Resolute

Annual Report 2024



JPMorganChase

Financial Highlights

As of or for the year ended December 31, (in millions, except per share, ratio data and employees)	2024	2023	2022
Selected income statement data			
Total net revenue	**$ 177,556**[(d)]	$ 158,104	$ 128,695
Total noninterest expense	**91,797**[(d)]	87,172	76,140
Pre-provision profit[(a)]	**85,759**	70,932	52,555
Provision for credit losses	**10,678**	9,320	6,389
Net income	**$ 58,471**	$ 49,552	$ 37,676
Per common share data			
Net income per share:			
Basic	**$ 19.79**	$ 16.25	$ 12.10
Diluted	**19.75**	16.23	12.09
Book value per share	**116.07**	104.45	90.29
Tangible book value per share (TBVPS)[(a)]	**97.30**	86.08	73.12
Cash dividends declared per share	**4.80**	4.10	4.00
Selected ratios			
Return on common equity	**18%**	17%	14%
Return on tangible common equity (ROTCE)[(a)]	**22**	21	18
Liquidity coverage ratio (average)[(b)]	**113**	113	112
Common equity Tier 1 capital ratio[(c)]	**15.7**	15.0	13.2
Tier 1 capital ratio[(c)]	**16.8**	16.6	14.9
Total capital ratio[(c)]	**18.5**	18.5	16.8
Selected balance sheet data (period-end)			
Loans	**$ 1,347,988**	$ 1,323,706	$ 1,135,647
Total assets	**4,002,814**	3,875,393	3,665,743
Deposits	**2,406,032**	2,400,688	2,340,179
Common stockholders' equity	**324,708**	300,474	264,928
Total stockholders' equity	**344,758**	327,878	292,332
Market data			
Closing share price	**$ 239.71**	$ 170.10	$ 134.10
Market capitalization	**670,618**	489,320	393,484
Common shares at period-end	**2,797.6**	2,876.6	2,934.2
Employees	**317,233**	309,926	293,723

(a) Pre-provision profit, TBVPS and ROTCE are each non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 67–69 for a discussion on these measures.
(b) Refer to Liquidity Risk Management on pages 108-115 for additional information on this measure.
(c) Refer to Capital Risk Management on pages 97-107 for additional information on these measures.
(d) Total net revenue included a $7.9 billion net gain related to Visa shares, and total noninterest expense included a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation, both recorded in the second quarter of 2024. Refer to Executive Overview on pages 54-58 and Notes 2 and 6 for additional information on the exchange offer for Visa Class B-1 common stock.

JPMorganChase (NYSE: JPM) is a leading financial services firm with assets of $4.0 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the firm serves millions of customers, predominantly in the U.S., and many of the world's most prominent corporate, institutional and government clients globally.

Information about J.P. Morgan's capabilities can be found at jpmorgan.com and about Chase's capabilities at chase.com. Information about JPMorganChase is available at jpmorganchase.com.

2024

Year of Firsts

#1

IN DEPOSITS AND FOR SMALL BUSINESSES

Named #1 in retail deposit market share
and #1 primary bank for U.S. small businesses

#1

COMMERCIAL & INVESTMENT BANK

Generated $25 billion of net income
on revenue of $70 billion

#1

PRIVATE BANK AND ASSET MANAGER

Named Best Private Bank in the World
by *Global Finance* magazine
and #1 asset manager by active flows

#1

IN ARTIFICIAL INTELLIGENCE

Ranked #1 for overall artificial intelligence
capabilities on the Evident AI Index
for the third year in a row

#1

IN CUSTOMER SATISFACTION

Ranked #1 among self-directed investors
in the J.D. Power 2024 U.S. Wealth Management
Digital Experience Study

#1

MIDDLE MARKET SYNDICATED LENDER

Ranked #1 overall
Middle Market Syndicated Lender
in the U.S.

#1

TOP COMPANIES

Ranked #1 on LinkedIn's 2024 Top Companies list,
which ranks the 50 best large U.S. companies
for career growth

TOP 10

MOST ADMIRED COMPANIES

Ranked in the top 10 on
Fortune magazine's Most Admired Companies list
for the eighth year in a row

Dear Fellow Shareholders,



Jamie Dimon,
Chairman and
Chief Executive Officer

Across the globe, 2024 was yet another year of significant challenges, from the terrible ongoing war and violence in Ukraine and conflicts in the Middle East to ongoing terrorist activity and growing geopolitical tensions, importantly with China. Our hearts go out to those whose lives are profoundly affected by these events.

JPMorganChase, a company that historically has worked across borders and boundaries, will do its part to ensure that the global economy is safe and secure, but it is not immune to the effects of these events. Two things are absolutely foundational to the long-term success of JPMorganChase: one is whether we run a great company and two, which is maybe more important, is whether the long-term health of America, domestically, and the future of the free and democratic world are strong. In the first two sections of this letter, I deal with these critical issues. And in the third and fourth sections, I talk about specific issues unique to JPMorganChase and how we are addressing them, including constantly fighting complacency, arrogance and bureaucracy.

Despite the unsettling landscape, the U.S. economy, at least until recently, continued to be resilient, with consumers still spending (though with some recent weakening) and businesses still healthy. It is important to note that the economy has been fueled by large amounts of government deficit spending and past stimulus. There also remains a growing need for increased expenditure on infrastructure, the restructuring of global supply chains and the military, which may lead to stickier inflation and ultimately higher rates than markets currently expect. The recent tariffs will likely increase inflation and are causing many to consider a greater probability of a recession. And even with the recent decline in market values, prices remain relatively high. These significant and somewhat unprecedented forces cause us to remain very cautious. There is much more detail on all of this in section three.

2024 was another strong year for JPMorganChase, with our firm generating record revenue for the seventh consecutive year, as well as setting numerous records in each of our lines of business. We earned revenue in 2024 of $180.6 billion[1] and net income of $58.5 billion, with return on tangible common equity (ROTCE) of 20%[2], reflecting strong underlying performance across our businesses. We also increased our quarterly common dividend of $1.05 per share to $1.15 per share in the first quarter of 2024 – and again to $1.25 per share in the third quarter of 2024 – while continuing to reinforce our fortress balance sheet. We grew market share in several of our businesses and continued to make significant investments in products, people and technology while exercising strict risk disciplines.

Throughout the year, we demonstrated the power of our investment philosophy and guiding principles, as well as the value of being there for clients – as we always are – in both good times and bad times. The result was continued broad healthy growth across the firm. The charts on pages 6–12 show our performance results and illustrate how we have grown our franchises, how we compare with our competitors and how we look at our fortress balance sheet. Please peruse them and the CEO and COO letters in this Annual Report, all of which provide specific details about our businesses and our plans for the future.

In 2024, we continued to play a forceful and essential role in advancing economic growth. In total, we extended credit and raised capital totaling $2.8 trillion for our consumer and institutional clients around the world.

1 Represents managed revenue.

2 Adjusted ROTCE of 20% excludes $5.4 billion from net income in 2024 as a result of the net gain related to Visa shares and the donation of Visa shares to pre-fund contributions to the Firm's Foundation. This is a non-GAAP financial measure.

On a daily basis, we move over $10 trillion in 120+ currencies and more than 160 countries, as well as safeguard over $35 trillion in assets. After we purchased and effectively fully integrated First Republic Bank, that bank failure disappeared as a negative issue for the U.S. economy. In addition to bringing much-needed stability to the U.S. banking system, we were able to give a new, secure home to approximately half a million First Republic customers.

While we have modified our approach to certain corporate responsibilities to conform to new guidance, we remain committed to reaching out to all communities in an effort to create a stronger, more inclusive economy – from supporting work skills training programs around the world and financing affordable housing and small businesses to making investments in our people and in cities like Detroit that show how business and government leaders can work together to solve problems. Almost all of these efforts are commercial in nature; i.e., "profit seeking" and are no different from what businesses, large and small, are trying to do in towns across America.

We have achieved our decades-long consistency by adhering to our key principles and strategies (see sidebar on Steadfast Principles on page 5), which allow us to drive good organic growth and promote proper management of our capital (including dividends and stock buybacks).

I remain proud of our company's resiliency and of what our hundreds of thousands of employees around the world have achieved, collectively and individually. Throughout these recent challenging years, we have never stopped doing all the things we should be doing to serve our clients and our communities. As you know, we are champions of banking's essential role in a community – its potential for bringing people together, for enabling companies and individuals to attain their goals, and for being a source of strength in difficult times. I often remind our employees that the work we do matters and has impact. United by our principles and purpose, we help people and institutions finance and achieve their aspirations, lifting up individuals, homeowners, small businesses, larger corporations, schools, hospitals, cities and countries in all regions of the world. What we have accomplished in the 20+ years since the JPMorganChase and Bank One merger is evidence of the importance of our values.

Steadfast Principles Worth Repeating

Looking back on the past two+ decades – starting from my time as Chairman and CEO of Bank One in 2000 – there is one common theme: our unwavering dedication to help clients, communities and countries throughout the world. Clearly our financial discipline, constant investment in innovation and ongoing development of our people have enabled us to achieve this consistency and commitment. In addition, across the firm, we uphold certain steadfast tenets that are worth repeating.

First, our work has very real human impact. While JPMorganChase stock is owned by large institutions, pension plans, mutual funds and directly by single investors, the ultimate beneficiaries, in almost all cases, are individuals in our communities. More than 100 million people in the United States own stocks; many, in one way or another, own JPMorganChase stock. Frequently, these shareholders are veterans, teachers, police officers, firefighters, healthcare workers, retirees, or those saving for a home, education or retirement. Often, our employees also bank these shareholders, as well as their families and their companies. Your management team goes to work every day recognizing the enormous responsibility that we have to all of our shareholders.

Second, shareholder value can be built ***only*** if you maintain a healthy and vibrant company, which means doing a good job of taking care of your customers, employees and communities. Conversely, how can you have a healthy company if you neglect any of these stakeholders? As we have learned over the past few years, there are myriad ways an institution can demonstrate its compassion for its employees and its communities while still strengthening shareholder value.

Third, while we don't run the company worrying about the stock price in the short run, in the ***long run*** we consider our stock price a measure of our progress over time. This progress is a function of continual investments in our people, systems and products, in good and bad times, to build our capabilities. These important investments will also drive our company's future prospects and position it to grow and prosper for decades. Measured by stock performance, our progress is exceptional. For example, whether looking back 10 years or even further to 2004, when the JPMorganChase/Bank One merger took place, we have outperformed the Standard & Poor's 500 Index and the Standard & Poor's Financials Index.

Fourth, we are united behind basic principles and strategies (you can see the principles for How We Do Business on our website and our Purpose statement in my letter from 2022) that have helped build this company and made it thrive. These allow us to maintain a fortress balance sheet, constantly invest and nurture talent, fully satisfy regulators, continually improve risk, governance and controls, and serve customers and clients while lifting up communities worldwide. This philosophy is embedded in our company culture and influences nearly every role in the firm.

Fifth, we strive to build enduring businesses, which rely on and benefit from one another, but we are not a conglomerate. This structure helps generate our superior returns. Nonetheless, despite our best efforts, the walls that protect this company are not particularly high – and we face extraordinary competition. I have written about this reality extensively in the past and cover it again in this letter. We recognize our strengths and vulnerabilities, and we play our hand as best we can.

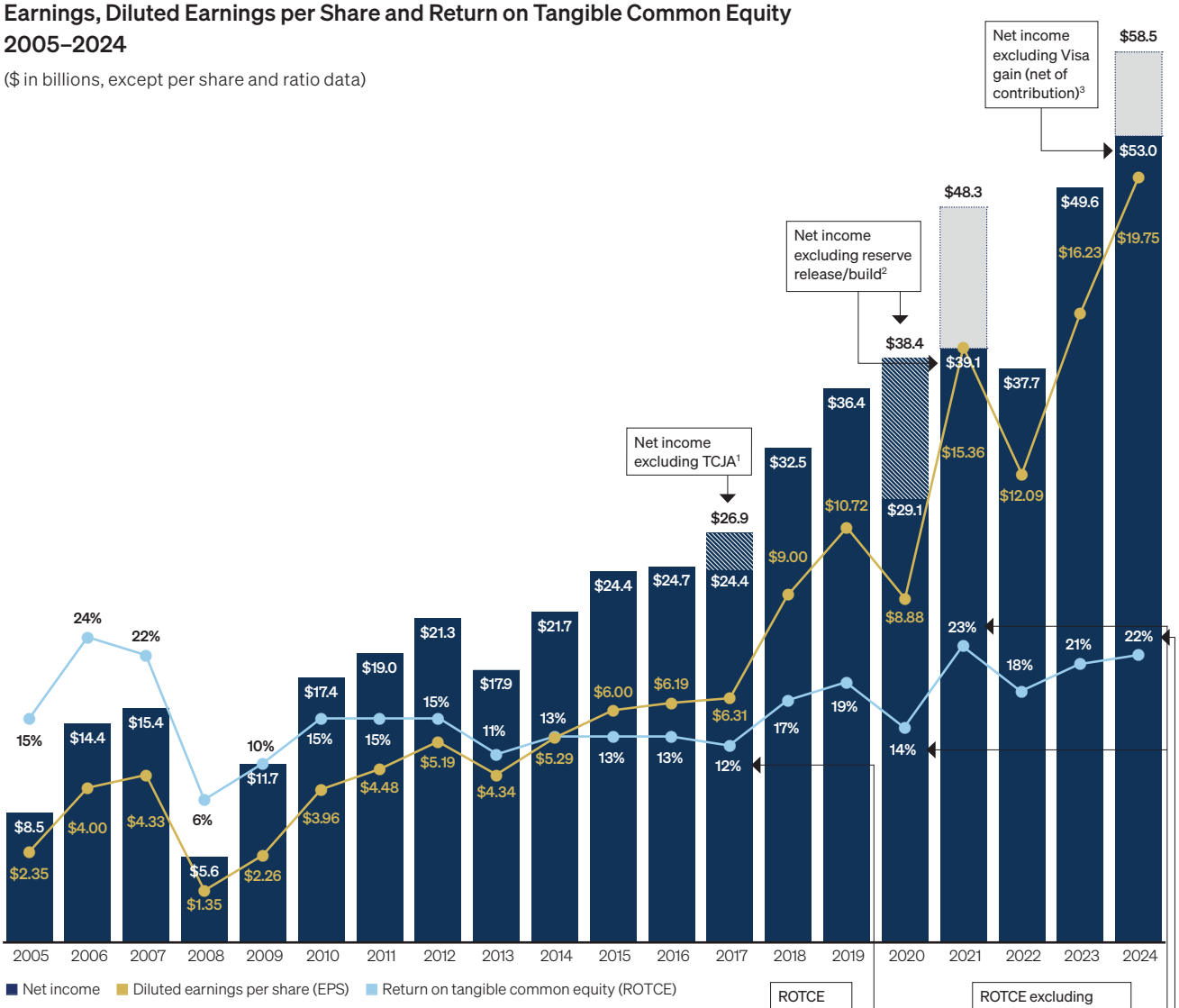
Sixth, we must be a source of strength, particularly in tough times, for our clients and the countries in which we operate. We must take seriously our role as one of the guardians of the world's financial systems.

Seventh, we operate with a very important silent partner – the U.S. government – noting, as my friend Warren Buffett points out, that his company's success is predicated upon the extraordinary conditions our country creates. He is right to say to his shareholders that when they see the American flag, they all should say thank you. We should, too. JPMorganChase is a healthy and thriving company, and we always want to give back and pay our fair share. We do pay our fair share – and we want it to be spent well and have the greatest impact. To give you an idea of where our taxes and fees go: In the last 10 years, we paid more than $52 billion in federal, state and local taxes in the United States and over $26 billion in taxes outside of the United States. Additionally, we paid the Federal Deposit Insurance Corporation over $11 billion so that it has the resources to cover failures in the American banking sector. Our partner – the federal government – also imposes significant regulations upon us, and it is imperative that we meet all legal and regulatory requirements imposed on our company.

Eighth and finally, we know the foundation of our success rests with our people. They are the front line, both individually and as teams, serving our customers and communities, building the technology, making the strategic decisions, managing the risks, determining our investments and driving innovation. However you view the world – its complexity, risks and opportunities – a company's prosperity requires a great team of people with guts, brains, integrity, enormous capabilities and high standards of professional excellence to ensure its ongoing success.

Earnings, Diluted Earnings per Share and Return on Tangible Common Equity 2005–2024

($ in billions, except per share and ratio data)



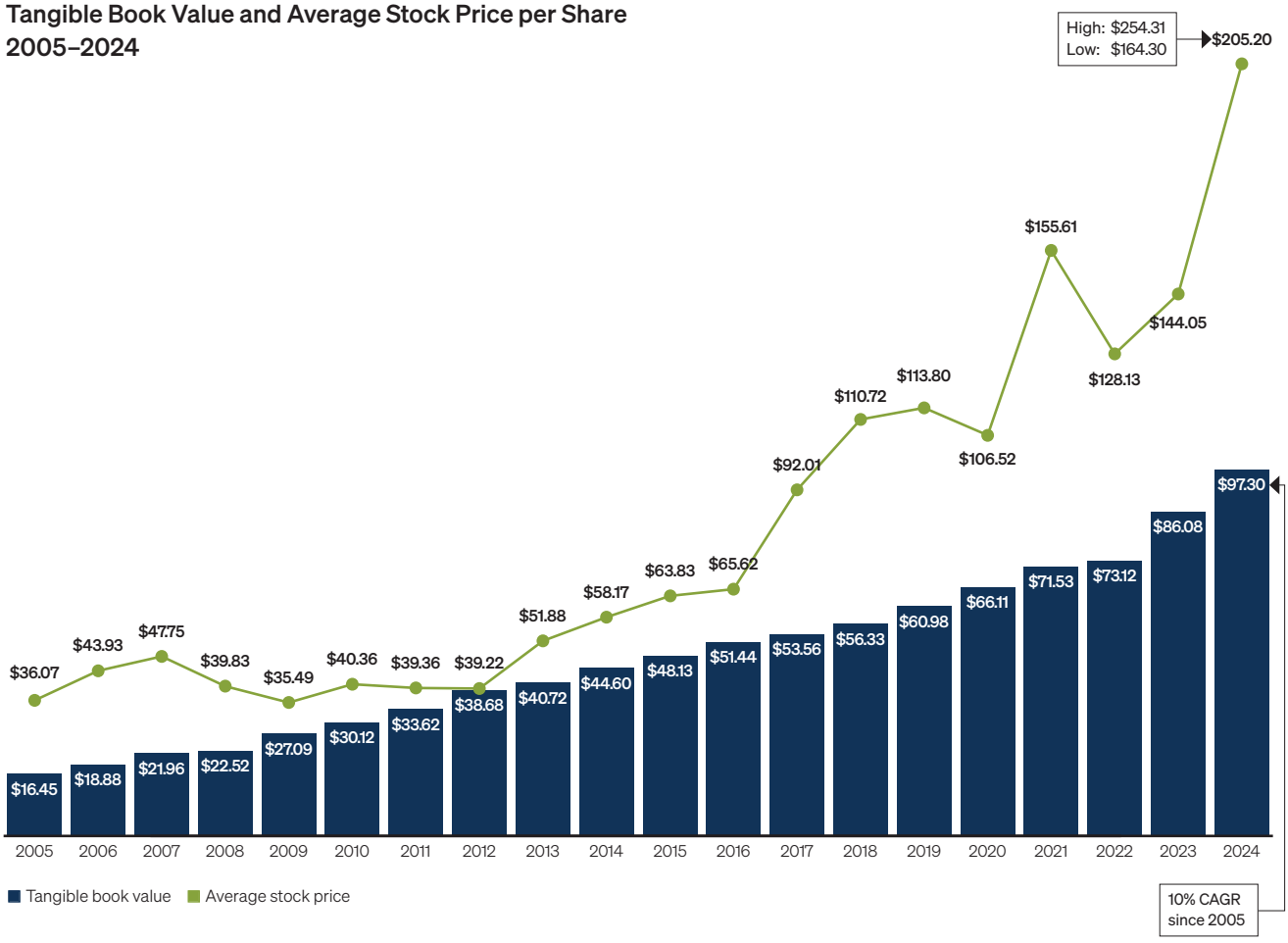
1 Adjusted net income excludes $2.4 billion from net income in 2017 as a result of the enactment of the Tax Cuts and Jobs Act (TCJA). This a non-GAAP financial measure.

2 Effective January 1, 2020, the Firm adopted the Financial Instruments – Credit Losses accounting guidance. Firmwide results excluding the net impact of reserve release/(build) of $(9.3) billion and $9.2 billion for the years ending December 31, 2020 and 2021, respectively, are non-GAAP financial measures.

3 Adjusted net income excludes $5.4 billion from net income in 2024 as a result of the net gain related to Visa shares and the donation of Visa shares to pre-fund contributions to the Firm's Foundation. This a non-GAAP financial measure.

GAAP = Generally accepted accounting principles

Tangible Book Value and Average Stock Price per Share 2005–2024



CAGR = Compound annual growth rate

Stock total return analysis

	Bank One	S&P 500 Index	S&P Financials Index
Performance since becoming CEO of Bank One (3/27/2000–12/31/2024)			
Compounded annual gain	13.2%	7.6%	5.8%
Overall gain	2,065.0%	512.2%	304.3%

	JPMorganChase	S&P 500 Index	S&P Financials Index
Performance since the JPMorganChase and Bank One merger (7/1/2004–12/31/2024)			
Compounded annual gain	12.3%	10.5%	5.9%
Overall gain	978.1%	668.5%	222.1%
Performance for the period ended December 31, 2024			
Compounded annual gain			
One year	44.3%	25.0%	30.6%
Five years	14.7%	14.5%	11.7%
Ten years	17.6%	13.1%	11.4%

This chart shows actual returns of the stock, with dividends reinvested, for heritage shareholders of JPMorganChase and Bank One vs. the Standard & Poor's 500 Index (S&P 500 Index) and the Standard & Poor's Financials Index (S&P Financials Index).

Client Franchises Built Over the Long Term

Consumer & Community Banking

	2005	2014	2023	2024
Average deposits ($B)[1]	$187	$487	$1,127	$1,064
Deposits market share[2]	4.5%	7.9%	11.4%	11.3%
# of top 50 markets where we are #1 (top 3)	*6 (12)*	*7 (22)*	*12 (25)*	*14 (25)*
Business Banking primary market share[3]	4.0%	7.2%	9.5%	9.7%
Client investment assets ($B)[1]	NA	$213	$951	$1,088
Total payments volume ($T)[4]	NA	$1.6	$5.9	$6.4
% of digital non-card payments[5]	~20%	49%	79%	81%
Credit card sales ($B)	*$225*	*$466*	*$1,164*	*$1,259*
Debit card sales ($B)	*NA*	*$241*	*$515*	*$546*
Debit and credit card sales volume ($B)	NA	$707	$1,679	$1,805
Credit card sales market share[6]	15%	21%	23%	23%
Credit card loans ($B, EOP)	$142	$131	$211	$233
Credit card loans market share[7]	19%	17%	17%	17%
Active mobile customers (M)	NA	19.1	53.8	57.8
# of branches	2,641	5,602	4,897	4,966
# of advisors[1]	NM	3,090	5,456	5,755

- Serve 84M U.S. consumers and 7M small businesses
- 71M active digital customers[8], including 58M active mobile customers[9]
- Primary bank relationships for ~80% of consumer checking accounts
- #1 retail deposit share
- #1 deposit market share position in 4 out of 5 largest banking markets in the country (NY, LA, CHI and SF) while maintaining branch presence in all 48 contiguous U.S. states
- #1 primary bank for U.S. small businesses
- Ranked #1 in J.D. Power 2024 U.S. Wealth Management Digital Experience Satisfaction among full-service and self-directed investors[10]
- #1 U.S. credit card issuer based on sales and outstandings[11]
- #1 owned mortgage servicer[12]
- Ranked #3 in the J.D. Power 2024 U.S. Mortgage Servicer Satisfaction Study[13]
- #3 bank auto lender for loan and lease financing[14]
- Ranked #1 in J.D. Power 2024 Digital Experience for Customer Satisfaction among Non-Captive Automotive Finance Lenders[15]

Commercial & Investment Bank

	2006			
Total Markets revenue[16]	#8	#1	#1	#1
Market share[16]	6.3%	8.7%	11.2%	11.4%
FICC[16]	#7	#1	#1	#1
Market share[16]	7.0%	9.0%	10.8%	10.9%
Equities[16]	#8	#3	#2	#2
Market share[16]	5.0%	8.0%	12.2%	12.4%
Global investment banking fees[17]	#2	#1	#1	#1
Market share[17]	8.7%	8.2%	8.6%	9.3%
Assets under custody ($T)	$10.7	$20.5	$32.4	$35.3
Average client deposits ($B)[18]	$220.8	$621.4	$912.9	$961.6
Average CB client deposits ($B)[19]	$66.1	$124.6	$174.1	$179.5
Payments revenue ($B)[20]	$4.9	$7.9	$18.3	$18.4
Payments revenue rank (share)[21]	NA	NA	#1 (9.3%)	#1 (9.5%)
Firmwide average daily security purchases and sales ($T)	NA	NA	$3.0	$3.4
# of top 75 MSAs with dedicated teams[22]	35	55	72	74
Average Banking & Payments loans ($B)[23]	$117.0	$219.0	$340.8	$348.8
Average CB Loans ($B)[24]	$38.1	$112.5	$209.2	$220.3
Average GCB & GIB Loans ($B)[23]	$75.3	$105.0	$131.2	$128.1
Multifamily lending[25]	#29	#1	#1	#1
# of Global Banking Bankers[26]	NA	NA	9,272	9,726
# of CB Bankers	NA	NA	3,469	3,700
# of GCB Bankers	NA	NA	1,408	1,453
# of GIB Bankers	NA	NA	3,574	3,858

- >90% of Fortune 500 companies do business with us
- On-ground presence in 177 locations in the U.S., 60+ countries internationally and serving clients in 100+ markets
- #1 in global investment banking fees for the 16th consecutive year and ranked #1 across M&A, ECM and DCM for the first time in a calendar year[17]
- Consistently ranked #1 in Markets revenue since 2011[16]
- J.P. Morgan Research ranked as the #1 Global Research Firm, #1 Global Equity Research Team and #1 Global Fixed Income Research Team[27]
- #1 in USD payments volume with 28.7% USD SWIFT market share[28]
- #1 in U.S. Merchant volume processing[29]
- #3 Custodian globally by revenue[30]
- Banking and Payments services to 32K+ Middle Market clients and 38K+ real estate owners and investors
- $2.6B revenue from Middle Market expansion, as well as nearly 2,700 new relationships in Middle Market Banking
- #1 overall Middle Market Bookrunner in the U.S. with 20 specialized industry coverage teams[31]
- Over 8K incremental affordable housing units financed in 2024 within Global Banking[32]

Asset & Wealth Management

JPMAM LT funds AUM performed above peer median (10-year)[33]	NA	82%	83%	85%
Client assets ($T)[34]	$1.1	$2.3	$5.0	$5.9
Traditional assets ($T)[34, 35]	$1.0	$1.9	$4.4	$5.2
Alternatives assets ($B)[34, 36]	$74	$221	$421	$504
Average deposits ($B)[34]	$42	$146	$216	$235
Average loans ($B)[34]	$27	$95	$220	$228
# of Global Private Bank client advisors[34]	1,484	2,392	3,515	3,775

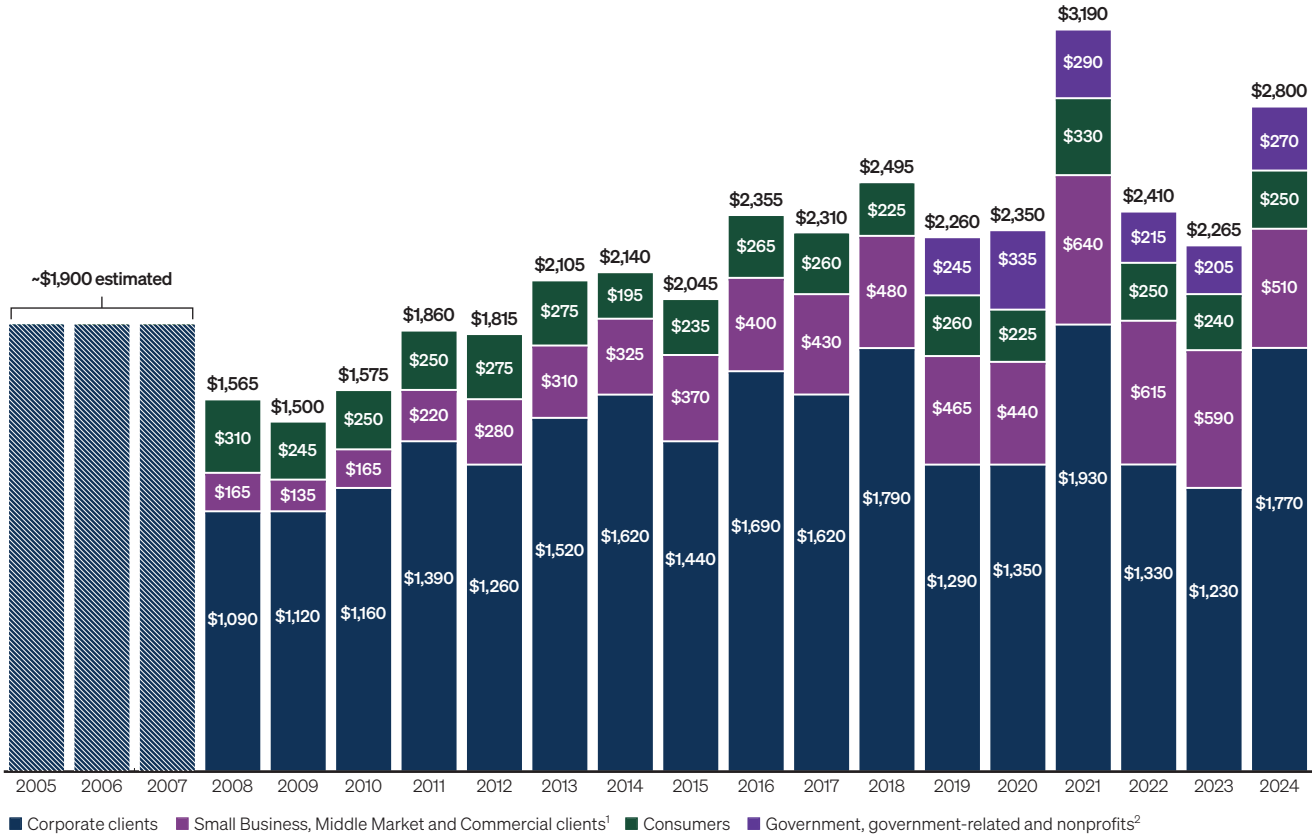
- 181 funds with a 4/5 star rating[37]
- Business with 57% of the world's largest pension funds, sovereign wealth funds and central banks
- #2 in 5-year cumulative net client asset flows[38]
- #1 in active flows[39]
- Positive client asset flows in 2024 across all regions, channels and asset classes
- #1 in active ETF flows and #2 in active ETF AUM[39]
- #1 in Institutional Money Market Funds AUM[40]
- #1 Private Bank in the World[41]

AUM = Assets under management
CB = Commercial Banking
DCM = Debt capital markets
ECM = Equity capital markets
EOP = End of period
ETF = Exchange-traded funds
FICC = Fixed income, currencies and commodities
GCB = Global Commercial Banking
GIB = Global Investment Banking
JPMAM = J.P. Morgan Asset Management
LT = Long-Term
M&A = Mergers and acquisitions
MSA = Metropolitan statistical area
NA = Not available
NM = Not meaningful
USD = U.S. dollar
M = Millions
B = Billions
T = Trillions
K = Thousands

For footnoted information, refer to pages 58-59 in this Annual Report.

New and Renewed Credit and Capital for Our Clients
2005–2024

($ in billions)



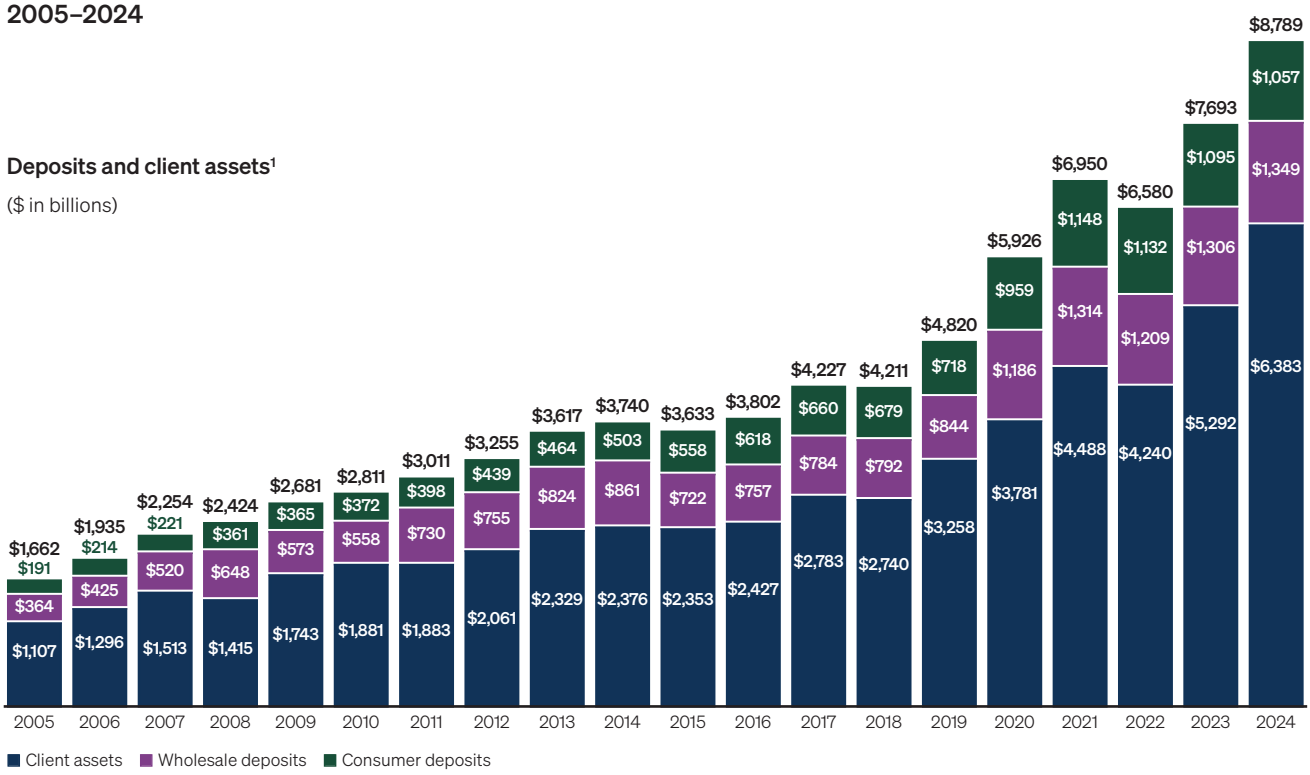
1 In alignment with the business segment reorganization effective in the second quarter of 2024, Corporate Client Banking activity was moved from Small Business, Middle Market and Commercial clients to Corporate clients starting in 2024.

2 Government, government-related and nonprofits available starting in 2019; included in Corporate clients and Small Business, Middle Market and Commercial clients for prior years.

Assets Entrusted to Us by Our Clients
2005–2024

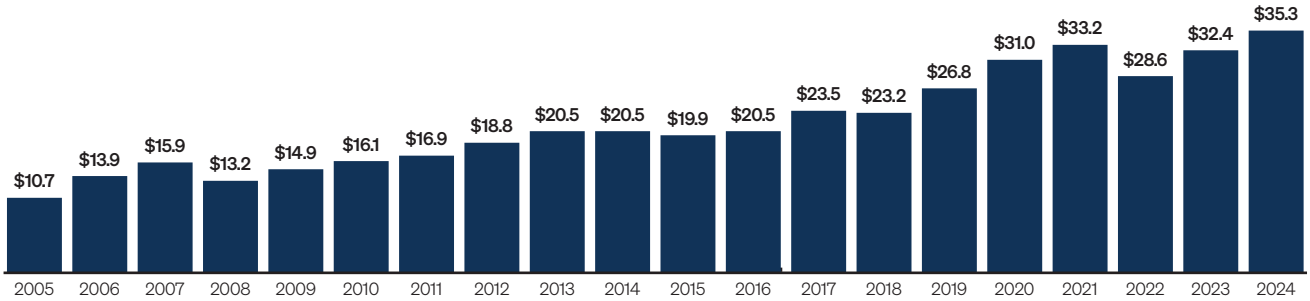
Deposits and client assets[1]

($ in billions)



Assets under custody[2]

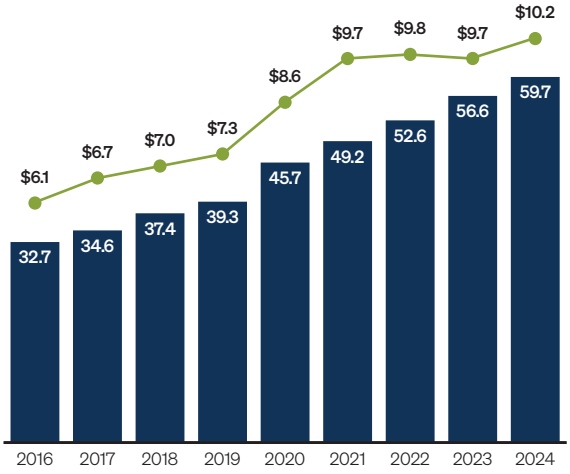
($ in trillions)



1 Represents assets under management, as well as custody, brokerage, administration and deposit accounts.
2 Represents activities associated with the safekeeping and servicing of assets.

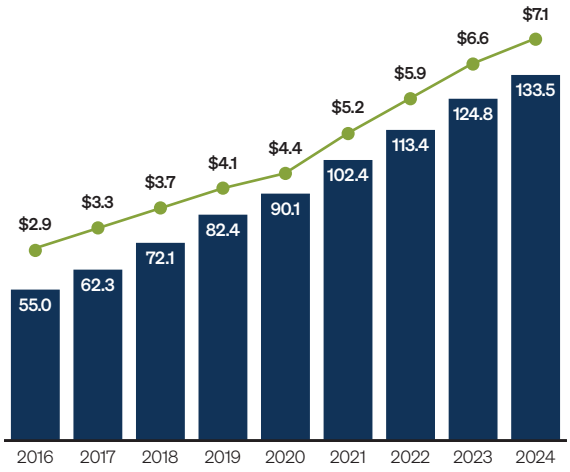
Daily Average Cash Management Volume[1] and Value[1]

(# in millions, $ in trillions)



Daily Average Merchant Transactions and Settlement Value

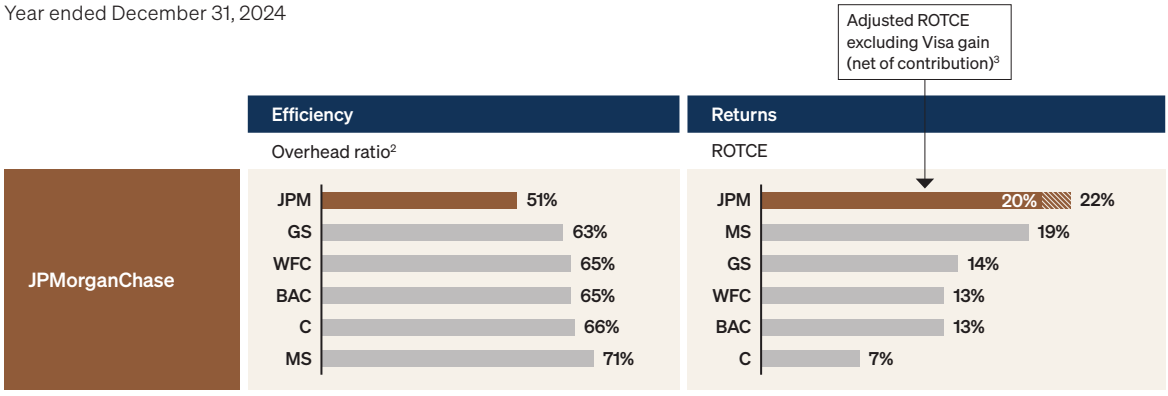
(# in millions, $ in billions)



1 Based on regulatory reporting guidelines prescribed by the Federal Reserve for U.S. Title 1 planning purposes; includes internal settlements, global payments to and through third-party processors and banks, and other internal transfers.

JPMorganChase Exhibits Strength in Both Efficiency and Returns When Compared with Large Peers[1] and Best-in-Class Peers[1]

Year ended December 31, 2024



	Efficiency		Returns		
	JPM overhead ratio	Best-in-class peer overhead ratio[4]	JPM ROTCE	Best-in-class peer ROTCE[5,7]	Best-in-class GSIB peer ROTCE[6,7]
Consumer & Community Banking	53%	51% COF-DC & CB	32%	25% BAC-CB	25% BAC-CB
Commercial & Investment Bank	50%	56% BAC-GB & GM	18%	15% GS-GBM	15% GS-GBM
Asset & Wealth Management	67%	62% NTRS-WM & ALLIANZ-AM	34%	41% MS-WM & IM	41% MS-WM & IM

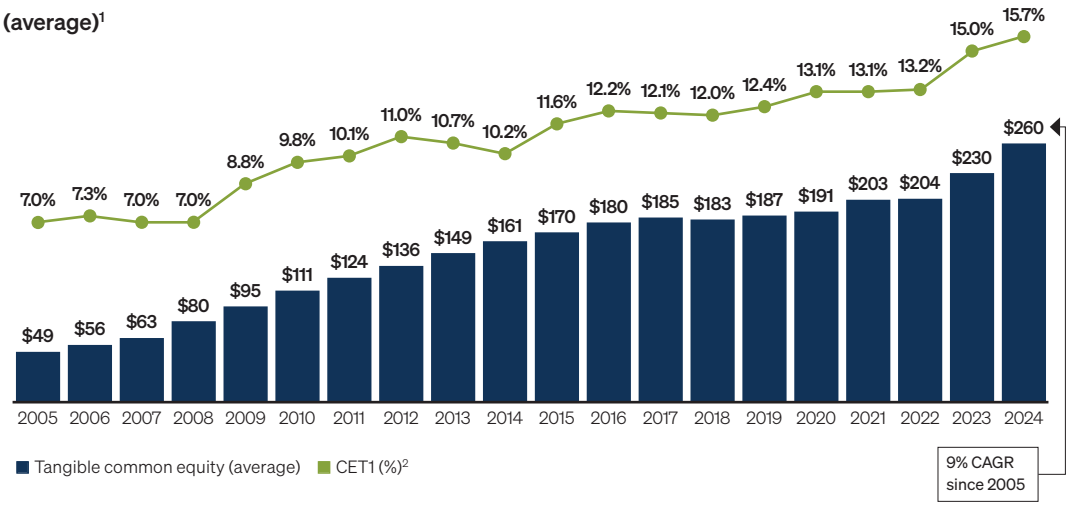
GSIB = Global systemically important bank
ROTCE = Return on tangible common equity

For footnoted information, refer to page 59 in this Annual Report.

Our Fortress Balance Sheet
2005–2024

Tangible common equity (average)[1]

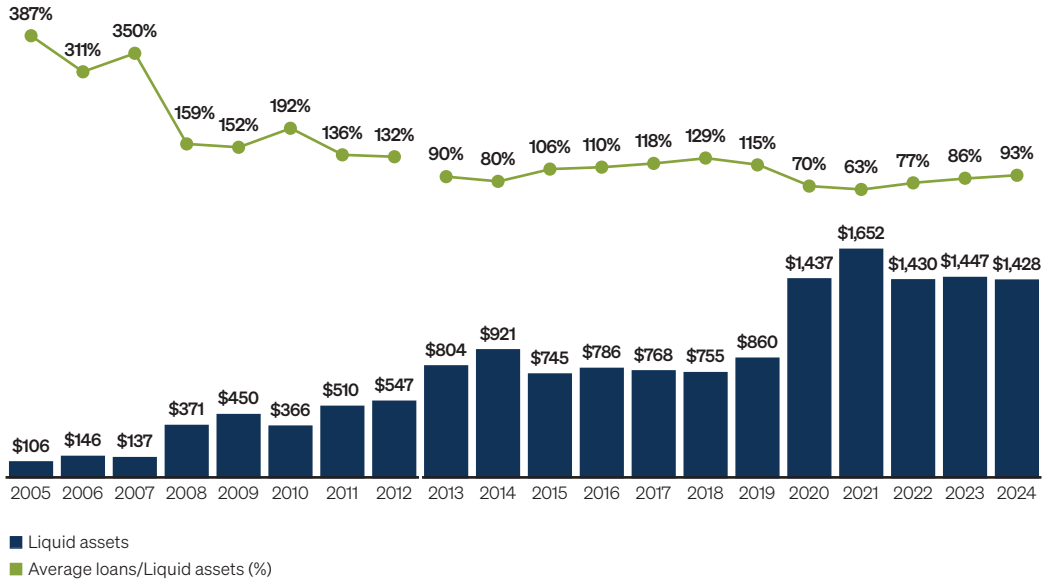
($ in billions)



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Net income applicable to common stockholders ($B)	$8	$14	$15	$5	$9	$16	$18	$20	$17	$20	$22	$23	$23	$31	$35	$27	$47	$36	$48	$57
Capital returned to common stockholders ($B)[3]	$6	$5	$9	$(12)	$(6)	$1	$11	$4	$9	$10	$11	$14	$22	$28	$34	$16	$29	$13	$20	$31
ROTCE (%)	15%	24%	22%	6%	10%	15%	15%	15%	11%	13%	13%	13%	12%	17%	19%	14%	23%	18%	21%	22%

Liquid assets[4]

($ in billions)



Liquid assets from December 31, 2005–2012 defined as cash, cash due from banks and investment securities
CAGR = Compound annual growth rate
CET1 = Common equity Tier 1
ROTCE = Return on tangible common equity

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I. America and the World Are at a Critical Crossroads: Comprehensive Action and Leadership Are Imperative Now

Only America Has the Economic, Military and, Yes, Moral Power

I am writing about this topic, both as a patriot who cares about America's and the free world's future and as the CEO of our company, because it may be the most critical factor affecting the future of JPMorganChase itself. The success of JPMorganChase has always been predicated on the success of the United States of America and the health of the world, particularly the strength of free and democratic countries.

Whether you call them adversaries or major competitors, they have made their goal clear. We must act now.

The brutal invasion of Ukraine and the indescribable terrorist acts on Israel should have dispelled any illusion that the world is a safe place. We do not need another Pearl Harbor or 9/11 to shatter any false sense of security based on the hopeful notion that dictators, terrorists and oppressive nations won't use their economic and military powers to advance their aims – particularly against what they perceive as weak, incompetent and disorganized Western democracies. Global peace and world order are vital American interests. We also need to answer the question: What kind of world do we want to live in? And do we believe that we can, or should, try to make the world a better place? Practically, what is the other choice?

Our international adversaries and major competitors have made it clear that their goal is to dismantle American hegemony, which means dismantling the rules-based system led by America in concert with our allies (essentially the Bretton Woods system and the North Atlantic Treaty Organization, as well as the International Monetary Fund and the United Nations). Since the end of World War II, this system has brought forth the longest period of peace and prosperity among the great powers. Today, it is clear this system needs serious reform and strengthening, not total destruction. Yet, if given the opportunity, that is exactly what our adversaries want to happen: Tear asunder the extensive military and economic alliances that America and its allies have forged. In the multipolar world that follows, it will be every nation for itself – giving our adversaries the opportunity to set the rules and use military and economic coercion to get what they want. That is what is at stake here. We need to bring the whole of government and the private sector together to build the world we want while dealing with the cold realities of the world we have.

We face the most perilous and complicated geopolitical and economic environment since World War II. Today's world is more complex and more interconnected than ever before. Comprehensive strategies, diligently deployed, are required to address challenges on many fronts: the war in Ukraine; terrorism in the Middle East and the real possibility that Iran may develop a nuclear weapon; Europe's potential fragmentation; and ongoing trade disputes and the rise of China. If Iran acquires a nuclear weapon, many other nations around the world will seek to acquire nuclear weapons, presenting us with a catastrophic situation. A global nuclear arms race is the ***worst*** outcome that could happen to our world – and this may be the greatest threat to mankind's survival. Lastly, it is extremely important to recognize that security and economics are interconnected – "economic" warfare has caused military warfare in the past.

Not only is America's global leadership role being challenged outside our borders by other nations but also inside our borders by our polarized electorate.

The actions taken in the next decade may prove, depending on how our country and our allies perform, the most consequential of our lives and may very well determine the fate of the free and democratic world over the next century. America has always had an amazing ability to confront enormous challenges – and we did so by facing them head-on with superb leadership from Abraham Lincoln to FDR to Dwight Eisenhower. We should remember that America, "conceived in liberty and dedicated to the proposition that all men are created equal," still remains a shining beacon of hope to citizens around the world.

Here are ***five things*** our nation needs to do well in order to secure the future we *should* want for our country and our companies. I fear that if we fail at one of them, we may fail overall:

1. Celebrate America's values and virtues, with humility, in order to restore civic pride, citizenship and purpose.
2. Acknowledge and fix our problems at home by regaining common sense and being resolute.
3. Recognize that the best strategy for America's success is to implement effective domestic policies that drive robust economic growth for the benefit of all citizens.
4. Initiate comprehensive economic foreign policy to win the new global "economic" war. America will be first – but not if it is alone.
5. Affirm that our national security and the world's best military, at whatever cost, are paramount and necessary for peace.

These are my prescriptions, and I understand that some people may disagree with them – and, on some issues, I may ultimately be wrong. What I am not wrong about, however, is the urgent need to face these issues head-on – we should not assume that America will overcome them. We have always been a resilient nation and have overcome significant adversity in the past *because* we faced our challenges and dealt with them properly. Problems don't age well. And the consequences of not dealing with this properly range from bad to catastrophic.

CELEBRATE AMERICA'S VALUES AND VIRTUES, WITH HUMILITY, IN ORDER TO RESTORE CIVIC PRIDE, CITIZENSHIP AND PURPOSE.

To be able to attack our problems at home and abroad, we must be strong. And our core strength is based upon our commitment to our values, as well as our ability to work hard and think intelligently about our problems. If the soul of America is not strong, then the rest will be weak. While we should acknowledge America's flaws, they should not be used to pull apart our country.

Our values transcend any political stance – libertarian, conservative, progressive, Democrat or Republican. We need to believe in ourselves and get back to work (in the office!), not tear each other down.

America's strength is not a divine right – it is earned by citizens committed to a common purpose.

Many of the blind ideologies being bandied about run counter to our fundamental principles. Our principles of freedom of speech, religion and enterprise allow individuals to pursue life as they lawfully see fit. Ideologues often adhere to rigid beliefs and seek to impose those beliefs on others; in extreme forms of fanaticism, there is ***no room*** for individual differences.

I applaud many traditional Democratic values, such as a commitment to try to lift up all of our citizens and to provide more justice and equal opportunity. I also deeply respect many traditional Republican values, such as a dedication to provide a strong national defense, to promote free enterprise and encourage a pro-business environment, and to emphasize the importance of the Constitution. And we should all support other core values, such as family, country, self-reliance, respect for workers and common sense. These values are not mutually exclusive and should be embraced and upheld by both parties. We, the people, need to be able to embody all these values.

Even with all of our current problems, billions of people, if they could, would leave their country and move to ours. Similarly, if most people could only invest in one country, they would choose the United States. Our exceptionalism is based

on our freedoms, our liberties, our opportunities and our rule of law, all under the protection of the Constitution (and the military) of the United States of America. You need only to witness the deep appreciation of new citizens, who often made enormous sacrifices to be here, to feel what it must be like when they take the Oath of Allegiance to the United States of America – it would bring you to tears.

It is incumbent on us to educate ourselves, our fellow citizens and future generations about American values and our ongoing pursuit of a more perfect democracy. This education should start in grammar school – our civic roles and responsibilities need to be taught. Our common values are transcendent.

ACKNOWLEDGE AND FIX OUR PROBLEMS AT HOME BY REGAINING COMMON SENSE AND BEING RESOLUTE.

Facts are often used by people to justify what they already think, and then populists on both sides distort the facts and use them to jazz up citizens around their grievances. But, as former U.K. Prime Minister Tony Blair asserts, we need to separate the populists from the grievances because many of these grievances are partially rooted in truth and must be addressed. The following are issues that I believe are causing legitimate frustration and anger in the country today. This list is not complete, but let's acknowledge some of these profound challenges. In this section and the next, I discuss some possible solutions:

- **Lack of control of our borders.** Uncontrolled immigration is highly disturbing to affected populations around the world and reduces the ability to manage legal and needed immigration. In the United States, the number of immigrants has increased by approximately 50% over the last 20 years. Once we gain control of our borders, I believe most Americans would support increasing merit-based immigration, including allowing anyone who earns a degree here to stay, ensuring there are proper visas for seasonal workers, enabling children born in this country to remain and providing a rigorous path to citizenship for law-abiding, undocumented immigrants. Healthy and proper immigration would bring great talent to our country and has been shown to actually help grow the economy.
- **Too many left behind.** Our fellow citizens at the lowest income tier have, in fact, been left behind, a trend we're seeing globally. From 1979 to 2019, wage growth of the top 10% income tier was nearly 10 times that of the bottom 10% – which, basically, did not increase at all. Our very low-income citizens experience higher school dropout rates, greater joblessness, increased drug use and crime in their neighborhoods, and significantly worse health outcomes. They often reside in rural areas and in inner cities. So while enormous wealth has been created in the country, the promise of equal opportunity seems unfulfilled for too many for too long.
- **Education, some of the best and some of the worst.** We have many of the best universities (including research universities) in the world. However, over the last 20 years, the cost of college has more than doubled for both public and private colleges, while household median incomes have gone up only 18%. Many inner-city schools graduate under 50% of their students. And in both high schools and colleges, we don't teach enough skills that lead to well-paying jobs. Again, this affects the bottom income tier far more. Equal opportunity is clearly not fairly shared.
- **Ineffective and incompetent government.** Most people do not believe that the government, regardless of party control, is doing a good job. For some, it's the constant bureaucracy, lack of permitting and failing schools; for others, it's the constant anti-business sentiment. We struggle to build pipelines, upgrade our electrical grid, develop high-speed rails and accomplish other necessary goals. Our government seems unable to reform and reorganize itself, which is a problem. This is amplified by the fact that many of our career politicians have little real-world experience, and it shows. We have failed at basic common sense. And let's stipulate here that this is not about blaming individual workers. We all know that many government employees are hard-working, ethical and caring citizens doing very important jobs that support and protect their fellow Americans.

- **Profligate fiscal management.** Most people do not believe that giving the government more money leads to better outcomes. In fact, most people perceive government actions, such as special tax breaks, as patronage for favored interest groups. Many people think the tax system itself is littered with unfair loopholes. Government has been fiscally irresponsible and profligate – and even with all the money spent, grievances increased. Our government estimates that it makes over $200 billion in "improper" payments per year. Somehow, we have huge deficits and bad outcomes.

- **A leviathan both too weak and too strong.** Our state is paradoxically both too weak – ineffective at accomplishing essential tasks – and overly strong – overreaching in ways that undermine fundamental democratic principles like individual freedom and autonomy. Over the last few decades, many have felt violated by the government's increasing interventions. This heavy-handedness often prescribes not only how we should act but also how we should think and feel.

- **Culture wars and virtue signaling.** In the past, the elite often insulted traditional values of family, God and individual success, lecturing about their superior values from their comfortable perches and imposing all of this on people who believed differently. We have implemented many climate policies that do not effectively address climate change and raise the cost of living. We have stopped teaching some important parts of American history. Instead of acknowledging America's significant virtues, we denigrate them and tear them down. We engage too frequently in class warfare and excessively in identity politics; i.e., using race, sex or creed inappropriately. And state laws were passed that actually increase crime instead of preventing it. Many of these policies hurt the very people they were meant to protect most. Many cities that paid a high price for their misguided policies are now returning to obvious policy goals – safe streets, better schools, more housing.

  Unfortunately, more and more people are being disrespectful, condescending and unwilling to listen to one another. While adjustments are needed, it is quite predictable that the pendulum will swing too far in the other direction. When all is said and done, let's hope we can all treat each other with a little more respect.

- **An imperfect healthcare system.** While in some ways our healthcare is the best in the world, it is also expensive, essentially costing almost twice as much as the average healthcare in OECD (Organisation for Economic Co-operation and Development) countries. Our healthcare system is also lacking in preventive care, transparency and proper incentives, and leaves too many uninsured.

- **Crippling litigation, bureaucracy and regulation.** An effective legal environment, upheld by a dependable judiciary, is essential for economic health, protecting rights, ensuring justice, resolving disputes, maintaining checks and balances, and supporting innovation. However, the current environment is demoralizing and slowing growth. While we all want justice through the legal system, our litigation system is expensive (far more than most other countries), capricious, arbitrary and slow. All of this leads to extreme risk aversion – mostly on the part of government but often on the part of business as well. It is concerning that some politicians have grown increasingly beholden to the interests of tort lawyers, posing real risk to balanced policymaking. In some ways, this could be America's Achilles heel.

- **Red tape 2.0.** Red tape has always meant excessive paperwork, bureaucracy and regulations. But it's been taken to a whole new level by people who really like it and want even more of it. They have doubled down on regulations and bureaucracy, which also dramatically increased red tape. In so doing, they made sure that new rules were written by academics with no pragmatic experience, guaranteeing that they would be excessive, confusing, contradictory and infused with ideology. So we need to give credit where credit is due. Therefore, I have renamed it "BLUE" tape. Even when "blue" tape has been shown to slow down economic growth and make it hard for businesses and individuals to thrive, those who created it excuse the outcome and refuse to change (see Europe).

- **Damaging trade practices, particularly with China.** While trade has greatly benefited the world and many – if not most – American citizens, the damage that was done to some, while acknowledged, was never rectified. Those who suffered felt the sting – both in lost jobs and lower wages. We also allowed too much unfair trade. Finally, and most important, we failed to protect our national security, becoming too reliant on potential adversaries for critical products that the military needs (more on this later).
- **Selfishness on the part of our citizens and elected officials.** Whether it is unions fighting new technologies or businesses getting tax breaks, the focus on "what am I going to get" needs to stop. There are 13,000 groups lobbying in Washington, D.C., defending their "special interest." Rarely do they fight for what is good for America. When America's future hangs in the balance or when special interest groups wield undue influence, it is time to prioritize principle over profit – and put country before company or union. Many in our country do this – our uniformed officers in the military are an ideal example as they put their lives on the line out of a deep belief in our values and our country.

America is still the exceptional nation, but its problems demand that we adjust our strategies. America has carried the burden of keeping the world safe and has made extraordinary efforts, including through trade, to improve the lives of the citizens of other nations. It is time to rebalance and rebuild but not retreat from the post-world order. A U.S. retreat from international leadership will leave a vacuum that may be filled by China or other actors that seek to promote an alternate set of international rules and norms.

Both parties contributed to our failures (and the media amplifies it).

Many of the grievances I've noted existed and grew under both parties' leadership. These grievances are frequently amplified by media, both traditional and new, that often adheres to only one party's views, which leaves audiences blind to all of the issues and consequences of flawed policies. For example, when conducting interviews, reporters many times reveal their biases whether through subtle support or open skepticism. Interview subjects may be discredited because of who they are, not because of the content of their argument. Much of this is making us meaner to each other – a little more kindness and understanding would go a long way. I am a firm believer that we should constantly talk with each other, air our views, hold each other accountable and try to respect all sides of an argument.

Social media has made this worse, in fact, deliberately worse by using algorithms to manipulate as opposed to educate. Networks and platforms could meaningfully improve the quality of discourse on the town square both by offering a menu of algorithms, as opposed to ones that are addictive, and by requiring all users to authenticate their identities, whether they choose to speak anonymously or not. In banking, we have "know your customer" requirements – social media should have them as well. Verifying identities would go a long way toward eliminating foreign influence and bots, and would make individuals, not the platform, subject to the law.

We also exist in a nation awash with inaccurate and unfair labeling and scapegoating; i.e., Wall Street versus Main Street. Who exactly is Wall Street in this comparison with Main Street? Large business and small business are symbiotic. Shouldn't we respect jobs and workers ***and*** the companies that create those jobs? And some give voice to the view that public sector jobs are more virtuous than private sector jobs. Less than 25 million people work in the public sector and we should hold them in high regard – teachers, police, firefighters, military, sanitation workers and others. All jobs have dignity and purpose, and add to the general well-being of the country. It is good to remember that the 135 million people who work in the private sector generate the income that funds the public sector.

All of these are among the reasons why I believe the body politic may be tired and ready to see bold disruption. While we need to take proper actions, we also need reform and reconstruction.

In addition, our adversaries mistake our apparent disarray as a sign that we are lazy, weak and decadent. Anyone who knows America – its work ethic, innovation and morality of most citizens – knows this is not true.

RECOGNIZE THAT THE BEST STRATEGY FOR AMERICA'S SUCCESS IS TO IMPLEMENT EFFECTIVE DOMESTIC POLICIES THAT DRIVE ROBUST ECONOMIC GROWTH FOR THE BENEFIT OF ALL CITIZENS.

We need to address the underlying issues causing the grievances that are tearing us apart and holding the nation back. By enacting meaningful policy reforms to resolve these issues, I believe our gross domestic product (GDP) would grow by over 3% a year – benefiting all Americans and especially those in our lower-income communities. From 2000 to 2024, GDP grew by just over 2% a year. Had it grown by 3%, which should be easily achievable with the right policy decisions, our GDP per person would be approximately $16,000 higher this year.

In this section and in the following, I describe many of the policies that we need to fix – and, in some cases, how to do it. Some of the fixes are easy, while others are more challenging. They run the gamut from improving the supply side, such as education, infrastructure, permitting, production capability and technology, to addressing the demand side, including fiscal and tax policy. All of these are domestic policies, which we can fix on our own. Later in this section, I talk about foreign economic policies, including trade, foreign investment and the U.S. dollar as the world's reserve currency, all of which are essential to our country and the world.

Policy needs to be detailed, comprehensive and coordinated to be successful – how you describe it politically is a separate matter.

As someone once said, "If you are going to do what you already did, you are going to get what you already got." We have the best economy in the world, but we must confront our extensive flaws and fault lines. We need to build our own capabilities and stop the constant under- and over-reaction. Our policies must foster healthy, sustainable growth, and it's essential that we unite the entire nation – government and business alike – to achieve it. Around the world, we observe both effective and counterproductive policies. For example, well-intentioned labor laws can backfire, as seen in parts of Europe where rigid labor regulations have contributed to persistently high unemployment. Similarly, certain safety net programs may inadvertently discourage paid work. On the other hand, streamlined permitting policies show how smart governance can accelerate development and get projects built – in short order and safely. Nations that implement sound policies are capable of achieving remarkable outcomes; consider Ireland, Singapore, South Korea and Sweden. Even Greece, which used to be Europe's perennial basket case, has managed to turn itself around, driven by an exceptional political leader.

Good political leaders get both the politics and the policies, in detail, right. They are constantly educating the public instead of just responding to it. Our country needs leaders who can guide their parties away from catering to the extremes and who can collaborate effectively with our allies to craft integrated policies that address both economic and security challenges – in the short and long term. Most important, on the home front, we need lawmakers on both sides of the aisle to commit to the serious work of governing – setting aside partisan divides to develop policies that foster economic growth and expand opportunities for all Americans to succeed. Running for any executive office (mayor, governor or president) and running the government are completely different things. Some quickly figure that out, and some don't. While a good politician must communicate policies in a clear, compelling way that resonates with the American public, the policies themselves must be well designed to be truly effective. And this is more important today than ever before because the future, for both foreign policy and economic policy, is fraught with extreme risk.

We need to promote, not denigrate, businesses, large and small.

On economic policy, the Republicans are right to champion business and free enterprise, limit excessive government intervention, establish an international tax system that has made America competitive for the first time in over 15 years, and cut back on needless, mind-numbing, job-killing regulations. And all of this could be done while still maintaining the proper regulation necessary to prevent market abuses and safeguard the economic environment.

Recent Democratic policies, driven by often-misguided narratives and an often-

dismissive tone, have left much of the business community frustrated and disillusioned. Many government agencies and regulators frequently criticize business by relying on oversimplified and dishonest concepts like "price gouging" to justify their stance. They tend to take the isolated missteps of a few companies and use them to paint the broader business community as unethical. This fuels rhetoric that undermines free enterprise and leads to regulatory overreach that frequently exceeds the intent of the law. Few in the previous administration actually understood business or had any experience running a business – and it showed. Other important policies (for example, infrastructure, the CHIPS and Science Act, the Inflation Reduction Act), while well-intentioned, were laden with virtue-signaling and uninformed rules, which limit their effectiveness. And instead of fixing endless regulations, like permitting, government effectively made them worse.

It would be wiser to properly educate the public about the role of business, large and small. The private sector is the engine for investing our country's capital into high-returning areas – it is our most effective tool for promoting innovation, sustainable growth, productivity and jobs. There are more than 30 million businesses in America, but within the private sector, it is large companies that are responsible for 85% of the research and development (R&D) and nearly half of all nonresidential capital investment. Big companies generally have excellent healthcare, wellness, retirement and training programs.

Every time a new plant is built somewhere, it creates four or five times more jobs in that area, usually in small businesses. Small business and large business are truly symbiotic.

INITIATE COMPREHENSIVE ECONOMIC FOREIGN POLICY TO WIN THE NEW GLOBAL "ECONOMIC" WAR. AMERICA WILL BE FIRST – BUT NOT IF IT IS ALONE.

America's extraordinary standing in world affairs is predicated on our economic, military and moral strengths. Our exceptional relationships with our allies largely exist both because of the security they receive from America's military umbrella and our strong economic ties. But we are in a new world defined by shifting power dynamics, rapid technological disruption and rising geopolitical tensions, including China's growing assertiveness. This economic competition and conflict will likely go on far longer than the wars on the battlefield.

The autocratic nations of the world, and some of the nonaligned nations, would like to see a fragmentation of America's economic alliances and a weakening of our global economic position, including our status as the world's most powerful economy, a leader in innovation and holder of the world's reserve currency. This competition has many players, using many tactics, over many years. But our long-term strategic goals should be crystal clear: to maintain the cohesion and strength of the Western world, including their economies. If the Western world's military and economic alliances were to fragment, America itself would inevitably weaken over time.

Economic fragmentation from our allies may be disastrous in the long run.

Keeping our alliances together, both militarily and economically, is essential. The opposite is precisely what our adversaries want. Europe has some serious issues to fix. Since 2008, the eurozone's GDP per person has gone from over 75% of U.S. GDP per person to approximately 50%. While Europe has received some tough messages from U.S. leaders recently, what European leaders should do is seize the moment. European nations know what they need to do: significantly reform their economies so they can grow; e.g., finish the economic union to make commerce across their countries easier and more efficient, and initiate labor reform and tax reform to incent more business growth and more labor participation (see the Draghi report). They also recognize that they need to materially increase their military spend and capabilities. This is going to be hard, but our country's goal should be to help make European nations stronger and keep them close.

If Europe's economic weakness leads to fragmentation, the landscape will look a lot like the world before World War II. Each nation will need to seek out its own relationships to secure its future, and that may very well mean closer relationships with Russia and Iran for energy and China for trade and economics. Such moves would ultimately make these countries far more reliant on China and Russia – over time effectively

making them vassal states. Economics is the longtime glue, and America First is fine, as long as it doesn't end up being America alone.

We do not need to fear China – we just need to get our act together.

Comprehensive economic policy is critical to compete with China. There is no more consequential relationship for the world, and this relationship will affect the whole Indo-Pacific region, especially our allies: Australia, Japan, the Philippines, South Korea and others.

Over the last 20 years, China has been executing a more comprehensive economic strategy than we have. The country's leaders have successfully grown their nation and, depending on how you measure it, have made China the largest or second-largest economy in the world. That said, many people question China's current economic focus – it continues to be beset by many economic and domestic issues, particularly capital misallocation, which have resulted in large real estate problems, a weakened financial system, policies that inhibit entrepreneurs in their own country and an urgent need to accommodate a rapidly aging population.

China has its own national security concerns, as it is located in a very politically complex part of the world. Many of China's actions have caused its neighbors (e.g., Japan, Korea, the Philippines, among others) to start to re-arm and draw closer to the United States. It also surprises many Americans to hear that while our country is 100% energy sufficient, China needs to import 10 million barrels of oil a day. It is clear that China's new leadership has set a different course, with a much more intense focus on national security, military capability and internal development. That is its right, and we simply need to adjust to it.

America still has an enormously strong hand – plenty of food, water and energy; peaceful neighbors; and what remains the most prosperous and dynamic economy the world has ever seen, with a per person GDP of over $86,000 a year (this compares with China's GDP per person of $13,000 in 2024). Most important, our nation is blessed with the benefit of true freedom and liberty.

Starting well over a decade ago, both business and government should have focused on certain problems with China: unfair trade across multiple dimensions and our reliance on China for critical national security-related components. While we may always have a complex relationship with China (made all the more complicated and serious by its actions in supporting Russia in the ongoing war with Ukraine), the country's vast size and importance to so many other nations (China is the largest trading partner to almost every other nation) require us to stay engaged – thoughtfully and without fear. At the same time, we need to build and execute our own long-term, comprehensive economic security strategy to keep our position safe and secure. For example, we need to remain competitive with China in the artificial intelligence (AI) race by bolstering our technological advancements and reducing our reliance on Taiwan for semiconductor chips. Most of the actions we can take to protect our country are unilateral and do not need China's agreement. Overall, I believe that respectful, strong and consistent engagement would be best for both the United States and China, as well as the rest of the world.

Whether you view China as a competitor or a potential adversary, we should work with our allies to firmly negotiate an ongoing relationship. Tough but thoughtful negotiations over strategic, military and economic concerns – including unfair competition – should lead to a better situation for all. If America provides strong leadership, and keeps the Western world together, China will be better off forming partnerships with a strong Western world than with nations like Russia, Iran and others. We should also recognize what critical common interests with China we share in combating nuclear proliferation, climate change and terrorism.

What China does so well is manage its country as a whole – coordinating government and business so that they are able to further some of their strategic goals. We must improve our ability to act in a more organized and strategic way to succeed in this new global landscape. Simply put, if we keep our economy the strongest and maintain the strength of our alliances, we will thrive.

We should promote healthy economic alliances, which includes fair trade.

Global trade is enormous, amounting to approximately $20 trillion a year, of which only $2.5 trillion is with the United States. And global trade will take place with or without us. We should remember that other nations have choices, both in the short term and in the long term, and they will make these choices in their own self-interest based on economics, security and reliability.

Many countries need trade to help grow their economies. The European Union, for example, has the largest trade network with 40 individual agreements. China has applied for and signed several new trade agreements (e.g., the Regional Comprehensive Economic Partnership, Digital Economy Partnership Agreement, and Comprehensive and Progressive Agreement for Trans-Pacific Partnership). The United States lacks trade agreements with some of its closest allies, many of whom have signed trade deals with China. We should more actively be seeking free (and, of course, fair) trade agreements, particularly with strong allies like Australia, Japan, the United Kingdom and – we hope one day – the European Union. These can be done in a way that is clearly beneficial to both sides.

We already trade with most nations on the planet – and, of course, we should always be trying to make it better and fairer for America. Deepening high-standard trade with key trading partners is good economics and great geopolitics. And we don't need to ask many nonaligned nations, like India and Brazil, to align with us – but we can bring them closer to us by simply extending a friendly hand with trade and investment.

There are many ways to combat unfair trade – industrial policy is one of them, but it should be done right or not at all.

For hundreds of years, countries have used trade practices to get a leg up on other countries. This economic competition is often exercised through industrial and trade policy, and it comes in many forms: banning or limiting trade (quotas), tariffs, subsidies, grants, tax credits or accelerated depreciation, loan guarantees, long-term purchase agreements and capital controls. These tools are generally intended to give a company or an industry an unfair competitive advantage, and when used together, they can create unbeatable economies of scale. In their harshest form, they can be used by countries as a tactic to try to unfairly dominate whole industries. This should not be allowed.

There are other unfair trade practices that need to be mentioned; e.g., nontrade barriers, such as regulations that effectively stop specific types of trade and various unfair tax policies that range from value-added taxes to a particular country's tax schemes. Many countries use some of these tools in various forms (including the United States).

So trade agreements have many flaws and need to be carefully negotiated. Practices such as permitting countries to circumvent trade restrictions imposed on them – for example, allowing China to use agreements that it has with other nations to bypass tariffs on Chinese goods – can and should be stopped. Obviously, where the United States is treated unfairly, we should demand that those agreements be fixed. It would also be good to acknowledge that we have sometimes treated others unfairly (for example, parts of the Inflation Reduction Act unfairly favor American business).

Industrial policy mechanisms, when used, should be as targeted and as simple as possible. The cleanest of these is tax credits in various forms. Whatever the policy, two rules should not be violated: (1) there should be no social engineering and (2) markets should allocate capital, not the government – lest the result is a buffet where corporate America gorges. The government is simply not good at allocating capital in a free market. One example should suffice: In our attempt to create a more competitive chip manufacturing industry in the United States (it costs two times more to manufacture these chips in America, and, therefore, our manufacturers would fail if they tried to compete), the government could have given land grants for the land, accelerated depreciation and lowered taxes or offered tax credits for an extended period. Then the companies and the capital markets would have competed to decide how best to do this.

Nonetheless, we need to acknowledge that there have been real negative job impacts as a result of trade (in 1990, manufacturing created 18 million jobs in this country versus 13 million today), which are usually concentrated around certain geographic areas and businesses. So

any new trade policy should be combined with a greatly enhanced and effective Trade Adjustment Assistance program, which provides retraining, income assistance and relocation for those workers directly impacted by trade.

America already trades with more than 200 countries, territories and regional associations. We should strike the best and, of course, the most fair trade agreements that we can. And we should do this while maintaining our close economic relations with our allies.

What's the truth about trade deficits?

Trade deficits, by their nature, are not necessarily good or bad. Even if our country had no net trade deficit, it would likely be running deficits with some countries and surpluses with others. Sometimes a high trade deficit results from a country's extraordinary attractiveness as an open investment destination, and these investments help that country grow and prosper. This may be true for part of America's trade deficit. However, trade deficits for pure consumption may mean a country is slowly selling parts of itself to someone else, and I'm not sure that's a good idea.

Our trade deficit over the last 20 years has totaled over $12 trillion, and this is probably too large. The other side to the trade deficit is an investment surplus, which has resulted over the years in foreign investors owning $30 trillion of U.S. securities, while U.S. investors own only $16 trillion of foreign securities. In 2005, these numbers were $6.3 trillion and $4.3 trillion, respectively. You can see that, over time, foreign investors have come to own an increasing share of the United States. (For your information, China's holdings of U.S. assets are approximately $1.5 trillion, of which half is U.S. Treasury securities.)

It is good to remember that our trade deficit is also driven by our large government deficit. Therefore, it is perfectly reasonable for us to focus on our "twin" deficits: our $2 trillion fiscal deficit and our $1 trillion trade deficit. While the numbers in the above paragraph highlight the attractiveness of the American economy, they also reveal certain underlying risks: If America, for whatever reason, becomes a less-attractive investment destination, the U.S. dollar and the economy could suffer if foreigners sold their U.S. assets.

Our extraordinary energy position is a massive competitive advantage, ensuring affordable, reliable, safe and ever cleaner energy, both for us and critically for our allies.

The United States has a huge competitive advantage in that it is essentially self-sufficient on energy – and will be for decades. This reduces the cost of so many things in our country (e.g., up to 40% of the cost of food is related to energy) and makes it much easier for American companies to compete. It's also an enormous geopolitical benefit for us to be able to export safe, affordable, secure liquefied natural gas overseas to our allies. This binds them to us, gives them greater security and is economically beneficial for the United States. It also has the virtue of being good for the climate – as cleaner liquefied natural gas replaces dirtier coal.

America should lead the way in generating more energy to meet greater demand, including from AI, which will require huge amounts of energy. And we need an "all of the above" strategy for developing renewable energy, as well as tapping conventional energy sources. We should not forget that to make energy ever more efficient and cleaner, we also need more rapid permitting, investment in the grid and access to critical minerals. I am convinced that, over time, our innovative capabilities will make energy cleaner and solve the carbon emissions problem.

In this country, we have made many mistakes around climate policy – and I believe a lot of money will ultimately be wasted. We also made many bad decisions. For example, we failed to build the pipeline that would bring gas from Pennsylvania to New York – this would have replaced coal (in a cleaner way) and dramatically decreased the cost of energy for New Yorkers. It's also important to remember that pollution in the United States was significantly reduced because we effectively outsourced the production of "dirty" manufacturing, like steel, to other nations that have lower emissions standards than we do.

One last point: Billions of people around the world still lack access to affordable and reliable energy, a fundamental driver of higher and healthier living standards. Meeting this demand improves lives on a global scale.

There are many other critical foreign economic policies that could be used to promote the American economy and protect our allies.

Essentially, they are:

- We must keep America's tax system internationally competitive so as not to drive capital, companies, intellectual property or people overseas. There is a complexity to this because so many countries play games with their tax systems – but staying competitive can be done. It would be a huge mistake for America to put itself at a disadvantage – there are better ways to collect taxes (more on taxes in the next section).

- U.S. development finance institutions, including the two main ones (the U.S. International Development Corporation and the Export-Import Bank of the United States), are generally used to develop projects in and support exports from developing nations. Our development finance is very small relative to the size of our country – in total, America's development finance investment is approximately $60 billion. We are virtually absent compared with China. By contrast, China's government-led Belt and Road initiative has lent or invested $1.4 trillion in 155 different countries. China does this to promote its business expansion overseas and to enhance its own energy, minerals or supply chains.

  In addition to the Belt and Road initiative, China has foreign direct investment of approximately $3 trillion in the rest of the world. This investment was virtually zero in 2000. By comparison, America's foreign direct investment totals $6.7 trillion. In my travels in Africa and Latin America, the absence of American business or government investment is palpable. African and Latin American nations want more of America, but they are getting what they need from China. Done right, America could dramatically increase its development finance – it is not a giveaway, it can be quite profitable, and it has the virtue of promoting America and its businesses overseas.

- We need to do a better job, in general, of promoting American business overseas. America's development institutions can work with American businesses far more effectively, for instance, by providing political insurance on large capital investments. This insurance would protect businesses and enable them to make investments in unstable regions by covering risks like government takeovers or political unrest.

  At the same time, while laws like the Foreign Corrupt Practices Act have helped reduce corruption and level the playing field abroad, such laws often put firms at a disadvantage, including American firms and international firms with a U.S. nexus. The rules can be vague, the guidelines are ambiguous and the penalties are steep – making impacted companies hesitant to compete. This needs to be fixed.

- We need to constantly educate and inform the world about America's values and virtues. We don't need to be condescending or lecturing, just consistently educating and sharing – the lore of freedom and democracy combined with a gentle assist will eventually win the day.

America's strong economy plays a critical role in preserving the U.S. dollar as the world's reserve currency.

The U.S. dollar is a "fiat" currency. Some say this makes the dollar purely a matter of trust. This is simply not true. The Federal Reserve, which issues dollars, owns assets (mostly U.S. Treasuries) supporting each dollar it issues. Those assets carry the full faith of the U.S. government, backed by its taxing power on the most prosperous nation the world has ever seen. If you have U.S. dollars, you are essentially free to do with them as you see fit – that is not true in many autocratic nations. The U.S. dollar is the world's reserve currency because of America's open markets, the strength of our economy and our rule of law upholding property rights – all protected by the U.S. military. These are also the reasons why the United States is such an attractive investment destination for anyone wanting to invest their money.

A well-functioning international monetary system is good for the United States and for our allies, particularly since the rules are set by us and our allies (although some reform is needed). The U.S. dollar is foundational to a healthy global economic system, and it's the cornerstone of America's commanding global influence. The strength of our financial system gives America considerable clout, not only in allocating capital

efficiently but also in creating a huge informational advantage for our country. The U.S. financial system writ large is the best in the world – with extraordinary knowledge and capabilities, it is a critical flywheel of the American economy.

To protect the status of our global economic influence and of our reserve currency, America also needs to be broadly trusted and reliable. Good trade should be enabled to flourish. Sanctions are a powerful tool (against not just financial corruption but global bad actors) – but they should only be used judiciously and for the right purpose and, generally, done in concert with our allies. In addition to the benefits mentioned above, being the reserve currency saves the United States $100 billion a year at current interest rates. People around the world actually carry approximately $2.5 trillion of paper U.S. dollars, which, in effect, is borrowing without paying interest.

There is a correlation between the strength of our economic and military alliances and our status as reserve currency: The stronger our alliances, the stronger our reserve currency status. However, the opposite is also true. History has shown that as countries become weaker, their currency loses reserve currency status.

AFFIRM THAT OUR NATIONAL SECURITY AND THE WORLD'S BEST MILITARY, AT WHATEVER COST, ARE PARAMOUNT AND NECESSARY FOR PEACE.

In today's troubled world, we've seen several stark reminders that national security is and always will be paramount even if that idea seems to recede in tranquil times. America remains the arsenal of democracy and the bastion of freedom for the whole world. We must explain to the American public, over and over, how Ukraine and the terrorist activity in Israel, fueled mainly by the Iranian regime, are the actual battlefields of freedom. It is our hope that these terrible events have awakened all of us to the fact that the world is never safe. As President Ronald Reagan once wisely said, "The only way to stay safe is peace through strength." Having the best military is expensive, but it is not nearly as expensive as dealing with what would happen without it. We must maintain the world's strongest military, without question.

Of course, it is reasonable to expect allies to pay their fair share of global military expenses – but we should also recognize that it is in our own strategic self-interest to keep our allies together. The U.S. military presence around the world should not be viewed as mere protection for hire – it's a critical pillar of global stability and a reflection of our leadership.

We hope one day there will be a lasting and permanent peace for Israel and the Middle East. Ukraine needs a proper resolution – one that provides it with sovereignty, stability and security – putting their country on a path to healthy growth. Sovereignty means that they are a free nation left to make their own decisions. If Ukraine is left in a weakened position (meaning, essentially, that Russia succeeded), we will see a fracturing of America's military alliances as countries, Europe in particular, search for better security arrangements.

One more point about military security: There was always a thought that America was far from European wars, even though we have been dragged into them many times. With the advent of cyber war, satellites and hypersonic missiles, the world has changed; other countries' military capabilities are already on our doorstep.

We need to employ all instruments of national power.

The exercise of power isn't measured by military force alone but also includes other instruments of national power: diplomacy, economic development, foreign assistance (all done in a strategic, efficient and accountable way) and constant education about the benefits of freedom. Again, as President Reagan said, "Freedom is special and rare. It's fragile; it needs protection." Fundamentally, we need to realize that power is also based on trust: trust that we will do the right thing, that we can do the right thing and that we are not just strong but reliable.

We need to immediately change certain policies to secure and enhance our military capabilities.

Sustaining America's position of power requires major changes in the funding and planning of our military. This includes major changes in trade, production capacity and supply chains to make our military as resilient and capable as possible. Some specifics will suffice:

- We don't have multi-year plans for critical military expenditures and often rely on short-term continuing resolutions to fund our military. This costs the military billions of dollars a year and creates instability and uncertainty for the defense industry. Switching to multi-year plans could potentially provide $40 billion in savings a year (out of a 2024 Defense Department budget of almost $850 billion) and greater stability for the military.
- We need to allow greater flexibility on the reallocation of money; i.e., to continuously innovate (buy the newest drones and other items).
- Our stockpiles of vital munitions are seriously inadequate – if there was a war in the South China Sea, we would run out of missiles in seven days. If it were up to me, I would be stockpiling ammunition, air and missile defense, rare earths and other critical components, importantly to preserve peace.
- We don't maintain sufficient excess production capacity in our defense industrial base to ramp up the production of weapons, if necessary. We don't even have the proper capacity to build battleships anymore. It would be rather easy for the government to work with the private sector to help maintain factories capable of producing military materials that would be required at a wartime pace.
- We also lack sufficient labor necessary to do everything outlined above. It can take up to six years to train workers on the complex skills that are needed to manufacture this equipment – and we don't have six years.
- We need to immediately restructure some of our trade and supply chains. Surprisingly, many of the essential items we would need in case of war would come from potential adversaries. These products range from rare earths to penicillin and other pharmaceutical ingredients to certain types of steel, semiconductors and even some manufactured components. We need to use all of the tools at our disposal to do this as expeditiously as possible.
- Taking the proper unilateral actions on very targeted investment and export restrictions (chip making equipment, advanced chips and other hard-to-duplicate technology used for military purposes) is essential. However, we should only expect these kinds of actions to slow down our competition, not necessarily stop it.
- Finally, the extraordinary science that comes out of our national labs and our exceptional universities has been critical to creating and maintaining our scientific discoveries and advances, which have not only fueled America's economy but have also maintained our military superiority. There are lots of complaints – some legitimate – about America's elite universities, but this cannot and should not be one of them.

Protecting our country goes way beyond just the military and includes, among other items, grid security, data centers, communications and cybersecurity in general.

Foreign policy is realpolitik.

America's alliance system is the foundation of our geopolitical advantage and is the special sauce of American leadership. Foreign policy must be grounded in realpolitik – a pragmatic approach that prioritizes national interest over ideological considerations. Realpolitik means that many decisions are properly subordinated to national security. For example, while addressing global challenges, like climate change, is important, such efforts should not overshadow the strategic imperatives of our foreign relations.

We need to bring our allies along and help them build their own capabilities. A weak Europe is ultimately very bad for America. Among other things, our allies need reliable, safe, secure and affordable energy – or they will be in a terrible position. Diplomacy and our economic relationships, including trade, are a critical part of maintaining these alliances. While we should educate other nations about the virtues of our values, we should stop lecturing – we don't need them to have all our values, but we do need them to be strong allies.

II. A Compendium of Critical Domestic Policies to Drive Growth, Opportunity and Well-Being

We should do everything we can to drive healthy growth in the economy. By doing so, we create the resources to constantly reinvest in our country, and we create the conditions to promote greater opportunity and well-being for all our citizens. In this section, I describe nine critical policies that I believe are essential to making our economy strong – putting us in the best position to deal with any issue in front of us, economic or geopolitical, and guaranteeing our ongoing military and economic predominance.

In compiling this list, I tried to look at the United States as I would any large complex company that we might acquire. (Of course, our country is much more complicated than any one company.) A full assessment of all critical issues allows you to develop a game plan. The issues I've highlighted – and there may be more – are those that I believe are holding us back and causing much of the "grievances" I wrote about in the first section. In all cases, I tried to be practical in my approach, and, in some cases, I offer ideas for potential fixes.

I tried to look at this without regard to how positions might be labeled; i.e., conservative, liberal, progressive, red or blue. Whether my views are right or wrong, it is critical that we start to fix that which is broken.

Government as a whole needs to demonstrate to the American public that it is effective, efficient, competent and principled – as any institution should do – in developing policies that are conducive to maximizing long-term growth, jobs, competitiveness and fairness – without micromanaging the economy.

The government, like all institutions, should continuously prioritize and allocate resources to streamline its operations and reduce red tape to improve service delivery, enhance responsiveness and achieve cost efficiencies. Every department should focus not just on the amount of money spent but on what it expects the outcomes should be, what the outcomes actually are and how it can deliver more at a lower cost.

Instead, we have a broken bureaucracy that fails to fully acknowledge or effectively deal with our biggest problems. Even worse, the power of the government over the years has been used to attack parties, businesses and individuals, particularly those not in favor by the party in power. This needs to stop. It begins by always reminding the American public about the founding principles of the United States of America – the principles embedded in our Declaration of Independence and the Constitution – liberty, freedom, individual rights and justice for all.

The economic machine is extraordinarily complex. We need to focus on proper policies that are ***conducive to growth***. Micromanaging coupled with misguided, ill-informed policies not based on reality and pragmatism often have huge unintended consequences. People frequently twist accurate data with bad logic to kill good policy. Many times, it is easier to throw money at a problem, mostly on the demand side (i.e., spend more money), than to formulate good policy or spend money appropriately to help the supply side. Good supply-side policies, such as those promoting job creation and infrastructure development, are critical to achieving productiv-

ity and, therefore, to maximizing long-term growth. While innovation is the cosmological constant always driving growth, sometimes its downside is used to block it. This is a huge mistake. We should foster innovation and then create policies that help those who are negatively affected.

WE NEED CONSISTENT AND RESPONSIBLE TAX AND FISCAL POLICIES.

America could benefit from a bipartisan, binding mechanism to achieve fiscal responsibility, similar to a Simpson-Bowles type of commission – but with real congressional authority. Some countries, such as Sweden, have implemented a fiscal policy framework with specific guidelines. Sweden's framework establishes a debt-to-GDP ratio of 35% plus or minus 5%. This allows the country to run deficit financing at the same rate as its economic growth and still maintain a debt-to-GDP ratio of 35%. Adhering to this kind of consistent fiscal standard makes it easier to manage the country in general. The United States should eventually establish similar guidelines that would make it easier to run this "ship of state" and reduce the uncertainty that results from constant flip-flopping between sometimes radically different fiscal policies.

Additionally, we should eliminate the debt ceiling. The debt ceiling is essentially a "weapon of mass destruction" that can be misused by politicians who don't understand the damage it can do. It's hard to even contemplate the harm that would be done to the trust in America and in our economy if we actually failed to meet our debt obligations.

We must learn to account for investments differently from the way we account for expenses, particularly in areas such as infrastructure.

The lack of proper accounting by the U.S. government is astounding and is almost laughable. Unfortunately, the practice drives terrible decision making. For example, in determining the deficit, the government treats investments in infrastructure (roads, hospitals, ports) the same way that it treats expenses. But we should put them in completely different budgetary categories. Good investment spending has long-term productivity benefits that many expenses do not. The United States now spends only 0.55% of its GDP on infrastructure. The OECD average is at 0.81%, and China's is a staggering 5.56%. We need to spend more money on productive infrastructure, not less. Borrowing to invest is fundamentally different from borrowing to consume.

The government also makes a lot of loans, but it doesn't have to account for them in the same way that a bank does – which makes bad lending easy to do. For example, the government continues to extend a significant amount of student loans with improper or no underwriting. When the student loan system was taken over by the government in 2010, loan losses had been reasonable, and loans outstanding were $750 billion. Through the magic of government accounting, the government actually forecasted more than $60 billion in profit from when they took over the program. Thirteen years later, the outstanding debt from student loans has more than doubled to $1.6 trillion, and we estimate that the government has lost, with proper accounting, at least $500 billion. Yet the government continues to make many of these bad loans.

The stakes are even higher regarding the government's control of two of the largest financial institutions in the world, Fannie Mae and Freddie Mac, whose combined assets of $7.7 trillion largely represent mortgages these organizations have guaranteed. It is incumbent on our government to properly manage institutions like these to protect U.S. taxpayers from tremendous losses (they lost $265 billion in the great financial crisis) and to shield U.S. and global economies from severe damage.

To make the U.S. tax system conducive to economic growth and job creation, we should incorporate these overall objectives:

- Be agnostic to specific industries, setting aside favoritism.
- Offer a system that is stable with standards consistently applied.
- Ensure that our practices keep the United States competitive with other countries.
- Provide effective incentives for growth and innovation.

The 2017 Tax Cuts and Jobs Act (TCJA) took significant steps toward achieving these goals by (1) broadening the tax base, (2) reducing the federal corporate rate to 21% (which is approximately the OECD average) and (3) reforming the international tax rules. The first point is sometimes forgotten: While the reduction of the headline tax rate from 35% to 21% was projected to reduce corporate taxes by $1.4 trillion (over 10 years), the broadening of the base offset $1 trillion of that reduction. Regarding international tax rules, a key part of that reform was the removal of gimmicks that allowed U.S. corporations to indefinitely defer tax rules on their overseas earnings. As a result, our international tax system strikes about the right balance between recognizing the importance to U.S. companies of serving overseas markets while not incentivizing them to move capital, skills and R&D outside the country.

Although there is certainly room for improvement, overall, the changes made by the TCJA recognize that reducing and rationalizing taxes on business income are critical to spurring economic growth and producing more "bang for the buck" than cutting taxes on individual income. Importantly, these reforms benefited most Americans. In the first two years after the TCJA went into effect, we saw real median income rise more than in the previous 10 years and the lowest unemployment rate for adults without a high school diploma.

In the year following enactment, we also saw GDP growth of 3% and a 20% increase in domestic investment for affected firms. Corporate taxes paid have risen to record levels – not because the tax burden on corporations was increased, but because corporations were more profitable; they were doing more business, hiring more people, making more investments. None of this would have been possible without a competitive corporate tax rate.

Our Internal Revenue Code can be further amended to incentivize growth and ensure a fairer tax system overall.

On the first point, our tax system should provide effective incentives for growth and innovation to support entrepreneurs and small businesses. Two such examples were in the tax code for decades before Congress recently phased them out: (1) recognizing the importance of capital investments and (2) increasing expenditures for R&D. Both are proven ways of growing the economy and creating jobs.

As to ensuring a fairer system, there are still numerous provisions for Congress to go after. On the business side, the rules intended to prevent artificial shifting of taxable income outside the United States need strengthening and a number of specific industry tax breaks need eliminating. On the individual side, there are also many tax breaks that primarily benefit a certain segment of the population: the wealthy. These include carried interest, the ability to deduct up to $10,000 of state and local taxes, and too many creative estate tax planning techniques. These tax breaks not only cost revenue but also have the additional stigma of being perceived by the American public as just another example of institutional bias and favoritism toward a special interest group. And consistent with ensuring a fairer system, the U.S. tax code should incorporate the "Buffett Rule" so that high-income earners pay a minimum tax on realized income. Everyone, including the wealthy, would benefit enormously from the increased growth that would follow if we amended our system the right way. I think many people would have fewer objections to paying a slightly higher tax rate if they thought the money was being used wisely to attack America's biggest problems.

Finally, the tax code plays an important role in helping to raise up those at the bottom of the economic ladder. This includes incentives to ensure an adequate and affordable housing supply, such as the credit provision for building affordable housing. It's important that any tax credit and social benefit program be properly phased in so that it doesn't dis-incent work. One way the code could incentivize labor force participation is to expand and reform the Earned Income Tax Credit (EITC). The EITC gives an

individual earning $14,000 a year with two children a $5,600 tax credit (and with no children a $350 tax credit). I would almost double this tax credit and remove the child requirement. While this would cost a lot of money, it has many virtues. It would give those with lower income far more money to spend, without government interference, on what they and their families need – education, food, better housing and more. And much of it would be spent locally, in lower-income neighborhoods. It has the virtue of rewarding work, which would grow the GDP. Jobs not only bring dignity but better social outcomes in terms of less homelessness and crime, improved health outcomes and more household formation, among other benefits. For many people, that first job is just the first rung on the ladder of a career. I have little doubt that this plan would more than pay for itself over time. Many Republicans and Democrats support this program as it helps create the American Dream for many people.

OUR EDUCATION SYSTEM IS IN DEEP NEED OF REFORM TO CREATE SKILLS, JOBS AND OPPORTUNITY.

Much of our education system no longer truly meets our country's promise that its students graduate with the skills they need to attain a good job. The American Dream itself rests upon our providing, as best as we can, equal opportunity to all our citizens. Education and jobs are still the best way to achieve this. That certainly can't happen when so many of our schools are not working.

In a number of our inner-city high schools, under 50% of the students graduate, and those who do often don't have the skills they need to hold a well-paying job. Increasingly, poverty has become intergenerational.

The growth of America was always driven by productivity that matched capital investment with skills, which is also the driver of individual incomes. Fortunately, all we need to do is reorient what we do today. No investment is required. It is essentially free; we just need to redirect existing resources (the United States spends almost $1 trillion a year on K-12 education) into better outcomes.

Let's begin with a refresh of our country's workforce training system.

Effective workforce training systems that align education, training and the private sector are necessary for securing well-paying jobs. There are many successful examples, but one will suffice. Aviation High School in Long Island City, New York, teaches its students not just the basic high school curriculum but also how to maintain small aircraft; i.e., hydraulic, engine and electrical systems, and other technical skills. Some students travel several hours a day to get to school, and often parents are the driving force behind their child's enrollment. The school graduates about 450 students annually, many of whom go directly into the aviation field. These young people are currently earning in the range of $80,000 a year (not including overtime) from major U.S. airlines who are in desperate need of these types of skilled workers.

Schools like this are the template we need to follow, modernizing education and workforce development programs to be responsive to current workforce needs. The advent of AI and technological change will require lifelong learning and re-skilling. Career and Technical Education programs and alternative pathways, such as apprenticeships, earn-and-learn programs and work-based learning, also provide effective career entryways.

Reforms to credentialed programs could also increase access to careers with a future and reward experience. We know exactly what to do, though systems change is hard. There are millions of jobs available for which training could be done in high school, community college or special programs outside of school. For example, there are training programs lasting 12-24 weeks

in coding, advanced manufacturing, cyber, data science, program management, and nursing and healthcare-related areas. These trainings should be certified and counted as credits for undergraduate or graduate education. Many unions run excellent apprenticeship and training programs that certify workers for badly needed high skilled jobs like welding, electrical work, plumbing and others. These jobs can pay well in excess of $100,000 a year.

Two other points: Pell Grants, which are government grants awarded to students to help pay for eligible two-year or four-year colleges, should be available for work credential programs. In addition, the Workforce Innovation and Opportunity Act should be reauthorized to support Second Chance initiatives that give returning felons an opportunity to receive training to re-enter the workforce.

Higher education costs too much and is insufficiently linked to outcomes.

Many people who graduate from college are successful not solely because of their college degree. Their opportunities stem from their socioeconomic circumstances – how and where they grew up – which offer them knowledge, confidence, and often internships and relationships within the workplace that give them a leg up. Even with all of that, over 30% of those who obtain college degrees face underemployment; i.e., low-paying jobs. They, too, need skills. You can major in philosophy or history, but a credential of value in coding, data science and analytics, graphic design, financial accounting, digital marketing or engineering can lead to jobs making $80,000+ a year.

Some portion of higher education funding should be linked to outcomes focusing less on graduation and employment rates and more on income levels of graduates.

The federal student lending system needs to be reformed to help ensure that the borrower's education is leading to a good-paying job. This would be better for the student, would reduce future loan losses and would discourage simply driving education costs up.

Early childhood education is critically important (it's a long-term investment so start now).

Early childhood education is a long-term investment so it is important to start now. Universal pre-K and other early childhood programs enhance educational outcomes and increase parent labor-force participation. Almost every study I have seen shows the tremendous return on this investment (some even showing two to four times for every dollar invested) even though it appears as a cost in the early years. Included among the positive outcomes for both the parent and the child are early childhood education and higher levels of income, good health and parental employment.

All students should receive a basic financial education.

Financial education should be taught as part of the K-12 education system. Everyone, and in particular our young people, should understand the basics: the need for a rainy day fund, how to look at savings, the value of a checking account (versus payday lending), the value of homeownership, the importance of saving for retirement and other basic principles. Specific financial coaching delivered simultaneously with opening a first bank account would also be very effective.

Teaching health and well-being in grades K-12 would benefit all our citizens.

A basic understanding of health, exercise and nutrition would be a huge benefit for our society. Ninety percent of our nation's $4.5 trillion in annual healthcare expenditures are for people with chronic conditions (certain cancers, heart disease, diabetes, obesity, musculoskeletal disorders and mental health). Preventive medicine and early interventions to manage these diseases, especially those directly related to behaviors (smoking, drinking, poor exercise and nutrition) can have significant health and economic benefits. One small but meaningful example: Cigarette smoking costs the United States more than $240 billion in healthcare spending. This could be reduced every year if we could prevent young people from starting to smoke and help those who do smoke to quit.

WE MUST REMEDY THE HEALTHCARE SYSTEM, BOTH TO REDUCE COSTS AND IMPROVE OUTCOMES.

America has among the best and worst of healthcare. While we may have the best doctors, hospitals, pharmaceutical industry, medical devices and more, our average outcomes are not good, and our costs are double those of our global competitors (17% of GDP versus 9% in other countries). In addition, 27 million people don't have insurance, and, as mentioned above, preventable chronic diseases run rampant. Our healthcare system also lacks transparency around costs, pricing and proper incentives since the user never effectively pays the full price. We need to begin reform right away.

A few simple **policy** changes would go a long way toward improving all of this:

1. Healthcare data should be tabulated in a consistent way across all healthcare organizations and providers.
2. All healthcare data should belong to the individual and, therefore, be transferable (and not used for unauthorized purposes by anyone).
3. Increasing transparency for both the companies and the patients is essential, ensuring clarity about the cost of care. Additionally, patients should understand what their medicines will cost them and be eligible for volume discounts, including rebates.
4. Healthcare would be more affordable if the exchanges were national and offered a broader range of insurance options people could buy.

Better data and more consistent standards across Medicare, Medicaid and commercial markets are needed, with transparency and elimination of fraud and waste being key to stabilizing markets and portability being important for empowering patients.

Engaging employees by prioritizing health education and literacy can help make them informed consumers of healthcare and wellness. Addressing the significant problem of medical bankruptcy in the United States is crucial, and medical bills should not be calculated as part of credit scores.

One day, individuals should be responsible for purchasing their own healthcare. Healthcare should not be an annual purchase – you should be able to make a long-term buy, which means you would be the beneficiary of taking care of your own health.

One final point. Over the last 100 years, the health of our citizens and our workforce has played a significant role in increasing productivity for American workers. Some studies show that over the last 25-30 years, this may have accounted for as much as 45% of productivity growth over time. Healthier workers and the participation of older workers (due to their accumulated knowledge and wisdom) are the main reasons.

WE CAN IMPROVE EFFECTIVE REGULATIONS WHILE REDUCING CRIPPLING RULES, DEMORALIZATION, AND ARBITRARY AND EXPENSIVE LITIGATION.

I don't even know where to begin! How did the can-do, commonsense practical America end up here? Clearly, something is broken. We have gotten to the point where we barely talk about improving our regulations. We only talk about adding more – contributing to endless, mind-numbing and demoralizing bureaucracy. Studies show that the cost of our regulations (which do have some productive outcomes) is over $3 trillion annually. J.P. Morgan Global Research estimates that relative to the United States, more restrictive regulation reduces long-term growth in the five largest European Union economies by 0.8% per year, and in China by 2.4% per year. These regulations are at the federal, state and local levels, and they affect every industry and business, small and large. They range from permitting and licensing to employment rules and tax compliance (and much more). Each of these rules could easily be fixed. Take permitting, for example. Various regulators, state and federal, should be forced to approve projects sequentially. Some countries (Singapore and Canada) have rules to reduce permitting timelines substantially to two years or fewer (ours can take over 10 years). Regulations shouldn't be like concrete (immovable) – they should be constantly improved. U.S. law already requires major rules and regulations to

have a cost-benefit analysis done – this needs to be **fully enforced**. There are hundreds of rules to fix. Often these regulations are targeted at the financial and technology sectors, whose industries help drive our dynamic economy.

The cost of our tort system is over $500 billion a year, a little more than 2% of our GDP. While the tort system plays an important role in compensating victims and deterring irresponsible behavior, our system is capricious and arbitrary. Since the loser never pays, there is a great incentive for someone to sue and for the person being sued to settle. Much of the compensation never even gets to the victims. These costs are **two-and-a-half times** the average level of eurozone countries. One example of a major improvement would be Florida's recent reforms, which seem to have both reduced the excessive cost of torts to the system while giving people better odds of proper recompense.

These excessive regulatory and litigation costs result in higher costs across the whole economy, including infrastructure, utilities, education and other essentials. Proper federal, state and local regulations, along with permitting reform, are necessary to reduce delays and litigation. Minimizing red tape would make it easier, cheaper and faster to build infrastructure such as roads, schools, bridges, energy facilities and homes. A little common sense would go a long way.

One last point: Excessive regulations make it much harder to start a new business, and they often reduce competition. And they almost always hurt smaller companies more than larger ones.

WE COULD DO A BETTER JOB SUPPORTING SMALL BUSINESSES.

Small businesses power job growth in America – they account for two-thirds of new jobs and employ nearly half of the American workforce. Our entrepreneurial ecosystem has been the envy of the world for generations, and it is essential to create a policy environment that facilitates small business creation, growth and continuity.

Business starts have been above-trend for several years, but the failure rate remains high – 50% fail in the first five years. Public-private partnerships can help fill the capital gap in the white space between venture funding and bank lending.

Small business owners in low-to-moderate income areas face more headwinds than those in wealthier communities, so tax benefits and community education programs play an important role in helping communities lift themselves up through commerce. While banks will remain a critical supporter of small business in their growth phase, the Small Business Administration's role is crucial and agency modernization must remain a priority, including reforms to the Small Business Investment Company program and the National Technical Assistance program.

Finding qualified talent is the #1 challenge facing small businesses owners, and nearly 40% of them have job openings that they can't fill. Public partnerships with trade schools and community colleges can increase the supply of skilled labor. As mentioned in the education section, there are many ways to increase the supply of skilled labor.

Innovative healthcare legislation can reduce healthcare costs and help small businesses compete with larger employers for talent.

Just like for larger businesses, there is a need for predictability in tax policies, litigation processes and the EITC – over 15% of small business owners cite these issues as their most pressing problems. Many small businesses face a heavier burden from state and local regulations than from federal ones so seeking best practices from multiple jurisdictions to streamline requirements can support business operations and growth.

Finally, we must prepare for the coming "silver tsunami" in small business – 75% of business owners would like to exit their business in the next decade, representing trillions of dollars in business wealth at stake. There will be substantial turnover in small businesses in the next decade, and we must prepare the next generation with the skills and passion to take the baton. Local communities can help protect their tax and employment base by investing in succession and transition education programs.

WE SHOULD HAVE PERMANENT PLANS TO CONSISTENTLY DRIVE THE BUILDING OF GREAT INFRASTRUCTURE.

Every state, city and municipality should have multi-year infrastructure plans. Improper planning and ineffective execution are rampant, costly and potentially dangerous. Waiting for bridges to be near collapse or airports to be overly crowded is a bad idea. This planning could include manufacturing sites, maritime, grids, housing, pipelines, canals, broadband and highways, to name but a few.

WE CAN MAKE IT EASIER TO BUILD A MORE AFFORDABLE HOUSING SUPPLY.

To address the housing supply issue, it is important to increase funding for effective, affordable housing production programs. This can be partially and easily achieved by expanding the already successful Low-Income Housing Tax Credit programs. Additionally, incentivizing investments that increase economic opportunity in disinvested communities is crucial, and making the New Markets Tax Credit program permanent would support this goal.

In terms of mortgages, reducing unnecessary regulations would decrease homeownership costs. Streamlining loan origination and servicing standards, reducing capital requirements and simplifying securitization rules would reduce the cost of mortgages without making them riskier. These simple reforms could lower the cost of mortgages by 70–80 basis points. The costs of unnecessary regulation go beyond price - they impact the availability of credit and who can qualify for a mortgage. The Urban Institute estimates that a reduction like this would increase mortgage originations by 1 million per year and help lower-income households, in particular, buy their first home. This would specifically help individuals buy homes in the $150,000–$300,000 range. Buying a home, still a pillar of the American Dream, is simply the best way for individuals to start building household wealth.

Good and consistent local zoning requirements – that are executed with a sense of urgency – are essential in building more affordable housing. Finally, the availability of more housing, particularly lower-income housing (it's generally more economical to build denser housing than detached housing), would help people move out of rental properties sooner and reduce rents for those who do continue to rent.

WE CAN STRENGTHEN OUR FINANCIAL SYSTEM AND MARKETS.

While we have the best financial system in the world, it can always be improved. And of course, our financial system should have good consumer protections to prevent Americans from being tempted to purchase bad products or being misled, as well as strong regulations to protect the country from the failure of financial institutions. Since the great financial crisis (the financial system deserved a lot of the negative attention it received), we've made many improvements to regulations. However, as usual in a crisis, we also overreacted.

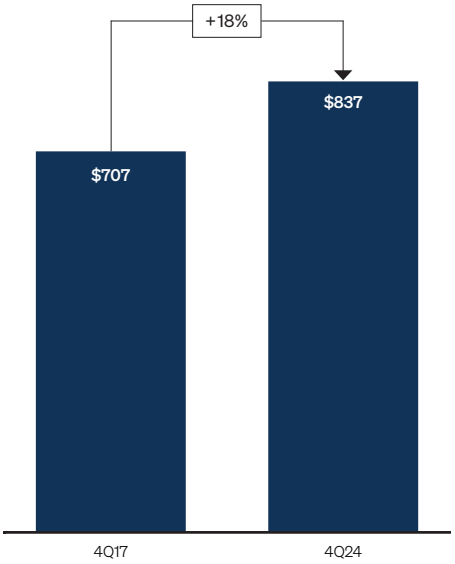
Fundamentally, we need a dynamic regulatory structure that facilitates growth and innovation rather than one that continuously imposes top-down mandates or promotes the constant demonization of corporations and financial services. Shortsighted and misguided policies often sound good politically but usually have unintended consequences that frequently hurt the very people those policies are trying to help. Healthy financial systems are the **lifeblood** of a healthy economy. You only need to look at many countries around the world to see the damage done to their economy by misguided financial policies and regulations. I'd like to suggest a few ways we can make our regulatory system better for all Americans.

We need to improve bank regulations.

It is a completely false narrative that there has been any type of looser regulation on the largest banks since the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) was passed. Capital requirements and other regulations have been on a relentless march upward even as banks have become proportionally

Required Amount of Risk-Based Common Equity Tier 1 Capital for U.S. GSIBs[1]

($ in billions)



1 Represents fully phased-in requirements; risk-weighted assets as of 4Q24

Sources: Company filings of Bank of America Corporation, The Bank of New York Mellon Corporation, Citigroup Inc., The Goldman Sachs Group, Inc., JPMorganChase, Morgan Stanley, State Street Corporation and Wells Fargo & Company

GSIB = Global systemically important bank

smaller within the financial system (see chart above). All of this makes banking and banking services (loans) not only more expensive but less available; these costs eventually will be passed on to the consumer and businesses and result in a slower-growing economy.

Dodd-Frank did do some good things, mostly by improving capital and liquidity requirements and by creating resolution mechanisms for failed investment banks. But even for the regulators, Dodd-Frank set up a balkanized and dysfunctional regulatory system with too many cooks in the kitchen. This is hard for the regulators as well as the banks – not only does it result in excessive and duplicative regulations, but it also makes it more difficult for regulators to be responsive and nimble in a rapidly changing environment. You might ask why has it taken 10 years to finish Basel III?

The enormous rules and regulations by multiple regulators that make up the Comprehensive Capital and Analysis Review (CCAR) stress test and examination are tens of thousands of pages long; our most recent Resolution and Recovery plan was 80,000 pages long; and the regulations around global systemically important banks (G-SIB), liquidity, trading and operational risk have proved to be absurd and even harmful. Many of the tests we are required to perform are not even remotely accurate in measuring true risk – and this causes distortions on how and when capital is allocated and creates large opportunities for unnecessary arbitrage.

The CCAR stress test, in particular, is highly flawed. While it essentially repeats the conditions during the great financial crisis, it does not take into account any of the structural improvements to regulations, underwriting and product offerings since then. The reported results of the test do not come close to anything that would actually happen if the hypothetical scenarios were to happen – they unfairly misled the true strength of the banks. The numbers are simply inaccurate. It would be far better to perform accurate testing, and then if the regulators wanted to add conservatism on top of that, they should do so prudently and transparently. I have mentioned many times before that we conduct hundreds of stress tests a week to protect ourselves from a wide range of possible bad outcomes – not just the CCAR scenarios.

The supplementary leverage ratio and G-SIB capital rules also treat U.S. Treasury securities and repurchase agreements as far riskier than they actually are. And the liquidity coverage ratio treats all other securities and loans as riskier than they are. These rules effectively discourage banks from acting as intermediaries in the financial markets – and this would be particularly painful at precisely the wrong time: when markets get volatile.

So now is a good time to go back and ask **basic** questions that **should** have been asked before and, in fact, were required to be asked by legislation: What is the cost/benefit of these rules, and what is the interplay between them? What do you want the expected outcome to be? For example, do you want mortgages and leveraged lending outside the banking system? Many of these rules incent capital and even companies

Size of the Financial Sector/Industry

($ in trillions)

			2007	2010	2024
Banks in the financial system	Global GDP[1]		$ 58.6	$ 66.7	$ 110.1
	Total U.S. debt and equity market		$ 54.3	$ 56.0	$ 154.9
	Total U.S. broker-dealer inventories		$ 6.2	$ 4.1	$ 5.3
	U.S. GSIB market capitalization		$ 0.9	$ 0.8	$ 1.8
	U.S. bank loans		$ 6.5	$ 6.6	$ 12.7
	U.S. bank liquid assets[2]		$ 1.5	$ 2.8	$ 7.4
	U.S. treasuries outstanding		$ 9.2	$ 14.0	$ 36.2
	U.S. primary dealer inventory		$ 0.4	$ 0.2	$ 0.5
Nonbank financial institutions	Hedge fund and private equity AUM[3]		$ 3.1	$ 3.4	$ 11.0
	Top 50 sovereign wealth fund AUM[4]		$ 2.7	$ 4.1	$ 13.5
	Global private credit AUM[5]		$ 0.2	$ 0.3	$ $1.6
	Global venture capital AUM[6]		$ 0.3	$ 0.4	$ 3.1
	Global family office AUM		NA	NA	$ 3.1
	Loans held by nonbanks[7]		$ 15.3	$ 13.8	$ 21.9
	U.S. money market funds[8]		$ 3.1	$ 3.0	$ 7.2
	U.S. private equity-backed companies (K)	1996	4.9	6.0	11.8
	U.S. publicly listed companies (K)[9]	7.3	4.6	4.2	4.0
	Nonbank share of mortgage originations[10]		12%	9%	75%
	Nonbank share of leveraged lending[5]		44%	54%	68%

Sources: Assets and Liabilities of Commercial Banks in the United States H.8 data, Bloomberg, Dealogic, Deloitte, FactSet, Federal Reserve Bank of New York, Federal Reserve Board, Financial Accounts of the United States Z.1 data, Hedge Fund Research, Inside Mortgage Finance, International Monetary Fund, Pitchbook, Preqin, Sovereign Wealth Fund Institute, S&P Global Market Intelligence and World Federation of Exchanges

AUM = Assets under management
GDP = Gross domestic product
GSIB = Global systemically important bank
NA = Not available
K = Thousands

For footnoted information, refer to page 59 in this Annual Report.

to be private as opposed to public. Financial risks have grown dramatically outside of the banking system, where there may not be the same liquidity or transparency. We have created large and sometimes leveraged arbitrage opportunities. Similar products now have completely different rules and requirements. The chart above shows the extraordinary growth in nonbank institutions and in private credit and private companies. Is this what we wanted?

Additionally, we have not adequately understood how the extensive changes that regulations had on loans and liquidity affected money supply and monetary policy and, therefore, the growth of the economy. Banks used to lend out nearly 100% of their deposits, and now they lend approximately 70%. Before the great financial crisis, banks had less than 15% of their assets held as liquid assets, and they now hold over 30%. If that capital and liquidity, now sitting idle, could be put to better use driving the economy without creating additional risk, shouldn't we do this? Again, what is the effect of all this, and is this what we wanted to achieve?

I do believe if we take a proper re-look, we can create more liquidity in the system and more clarity in resolution, eliminate most bank runs and reduce the cost of any bank failure, increase the amount of credit while lowering its cost, simplify regulations and improve access to banking for the unbanked – all the while maintaining a safe and sound banking system. Shouldn't those be our collective goals?

One final point: If all these rules ended up being properly modified, JPMorganChase would be in a position to extend, over time, **hundreds of billions** of dollars in extra lending annually. Many other banks would be in the same position.

We need to improve our retirement system.

In 1980, 84% of our country's private workforce had access to defined benefit plans versus 15% today. At present, 85% of the private workforce has access to defined contribution plans only, mostly 401(k)s. Defined benefit plans give individuals a known and guaranteed income that supplements their Social Security benefits, while employers invest the pension funds' capital to generate long-term returns and manage asset-liability risk.

Currently, many people are not prepared to deal with self-directed retirement plans, such as 401(k)s: They don't necessarily know how to invest the money; and they don't know how long they will live in retirement. Defined benefit plans address these concerns by transferring the investment risks and the mortality risk from the individual to the company.

Nonetheless, significant progress has been made to enhance the defined contribution system's effectiveness for individual savers. Enrollment is now the default option while employer matching has become the norm, and professionally managed target date funds offer a simple age-based model of investing. A young worker today will have a much better chance of reaching a successful retirement outcome than previous generations.

401(k) plans still have room for improvement. They should become more cost-effective and simpler to use for both employers and individuals. For example, 401(k)s should be portable when workers change jobs, and offered in a standardized form that can be used by multiple small businesses. Finally, and this is happening now, these plans should be designed with features that make them more like defined benefit plans.

We can learn some valuable lessons from how other countries balance adequate contributions, professional investing, simplified structures and tax efficiency. Australia has an excellent retirement system in which employers effectively contribute 12% of ordinary pay into an account that is invested by professionals; the funds are available to the employee upon retirement. In Sweden, an investment savings account is available that simplifies the investing process with favorable tax treatment. Account holders can deposit and withdraw funds at any time, and there is no capital gains tax – just an annual tax of 1% on the balance. This has dramatically increased investment by retail investors into the Swedish stock market.

The decline of the defined benefit pension system was fueled by funding rules that can affect cash flow and sometimes credit ratings, along with **accounting** changes for corporate plans that can create huge volatility in a company's earnings and balance sheet. America's critically important retirement policy should not have been undermined by accounting rules. For the defined benefit pension system to remain a viable component of our retirement system, we should return to a model that does not penalize pension funds for taking some investment risk.

Guardrails are necessary: We need clear rules that ensure pensions are properly funded and transparent so that participants have confidence in the system and the burden isn't transferred to taxpayers (roughly $70 billion has been paid to struggling defined benefit plans under the American Rescue Plan's Special Financial Assistance program). A well-funded pension plan offers an investment-supported, tax-advantaged mechanism for employers to deliver retirement benefits cost-effectively.

We need to encourage public markets.

Our public markets have been shrinking dramatically, which I do not believe is a good thing. The number of public companies has gone from 7,300 in 1996 to 4,000 today – it should be 15,000 today. This situation is the result, I believe, of a combination of factors: costly regulation and listing requirements; litigation; frivolous shareholder meetings; interference by non-governmental organizations; irresponsible, not-shareholder-friendly and misguided proxy advisors; lack of research for smaller companies; and cookie-cutter compliance requirements for boards, among others.

Regulations should encourage, rather than discourage, companies to go public. We can achieve a more active market for small companies by allowing investment banks to sponsor smaller companies with research and market making. This could be accomplished by reducing the cost of listing, enacting tax policies that favor equity investment and allowing more flexibility in listing (e.g., dual voting, simpler disclosures, reduced proxy access, smaller boards). Litigation would need to be kept to a minimum to allow this to take place. Sweden is an example of a country with a thriving stock market due to reforms made along these lines.

Finally, these changes would not only make it easier for companies to be public but would also improve capital access and create more innovation and, therefore, propel more economic growth. And great investments would be available to the average retail investor.

LOCAL DEMOCRACY WORKS: LET IT SHINE AND LEARN FROM IT.

In their book ***Our Towns***, James and Deborah Fallows describe their visits to dozens of small cities and towns across America (the largest being Columbus, Ohio) in 2019 to see what was happening outside of major cities. What they learned was this: Local democracy works and is not nearly as polarizing as reported in major media outlets in big cities. Local businesses, mayors and civic societies work together to create jobs, improve schools and enhance their community's quality of life (parks, river walks and other amenities). People generally collaborate, treat each other with respect and attack their local problems. Universities are often a critical part of this equation. What Mayor Mike Duggan did to turn Detroit around is an unbelievable example of what can be done in a major city. These cities fix their local problems: They experiment, they learn and they eventually win. Small democracy works – and we can learn a lot from it.

III. Specific Issues Facing Our Company

The last five years have been a period of significant growth for us – as evidence, we added more than 60,000 people to our workforce. While we have been very successful during this time, which was complicated by the pandemic, we allowed some bad habits to develop. Working from home exacerbated the situation by hindering innovation, slowing decision making, inhibiting information sharing, reducing efficiency, and creating more politics and bureaucracy. In the next section, Management Learnings, and in the letter by our Chief Operating Officer, we talk about various ways we seek to keep our company healthy and some specific efforts we are making to maintain our grit, our edge and our efficiency – all while keeping a keen sense that our competition around the world is always gaining. Here I outline how we are dealing with particular business challenges.

WE TAKE A LONG VIEW IN DEALING WITH OUR EXCESS CAPITAL.

Depending on what happens with all future regulations, we have somewhere between $30 billion to $60 billion in excess capital. While this is a nice problem to have, it does require some explanation on how we plan to deal with it. We aim to maintain a very secure dividend of 30% to 35% of current earnings. When it comes to capital deployment, our first priority has always been to invest in organic growth – as growth with good returns is the greatest value driver. Our second priority would be to use that capital for acquisitions, but, for a variety of reasons, we find it hard to imagine a sufficiently compelling large-scale acquisition at this time. Our last priority would be to buy back stock. We believe that buying back stock should benefit ongoing shareholders rather than simply returning cash to exiting shareholders. Therefore, buying back stock, which might be a no-brainer at one times tangible book value, becomes a stretch above two times the tangible book value. This explains why our stock buyback program has not used up all of our capital generation and why our equity capital has grown. We are very patient, and don't believe that there is any magic to the next 12 months, and, therefore, we look at excess capital as earnings in store or reserve – waiting to be used.

After reading the first section of this letter about the state of the world and the many risks facing the global economy, we hope you can see why we also believe that now is a good time to retain lots of extra capital and liquidity.

WE BRING AN INVESTOR/OWNER MINDSET TO DRIVE ORGANIC GROWTH.

We are very fortunate to be able to drive organic growth in virtually every part of our company – and at healthy returns. Organic growth is hard, but it's the best way to drive long-term, sustained shareholder value. You can read about many of these initiatives in the CEO letters of this Annual Report. Suffice it to say, organic growth involves adding bankers, branches, technology, products, services and countries virtually everywhere (we opened two new branch offices in Africa this year: in Kenya and Côte d'Ivoire). I had the privilege of visiting Kenya in 2024 with two of our senior executives who grew up there – it was quite moving to meet their families – both to see how important it is for Kenya to have JPMorganChase in their country and to see the great American story of how America can attract, train and develop great talent. You couldn't help but be moved to see the pride on the mothers' faces for their son's and daughter's achievements and the tears of joy in their eyes.

The CEO letters cover our new affluent client drive following the acquisition of First Republic, new payment systems, enhanced development finance efforts, private credit and our huge new efforts around the growing Innovation Economy. Our great economies of scale allow us to invest and compete – with much of our growth driven by technology builds of new products and services. We are constantly assessing the land-

scape and do expect lots of competition from existing competitors and fintech companies. We need to be as nimble as they are and use our skills and capabilities to stay ahead.

OUR LARGEST RISK IS GEOPOLITICAL RISK.

You have already read about the high and growing geopolitical and global economic risks. We constantly evaluate various potential outcomes (tabletop exercises) to ensure we can handle a range of scenarios. One of the largest risks we face is cyber attacks, both directly on our bank and on critical infrastructure; e.g., energy, communications. We also look at other potential large risks, such as war, hybrid and cyber warfare, energy disruptions and ongoing global threats, among other dangers. When we look at these various scenarios, we try to analyze and make sure we can handle not just the immediate effects on our company but also the secondary and tertiary impacts: effects on clients and potential dramatic repercussions on markets and the global economy. While we are not predicting or even expecting some of these terrible events, we believe that it is our job to be a source of strength, particularly in the toughest of times.

WE'RE NOT IN KANSAS ANYMORE: ECONOMY, INFLATION, INTEREST RATES, ASSET PRICES, TRADE WARS, OH MY!

The United States has had a rather healthy and steady economy for years, although it was already weakening as I began writing this letter – and that was before the recent tariff announcement

The economy is facing considerable turbulence (including geopolitics), with the potential positives of tax reform and deregulation and the potential negatives of tariffs and "trade wars," ongoing sticky inflation, high fiscal deficits and still rather high asset prices and volatility.

Before I get into some of these issues, there is a really big "BUT" about what is considered America's exceptional economic performance: Part of this performance has been driven by extraordinary deficit spending and the quantitative easing that took place. Since COVID-19, the federal government has borrowed and spent almost $11 trillion, and the Federal Reserve bought over $4.5 trillion in securities, creating huge liquidity in the financial system. Some of the results are exactly what you would expect: strong growth, inflation and higher corporate profits due to all the spending. But the U.S. deficit remains very large at just below $2 trillion, or 6.6% of GDP, which is the highest peacetime level ever not driven by recessionary needs (as, for example, during the pandemic). This high U.S. deficit also is associated with large trade deficits and is happening while our debt-to-GDP ratio is already over 100%, which is another peacetime high. The rest of the world has elevated debt levels and high fiscal deficits as well, although few as large as those of the United States. These large deficits are not sustainable – I do not know whether it will cause a real problem in six months or six years – the sooner we deal with it, the better.

Tariffs and non-tariff barriers have always been hotly contested in trade negotiation. Non-tariff barriers come in many forms and have been growing over time (regulatory barriers, government procurement, export subsidies, food restrictions, etc.). Recently, value-added taxes (VAT) have entered this debate. Economists generally see VATs as a tax on domestic expenditures that does not discriminate on the source of spending. But since the VAT does not tax exports, some see them as a non-tariff trade barrier. In any event, their effect on trade may not be very large.

Whatever you think of the legitimate reasons for the newly announced tariffs – and, of course, there are some – or the long-term effect, good or bad, there are likely to be important short-term effects. As for the short-term, we are likely to see inflationary outcomes, not only on imported goods but on domestic prices, as input costs rise and demand increases on domestic products. How this plays out on different products will partially depend on their substitutability and price elasticity. Whether or not the menu of tariffs causes a recession remains in question, but it will slow down growth.

There are many uncertainties surrounding the new tariff policy: the potential retaliatory actions, including on services, by other countries, the effect on confidence, the impact on investments and capital flows, the effect on corporate profits and the possible effect on the U.S. dollar. The quicker this issue is resolved, the better because some of the negative effects increase cumulatively over time and would be hard to reverse. In the short run, I see this as one large additional straw on the camel's back.

I am hoping that after negotiations, the long-term effect will have some positive benefits for the United States. My most serious concern is how this will affect America's long-term economic alliances, as I have written about in the first section.

Our economy also faces the unknown effects of quantitative tightening – you must remember we have never had this much quantitative easing and, therefore, quantitative tightening before. This introduces another element of uncertainty, which, in my view – particularly in conjunction with the restrictions put on market making by primary dealers – will likely lead to much higher volatility in the treasury markets. This higher volatility is not necessarily bad for JPMorganChase, but it is not particularly good for the capital markets. Fortunately, there are many regulatory changes now being discussed that could ameliorate the situation.

While inflation has come down, most of what I see in the future is inflationary: continued high fiscal deficits, the remilitarization of the world and the need for infrastructure investment, including the green economy and the restructuring of trade and tariffs.

Another critical point: All these factors will impact interest rates. While the Federal Reserve essentially controls short-term interest rates, it does not effectively control 10-year interest rates. The Fed can take actions that can affect the 10-year interest rate in the short run, but, ultimately, the 10-year rate will be based upon inflation, the strength of the U.S. economy and expectations of the future value of the dollar, and the supply and global demand for long-term treasuries. All things being equal, the slower the growth, the lower the interest rates, and the higher the inflation, the higher the interest rates.

This tug-of-war can go on for some time, but it's good to remember that in the stagflation of the 1970s, recessions did not stop the inexorable trend of rising rates. While interest rates have come down recently due to the weakening dollar, the risk off trade and the prospect of slower growth, this trend could still reverse.

Moreover, it is worth noting that we enter this time of uncertainty with high equity and debt prices, even after the recent decline. No matter how you measure it, equity valuations are still well above their historical averages. And credit spreads are still near the low end of these same ranges. Markets still seem to be pricing assets with the assumption that we will continue to have a fairly soft landing. I am not so sure.

All of these cross currents and turbulence may take years to play out. It is almost impossible to confidently put them into a quarterly or even annual forecast. We always hope for the best, but we are prepared for a full range of outcomes – lower or higher rates and potentially lower asset prices, all of which could be driven by different factors, including inflation, recession, high capital demand, successful trade negotiations, regulatory and/or tax reform, or adverse effects from ongoing wars. Even with fairly extreme outcomes, our company would remain healthy.

Finally, I would like to close this section by reiterating that I still have an abiding faith in America – the exceptional strength of our innovative economy and our resiliency.

CONSUMER PAYMENTS HAVE BECOME A NEW BATTLEGROUND.

There is a lot of misunderstanding about the value and cost of a consumer checking account. Our consumer bank serves nearly 44 million customers and just over 60 million accounts. It costs approximately $225 for us to maintain an account, of which roughly $150 is a fixed expense. Included among these costs are all the branch expenses, the people expenses and the cost of onboarding accounts (including verifying customers' identity and meeting Know Your Customer and anti-money laundering requirements). They do not include certain litigation costs or the cost of capital, which would add another $1.5 billion or essentially $25 per account. Our consumer accounts also come

with an extraordinary number of services, generally free checking, free direct deposit, superior fraud protection, 24/7 access to call centers, access to cash from branches and ATMs nationwide, free investment accounts, free wealth planning, and free and safe payments, including debit cards, Zelle and more.

Consumers "pay" for these accounts by the bank retaining net interest on deposits, which has averaged around 2.25% or approximately $275 a year per account. However, for accounts with lower balances, which make up the majority of accounts, this is generally around $25 a year. Banks also receive certain fees, such as monthly account fees, overdraft fees and debit card fees, which on these accounts is usually around $100 a year. For these lower balance accounts, our costs to maintain and operate them are far greater than what we make from them.

Debit revenue, which is paid by the third party receiving the payment rather than the consumer, was cut in half due to the ill-conceived Durbin Amendment (the average revenues from debit went from approximately $130 to $60 – this had been a large share of the revenues from smaller accounts). In setting the pricing for debit cards, the government looked only at the cost of the debit card swipe, which is illogical as that assumes a debit card is a separate and distinct product from its underlying checking account. Debit cards are a feature of the checking account that enable consumers to access their funds to pay merchants. Therefore, the true cost of providing debit cards should also include the costs associated with operating checking accounts (e.g., the costs of branches, bankers and so on). Predictably, to make up for their lost revenue, banks had to increase their fee schedules, causing approximately 1 million more individuals to become unbanked. The Durbin Amendment is the only case I can think of where the government determined the pricing between two big industries, in this case banks and retailers.

Retailers now pay banks like ours that are subject to this government-mandated pricing 47 basis points (0.47%), on average, for debit card transactions. This is far cheaper for retailers than debit card alternatives, such as cash and checks, while debit cards also provide retailers immediate guaranteed money and are preferred by consumers. All retailers bear a high cost of processing cash (including defalcation, cash sorting, delivery of cash to a bank, counterfeit funds and higher insurance because of robberies). The cost of processing cash, even for the largest retailers, is probably more than 4% of the payment. It is unfortunate that retailers and banks have been in a battle for years over who should bear the cost of processing money – and that retailers continue to use "lawfare" to get their way. This also makes it ironic that retailers are now adding "buy now-pay later" features as another payment option for their customers, which usually cost the retailer considerably more than processing a debit or even credit card transaction.

Our Consumer Bank lost $500 million from fraud last year – $300 million from losses as a result of customer fraud committed on us (for example, counterfeit deposited checks) and $200 million from reimbursements to customers who were victims of fraud (it is our policy to reimburse 100% of valid fraud claims). Unfortunately, we must also process thousands of scam claims where customers authorized transactions but should not have done so (for example, buying nonexistent products or sending money to fake websites), often because they were misled by bad actors. The loss rate to scams for our customers is amongst the lowest in the industry, and lower than nonbank payment providers. That is because we have made significant investments in fraud and scam detection, as well as prevention capabilities, and believe that our efforts have prevented Chase customers from losing $12 billion. Fraud and scams are a societal problem, and we need law enforcement, retailers, social media, telecom companies and others to work together to stop these crimes at the source.

Now a new battle is brewing: Third parties want full access to banks' customer data so they can exploit it for their own purposes and profits. Contrary to what you may read, we have no problem with data sharing but only if it is done **properly**: It must be authorized by the customer – the customer should know exactly **what** data is shared and **when** and **how** it is used; third parties should pay for accessing the banking system and payment rails; third parties should be restricted from using the customers' data for

purposes beyond what the customer authorized, and they should be liable for the risks they create when accessing and using that data. When banks utilize third party data, they will be, and in most cases already are, subject to these same obligations.

Banks provide fantastic services, and it's time to defend ourselves – in the public realm or in court if need be.

WE DEVOTE SIGNIFICANT RESOURCES TO STRATEGIC INTELLIGENCE TO INFORM CHANGE AND SHARE OUR KNOWLEDGE.

One of JPMorganChase's roles in the global financial system is to educate ourselves and the world about companies, markets, countries and critical economic issues. With a team of over 700 senior analysts, we perform extensive research on more than 5,000 companies and over 75 countries, spanning more than 20 specific sectors. Making ourselves, our clients and countries smarter, including about good public policy, has always been our goal. Doing this effort costs us over $1 billion a year. Given the importance of strategic intelligence, we have added a few critical elements, as follows:

- **JPMorganChase Institute.** Ten years ago, we created the JPMorganChase Institute to deliver unique data and insights to help solve some of our most pressing economic challenges. This information offers a unique lens into the financial habits of millions of small businesses and households, leveraging de-identified and aggregated customer data that represents half of U.S. households. The Institute's data and analyses have helped policymakers better understand the impact of decisions – ranging from student loan relief and targeted investments in underserved Chicago and Detroit neighborhoods to small business support and insights about how families manage income volatility and use their tax refunds. Importantly, the Institute has also helped shape some of our own products and employee benefits, including how we incentivize customers to save more money and reduce health insurance deductibles for our lower-paid employees.
- **JPMorganChase *Policy*Center.** Five years ago, we launched the JPMorganChase *Policy*Center to distill what we've learned through the firm's business resources and expertise, including Institute research and data, talent and philanthropic investments, into actionable, evidence-based policy recommendations. Grounded in data, we develop and promote policy aimed at reducing structural barriers to economic mobility and broadening opportunity for millions of families who live on the financial margins. We've conducted thought leadership and advocacy on issues such as housing affordability, workforce development and small business growth.
- **Asia Pacific Policy and Strategic Competitiveness.** A year ago, we created a new role – Head of Asia Pacific Policy and Strategic Competitiveness – to lead an effort to bring together colleagues across the firm in examining key policy issues critical to our competitiveness, including trade and investment, supply chains, technology and infrastructure. We also maintain a strategic security forum focused on horizon scanning for emerging and evolving risks, such as societal polarization, nuclear and biological threats, cybersecurity and strategic competition in the Arctic, to name just a few.
- **JPMorganChase Center for Geopolitics.** We are creating a new group that builds on our firm's long tradition of integrity, reliability and fortitude, offering forward-looking perspectives and unparalleled expertise. The JPMorganChase Center for Geopolitics will harness the firm's vast network of knowledge and know-how to help clients successfully seize opportunities and weather the trends transforming the global landscape.

- **Morgan Health.** Back in 2021, we launched Morgan Health, a new division with an aim to deliver and scale new healthcare models that improve the quality, affordability and equity of employer-sponsored healthcare. The team is broadly focused on improving the U.S. healthcare system. In its first three years, Morgan Health has invested $217 million in nine healthcare companies. These investments have focused on advanced primary care and care navigation (Centivo, Mosaic Health and Personify Health), data analytics (Embold Health and Merative), specialty (Cortica and Kindbody), new coverage options for small- and mid-sized businesses (Venteur) and at-home care (LetsGetChecked). In addition, Morgan Health works closely with the JPMorganChase Benefits team to better meet the needs of our U.S.-based population, where 285,000 lives are covered in the United States. The Morgan Health team is addressing health disparities, publishing novel research, sharing insights with other employers and engaging policymakers. The team is making progress, but considerable work remains.

- **Localized Investments.** After watching Detroit's extraordinary recovery from bankruptcy, we replicated how we supported that turnaround to develop a model for large-scale investments to other cities around the world. From San Francisco to Paris to Greater Washington, D.C., we've applied what we learned in Detroit to communities where conditions are opportune for success and require deeper investments – where community, civic and business leaders have come together to solve problems and get results. For us, Detroit was an incubator for developing models that help us hone how we deploy our business resources, philanthropic capital, skilled volunteerism, and low-cost loans and equity investments. Some of these specific initiatives include: our virtual call centers that launched in Detroit and Baltimore; our senior business consultants who help entrepreneurs and small businesses make the transition from community lending to accessing capital from traditional financial institutions; our 19 Community Centers/branches that are often located in areas with larger Black, Hispanic or Latino populations; and our work skills development efforts around the country. In addition, our Affordable Housing Preservation program, established in 2021, has extended loans of $20 billion to incentivize the preservation of over 190,000 affordable housing rental units across the United States. Along those same lines, we expanded our $5,000 Chase Homebuyer Grant program to include more than 15,000 majority Black, Hispanic and Latino communities (where the grant is available to all) and increased our grant amount to $7,500 in select markets. Since our grant program began in 2021, we have provided about 14,000 grants totaling $82 million.

Powering economic growth in Texas

JPMorganChase has helped to drive economic prosperity, job creation and business growth in Texas for more than 155 years. In 2023, we contributed over $1 billion to the Texas economy through goods and services purchased. With over 31,500 employees in the state – the highest number by state in the country – we bank businesses of all sizes, as well as schools, grocery stores, hospitals, government institutions and nonprofits. From Dallas to Austin to Houston to El Paso, we have the largest market share of Federal Deposit Insurance Corporation deposits in the state. We're helping millions of clients, including over 8.5 million consumer banking customers, 775,000+ small business clients, and government and community leaders thrive and achieve their goals.

We also know Texas is a great place to do business that values the power of free enterprise and partnership across sectors. We have shown up for Texans in good times and bad, and we will continue to do what it takes to keep growing. From creating or preserving 7,000+ affordable housing units since 2020 and helping large energy clients to supporting local community colleges, we're continually exploring ways to help create jobs and develop business and policy solutions to drive growth. Our work with traditional and new energy technologies is a great example of how we help empower industry leaders in the state. We provided more than $219 billion in credit and capital to energy companies headquartered in Texas between 2019 and 2024, helping support affordable, reliable energy that bolsters American energy independence, energy security and economic growth.

Our support to government, higher education, healthcare and nonprofit organizations:

- We serve over 400 government, higher education, healthcare and nonprofit clients in Texas, and, since 2019, provided more than $42 billion in credit and capital to them.
- Our clients range from county offices to school districts to healthcare systems. For example:
  - We serve as the primary depository bank for the City of Houston for its various operations. We are the primary operating bank for the City of Austin, Travis County and the City of Arlington. We also provide banking services to both the City of Fort Worth and the Fort Worth Independent School District.
  - For 30 years, JPMorganChase has helped the Dallas Fort Worth International Airport operate, serving over 88 million passengers in 2024.
  - We bank the University of North Texas System, a public university system supporting over 52,000 students that includes the University of North Texas Health Science Center at Fort Worth. We also bank Texas Christian University, a top-ranked national research university located in Fort Worth with more than 13,000 undergraduate and graduate students.
  - We bank Parkland Health, which is the oldest and only safety net hospital in Dallas.

Our support to investment, corporate and middle-market banking clients:

- Since 2019, we have provided in excess of $814 billion in credit and capital to local clients, such as oil and gas, technology, and media and telecommunications companies. For example:
  - JPMorganChase has been a steadfast banking partner to Fort Worth-based Double Eagle Energy, supporting the company's growth and resilience through challenging times, including the 2016 and 2020 commodity price crashes. With our support, it is executing 10,000 transactions totaling $15 billion, benefiting individual landowners across more than 1 million acres.

- In addition, we served as the financial advisor to Endeavor Energy in its historic $26 billion merger in 2024 with Diamondback Energy to create a North American independent oil leader, while also ensuring job stability in the Midland community. Importantly, the vast majority of Endeavor's 1,200 employees were retained after the merger.

- We have more than 5,000 medium and large clients across the state.

Our support to local financial firms:

- Since 2019, we have provided over $43 billion in credit and capital for financial institutions, such as local banks, insurance companies, asset managers and securities firms.

- We bank more than 80 regional, midsized and community banks in Texas, which play an essential role in maintaining the state's economy and serving local communities.

Our support to small business:

- Across the state, we have over 775,000 small business customers.

- As of 2024, we have provided nearly $2 billion in loans to small businesses in the state.

- We provide more than 325,000 hours of advice and support – including to small businesses – annually.

  - For example, in North Texas, we helped Farmhouse Fresh grow into an international luxury skincare brand with $50 million in annual sales at retail value and almost 80 employees. The company's origins began when the founder opened a business banking account 20 years ago at her local Chase branch.

Our support to consumer banking needs:

- We support more than 8.5 million consumer banking customers with mortgages, auto loans, and savings, checking and credit card accounts.

- We manage over $91 billion in investment and annuity assets for local clients.

- We operate more than 1,500 ATMs and 480 branches across the state.

Our business and community investments:

- Over the last six years, we have provided $100 million in philanthropic capital to help drive workforce and community development, increase access to financial health resources, and improve or protect housing affordability. For example:

  - We helped Houston Community College increase career opportunities for residents while improving the resilience of the local workforce in Houston following natural disasters.

Our support as a local employer:

- We employ over 31,500 residents throughout the state, including nearly 4,000 veterans.

- In Texas, the minimum annual pay of our full-time employees is $41,600 (plus an average annual benefits package worth over $19,000) compared with the statewide per capita income of nearly $39,775.

IV. Management Learnings

At a recent annual senior leadership conference, I led a type of "master class" focused on management lessons for 400 of our top executives. I held this session because we cannot afford to be complacent if we want to continue as one of the great companies in the world. Leadership should always be about learning and questioning. Our company needs to nurture innovation, ambition and discipline while discouraging complacency, arrogance and bureaucracy. Here is a slightly streamlined (I did speak for 90 minutes) and edited version (to protect clients, former colleagues … and myself!) of my actual remarks to our team:

Welcome, everybody. I have a lot to say, and I've tried to organize it thoughtfully and intelligently.

I just want to start with: What a great company! I don't know about you, but when I see this company in action, it just blows me away. The quality of the people, the respect of our clients, and how much they want us in cities and countries around the world – it's extraordinary. That's based on the things that ***you*** do and how ***you*** do them.

WHY COMPLACENCY, ARROGANCE, BUREAUCRACY AND BS KILL COMPANIES.

Part of what I'm always asking is: How do we make sure we stay innovative, ambitious and disciplined while eliminating complacency, arrogance and bureaucracy?

So let's look at a bunch of things. None of this is out of anger; it's just thoughtful consideration about reinforcing some basic disciplines.

You know, if you already have 100 people on your team, can you live with 100 people – or fewer – and make that work? This is very important. Everyone in this room, I'm talking to you personally. When I give examples, don't say that applies to someone else: "That's not my unit. That doesn't affect me."

It does, and I'm going to tell you why. Because all of you are responsible for this company that's worth around $700 billion, employs 320,000 people and serves so many, including all the clients you've seen who depend on you around the world. You, individually, are responsible. And you know more than you think. When you travel around, when you talk to people and when you manage what you do means that you know more than you think.

As you know, we've been asking people to achieve a 10% efficiency target. Again, it's a discipline in business. Think about what you yourself can do to make things better. This is basic business: Can you do more with less? What are your units doing that can be streamlined? Or maybe you are doing things you don't need to be doing at all.

I apologize, when I'm being specific, if it's you I'm talking about. I've just got to get some things off my chest about what we need to do and some of the things I've seen recently or over my career.

I'm going to ask each and every one of you, personally – and I'm going to track it – to send me an email. We're going to have a little team to take these issues you raise and follow up, and this will be permanent. I kind of like bureaucracy busting to get things done. It could be stupid things you've observed, any ideas, almost anything. We're not trying to limit you to any specific category.

You've got something to say? You want to add something? You want to check out something? You think something doesn't make sense? Please bring it up. Too many people stay in their lane. I'm going to follow up personally with each and every one of you in this room. I'm just asking you to sit down and have a little fun thinking about the stupid stuff we do, the bureaucratic stuff we do – about things you would change if you were able to change them – and you all can be very helpful. I think we should all be thinking about this.

I've said speed kills, but I mean slow speed. I didn't mean fast speed. And I've written down some examples of winners and losers from just the last 20 or 30 years that didn't adapt.

Sears and Kmart, they're gone. Digital Equipment: Gone. A&P, the best supermarket in the world, disappeared – overtaken by Kroger. BlackBerry practically disappeared, too. Walmart's done well. Dell did well, Apple obviously has done well, and Amazon has done well. Remember when everyone used to have Nokia phones?

It's even worse in financial services, where companies can manipulate numbers and overleverage and stuff like that. Travelers blew up, Citi blew up twice. Bear Stearns failed. Lehman failed. And Bank One – I'm here because, you know, Bank One screwed up a bunch of businesses. The S&L business – the whole business – got wiped out. The whole thing. Savings and loans do not exist anymore. WaMu's mortgage losses. Whole parts of the mortgage business disappeared, and mortgage brokers disappeared. Kidder disappeared. Drexel disappeared. And then more recently, Silicon Valley Bank's interest rate mismatch.

Of those that failed, many failed out of complacency, and complacency is a form of bureaucracy. It's arrogance – it's being slow to adjust. Complacency allows a lot of negative things to set in: dishonest numbers, failure to set standards, bad people, bad compensation schemes, disincentives, bad incentives, politics – and these things are all the cancers that kill companies. We all have to be very cautious when we see this happening.

And things are faster and more complex now. That means we've got to move quicker, coordinate better and do things at a faster speed.

YOU HAVE TO GET THE NUMBERS RIGHT.

I'm a fanatic about proper accounting. Accounting can lead you to the wrong answer. Regulatory rules can lead you to the wrong answer. Regulatory capital can lead you to the wrong answer. Or your own echo chamber can steer you the wrong way. Still, you need to know your numbers: You need to get your numbers right, understand them, analyze them, work them, test them and don't be rote about it.

McKinsey used strategic business units as a way of segmenting businesses. Always remember that when you have big companies, it's important to break them down to look at the component parts because the game is fought in the specific units. It's fought in commercial card. It's fought in premier card. It's fought in branch banking. It's fought in small business. However, it's not fought in the consumer franchise as a whole.

You must have an actual budget as your barometer. For example, you can't always compare yourself with the forecast because then you're always very close. You've got to show any deficits or progress against the budget.

Another thing I hate is comparing yourself with the peer average. I mean, really? You should always compare yourself with the best. Where are *they,* and where are *we*? Remember that the peer average includes some really crummy companies, too.

You have to – we have to – always understand that a rigorous review of allocated expenses is needed. They are real expenses, but you have the right to question them. You have to question them because seeing through the BS that gets involved in allocating expenses – and then causes misallocation of capital – is really critical.

Zero-based budgeting. I don't like asking people to do it. It's too hard. But you've got to think that way. For instance, if I start with 100 people doing the same thing, what do I do differently, better, more with the same number of people? Understand that a P&L is not an assessment of a business – you've got to do the full assessment with customer metrics, turnover, apps, technology ... whatever matters. In fact, the P&L could be the most deceptive thing of all – telling you and giving the wrong answer.

Project reporting. Whenever you have a project, and this is on you, it's important to do proper reporting. It could be technology cost, it could be anything. I remember coming to J.P. Morgan and, one after another, every project was on course – but from the last forecast. I said, "Show me where it is from the beginning," and now every single project was a year or two late. It's just an honest assessment – not

to blame yourself or get mad about it. Also, the project often morphed without any discussion. And I think that's just bad management.

External reporting. External reporting actually matters. So I'm always quite careful. Reporting externally is real, but for a lot of companies, it's not – they sugarcoat, they make it obscure. And what happens inside those companies is people start running their businesses that way. You've never seen me spin analysts. That's because if I spin analysts, you're going to spin me. That's it. You know, I want to honestly show how we compare with competitors.

Honest analysis. In your financial analysis, always evaluate the good, the bad, the ugly. That will make you better. Doing just the good makes you worse. Doing the good, the bad and the ugly makes you get better versus the competition.

Constant investment. You know, the practice of stop-starting investments is a bad idea. Constant transformation in technology and conversions means you can't have stop-start strategies almost anywhere. Make proper assumptions: What do you do when your spread on deposits is zero, but you're still opening branches? That's why I always talk about "through-the-cycle" investments. Think very carefully about the assumptions that go into your budgets because, sometimes, they cause you to do stupid stuff, and sometimes they stop you from doing good stuff.

Watching competitors. This involves comparing yourself with what the competition is doing today. But you always need to show how you're going to catch up to where things might go. You've got to say, "What are the competitors going to do next?" because that shows when you're getting to the puck and where the puck is going to be – not where things currently stand.

Good expenses/bad revenue. Sometimes great expenses become great investments. The fact that it's something called an expense means nothing to me. In fact, a lot of businesses capitalize these expenses. You build a plant, you capitalize it. You don't start expensing it until it's producing. But when we open a branch, many of the costs are not capitalized. We have a large cash outflow to build it, but after approximately four years when it breaks even, it generates profit for eternity. This is also true for private bankers, investment bankers, Chase wealth managers – our investment in them pays off over time.

In all that we do to grow and innovate, we must do the full analysis – as I've said, "the good, the bad, the ugly." This makes us better. Looking at only the positives is dangerous. We all know there are good revenues and bad revenues, good expenses and bad expenses. We can make a big loan and book lots of revenue in the short term, but those will turn out to be bad revenues if we didn't do the proper analysis at the beginning. The same reasoning applies to expenses. I hate the concept of cutting costs; instead, the concept should always be cutting waste. If costs are investments that drive healthy growth, then I want more of them.

Expense allocations. I've got a heritage JPMorganChase example. The company used to be dominated by the investment bank – because the people on the executive floor cared mostly about the investment bank. Everything was skewed toward the investment bank. They took HR costs, including pension, medical, executive comp, expats – all these costs lumped together – and they charged them out based on headcount across the company, which was not accurate. Expats were 100% in the investment bank. Executive comp was 100% in the investment bank, but their expenses were spread across the whole company. We subsidized capital for the trading floors. In all, subsidizing the investment bank cost $2 billion a year, which I immediately fixed. This was not to punish anyone, but it was a huge misallocation of capital. The big loser in all this was the consumer bank, and I'm still quite sensitive about that.

Here's another example: Capacity in the computer center was charged out to everybody, whereas the extra capacity, which is quite expensive, was required for only certain businesses but not others. It is not a waste of time to get expense allocation right. You may spend no time on it, but you shouldn't be paying for capacity. We need payment systems to be paid for by the payment businesses. It's important to be vigilant when you analyze expenses because things always morph, always go bad. Don't assume allocations are okay. Businesses sometimes get credit for things they shouldn't get paid for, and they don't mention it.

I'll just give you another example. When I got to JPMorganChase, we paid the treasury sales-force based on estimated revenue going forward. That was it. And almost no adjustments later on. It was staggering.

Investing in branches. When I became CEO, Bank One hadn't opened a branch in five years. Chase hadn't opened a branch in five years. Chase had barely refurbished its branches, but at least Bank One did. By the time we did the merger, Bank One was making $1 million-plus profit on each branch every year: 2,300 branches. Chase was making zero, partially because of its allocation practices and partially because no one seemed to care about them.

But these branches should have been hugely profitable. We don't give a branch credit for credit cards when they create a credit card account that's worth $600, even though branches create 1.5 million credit card accounts a year. That's $900 million of value.

We do this NPV (net present value) analysis about why we should close a branch, and we should do this. We should be disciplined. I think, for the most part, NPVs might work, but they don't always work. You need to use your common sense.

Sometimes banks will say they're going to close a branch because it's kind of small. This happened to me recently with our Old Greenwich branch. They were going to close it, and I just looked at some of the numbers ... and I went numb. It was making approximately $500,000, all profit, the NPV. And it's six miles to the next closest branch. I said, if you close that branch, you know what's going to happen? Eighty percent of the revenues will move elsewhere – to the Wells Fargo down the street, along with most of the local small businesses. Now would you rather have $500,000 a year profit or $1 million in cash in your pocket? I'd rather keep the $500,000 annually. Who's going to open in the same spot? One of our competitors: Wells Fargo, Bank of America or Citizens. And why does someone want to drive six miles in the winter on those icy roads? And is the branch more profitable than it looks? And to me, this wasn't thinking about the NPV; it was the pawn blocking the queen.

Judgment calls. Well, while we're talking about cutting costs, I also did something unusual in 2008: I opened the partners' dining room. This is just how I think about what you should do, and what you shouldn't do. You do the right thing anyway, whether it looks good or bad. The whole Operating Committee said, "Don't do it. The partners' dining room is going to cost a lot, and it will look like we are spoiling ourselves with good food." And I was like, "Yeah, but we don't actually know each other after the merger – and if we don't do it now, it'll be years before we get to know each other." I call it a good expense. It's a judgment call. You do the right thing and then explain it. Sometimes people don't do things because they think it'll look bad for them or hurt morale a little bit. When I got to Bank One, I authorized a partners' dining room, and I did this at J.P. Morgan, too.

YOU NEED A FULL AND CONSTANT ASSESSMENT.

We can learn so much from our competitors, customers and employees if we only open our eyes and ears. I want a full and constant assessment of our competition, including many organizations outside of financial services. We always need to look and learn, assess and evaluate – stringently monitoring market trends and engaging with whoever does something better than us. Visit other companies, see their branches. Go on road trips with your people. Take your management teams to dinner. When you talk with clients and they tell you that you're making a mistake, thank them. It's a gift. And if the issue is not in your area, write it down and send it to the person who's responsible. Get out of your own echo chamber. Hit the road, leave your office and talk with everyone you can – be constantly learning and assessing. Don't be afraid to admit if you've made a mistake or were late to the game on something. It's okay to be a fast follower. Just do a postmortem and identify what you'd do differently next time.

I mentioned learning from those outside our industry. Take Chick-fil-A as an example. I read they're using drones to figure out how to move people through the drive-thru line faster. We should always have that mindset of making something easier for our customers.

Ten years ago I said, "I'd like our senior team from the consumer bank to go to China." I wish I had done more things like that sooner. This goes back to why it's important to get on the road – to really understand your business and the competition. The team didn't really want to go, but they did go, and they got to see Alibaba, Ping An and Tencent in action. And it changed the way they thought about digital banking, biometrics, super apps and other technology advancements. It's amazing what you learn on the road.

YOU BETTER HAVE GREAT CONTROLS.

Honest numbers are critical to having great controls. Make a practice of continually reviewing financial operational detail, project reporting and audit reports. It's a discipline like exercising – it should be frequent and rigorous. And little things can add up to big things.

Back in the Primerica days, I bought one of those big Xerox copy machines for 2 million bucks. I'm down in Primerica's printing plant, and the guy there showed me his Xerox copy machine, and I said, "Great, I just bought one of these." He asked, "How much did you pay for it?" I said, "Two million dollars. How much did you pay?" He said, "Fifty thousand dollars." You know why? He bought it from a bankrupt company. It was still in the box. That's all. Let's do that a little bit every now and then.

Additionally, in terms of risk management, always examine new products and new credit underwriting standards. New products often tend to blow up. That happened with foreign exchange, with mortgage-backed securities, with swaps, derivatives, credit default swaps and others. Often, these new products have not been fully tested and haven't been used over a long enough period of time. I'm also a fanatic about stress testing, which they quickly learned at J.P. Morgan when I first got there. In their scenarios, they were looking at equity markets down 10% and credit spreads gapping out 40%. Was that sufficient? No! I said let's look at what would happen if equity markets were down 50%, high yield went to 20% and credit spreads gapped out to the worst ever. That is real stress testing and risk management.

YOU MUST KILL BUREAUCRACY ALL THE TIME AND RELENTLESSLY.

One of the biggest things that can kill a company – or make it slow to adjust or admit problems – is bureaucracy. It comes in a lot of forms, and you have to continuously weed that garden. It's a mindset.

Take Home Depot: When you walk into the Home Depot global galactic headquarters, the sign above the main entrance says "Store Support Center." It reminds corporate employees every day that they are there because they support the ***workers*** in stores around the country. And we have to remember – all of us, particularly corporate staff – that we are here because we have a customer, a branch or an investment banker in front of a client. That is an important mindset. Then you can use things like war rooms and review customer complaints to hone this thinking.

I always like to read customer complaints. I read them, and when I know the policy behind the complaint, I call up the people in charge and say, "I agree with the customer." Sure, we "shoulda, coulda, woulda." But I don't give a damn whether we're technically responsible or not. You've got to do the right thing; you've got to change your mindset.

Let's take ATMs. When I got to Bank One, this situation happened. My wife called me from Walgreens. The Bank One ATM didn't work. I tell the people on the ATM side of the bank, and a guy calls me back and says, "No, it's working." I say, "My wife called me and says it's not working." He replies, "No, it's working." So I say, "Do me a favor – get in your car and drive out there." Then he drives out there – and it's not working. As it turned out, we had an outside vendor tracking this stuff. So I told the guy that we were firing the vendor and wouldn't pay him for the last six months. Now we track it ourselves. This stuff can happen all the time.

Then there's the black car story. You all know the black car story never happened at J.P. Morgan. It did happen when we took over Shearson though. I was going outside one day, and there were, literally, 50 black cars. People were waiting to go home until 7 o'clock so they could take a black car home. They were supposed to take them to the closest train station. And they would pick up

their dinner – no one paid attention to it. There was one woman who took a car to Glen Cove or somewhere and back every day. She came in early in the morning. I went back to her boss, who knew about it. And I said to the boss, "You know, I can get her a full-time car and driver for one-third the cost." And I changed a bunch of rules and stuff like that.

Some years ago, all our branches were receiving tons of stuff, daily and weekly, from Corporate – from HR, Risk, Legal, Compliance, Trading, Audit, Finance – they were overwhelmed. I used to go to branches, and they'd complain about things they didn't know about. I said, "We sent you a memo that was full of information." And one of the men in the branch showed me a FedEx box, the really big one, and dropped it in front of me. He said, "This box is what we get every week from you guys." He had no idea about all the stuff that was in it. So we just changed things up a bit, using common sense, and created a little booklet called, I think, "Since We Last Met" or "You Must Read This." It had a summary page and listed the important stuff people needed to know. Little things like this are important to get right.

It's important for leadership to always question what their company does and why. And the answer cannot be, "That's the way we've always done it." Lots of times bad habits form and people get lazy, take shortcuts or don't care enough. A good example is from when I came to JPMorganChase more than 20 years ago. I was told we had 500 management coaches. I said, "Five hundred coaches? Really?" Our Operating Committee was slightly annoyed by my question and wondered whether I was going to micromanage every single decision. Of course I said that I wasn't – and that it was their decision – but the issue really bothered me. I thought about it over the weekend, and on Monday I told the Operating Committee, "You know what? I changed my mind. I'm going to micromanage this one. I want all coaches out by the end of the week." I didn't take that step to save money. I did it because it's a leader's job to coach, and we basically had outsourced management! I told the committee they could bring back a coach at the end of one year if they truly thought it was necessary and if they personally vouched for the coach's capabilities. But in my entire career, I've rarely seen this kind of outsourcing of responsibility succeed.

Here's another example of what slows us down: meetings. Kill meetings. But when they do happen, they have to start on time and end on time – and someone's got to lead them. There should also be a purpose to every meeting and always a follow-up list. Sometimes we think we're just being nice by inviting people to a meeting who don't have to be there. Sometimes we overcollaborate. One annoying example of bureaucracy is the meeting after the meeting, where an executive tells me what they didn't want to say in front of their partners. That's not acceptable. Don't bother. I'm not their messenger. Lay it on the table in real time. Shine light on a problem or disagreement. Be transparent with your colleagues. Obviously, it's different if it involves a private matter, but, usually, this strategy is just a go-around, an end run. We cannot allow these kinds of behaviors.

MISTAKES I MADE.

I also recognize that I don't always get everything right and that I have made plenty of mistakes myself, and that's why I want to candidly share some of them – as lessons. It's important that we all do that. For example, I underestimated the importance of cloud technology, I've sometimes left the wrong person in a job for too long and I failed to recognize some early signs of risk.

In sharing these experiences, I always reflect on the anatomy of mistakes and emphasize the need to acknowledge and learn from them. Mistakes happened for a variety of reasons – we didn't have the right people in the room, we didn't work hard enough, we didn't have a thoughtful decision-making process, we didn't get the right inputs, we made bad assumptions.

The London Whale, where we lost billions of dollars in 2012, is another mistake that's good to reflect upon. The mistake there wasn't the complexity of the portfolio; it was that it didn't get the proper oversight, including from the firm's risk committees. The idea emerged in a supposedly non-risky part of the bank, and the team overseeing the trades played it close to the vest and didn't go through our normal risk controls. We didn't realize that at the time, but

we should have, and I had some signs looking back. Frustratingly, the traders wanted to avoid oversight because it was risky. This reminds me of another sin that promotes mistakes in companies – hoarding information, which is a disease.

And here is one of my big mistakes when I got to Bank One. I'd been there for not quite a year, and I was in Louisville, where our business had been shrinking. I was trying to fix all that. I was in a local branch, and I realized that the branch across the street's hours were 9 a.m. to 5 p.m., and our hours were 10 a.m. to 4 p.m. I thought, whoa, that's not so good. I called up our branch management, and they said, "Well, we're different – we're not that kind of bank." I asked them to do me a favor: Let's find out for all of our branches – we had about 1,800 at the time – what are our hours compared with the average competitor. And they said, "Well, how are we going to do that?" I said, "Well, email the other branch managers, and ask them for their hours of operation." And, it turns out, we were open two hours fewer a day.

It was a Friday, and I went home a bit embarrassed. I came in on Monday, and it just so happened that the whole branch management team was there. And here's what I said to them: "I apologize. I thought I was a pretty good CEO, but I messed up, I made a mistake. I should have recognized this much sooner." However, not one salesperson, not one branch manager, not one regional manager, not one district manager noticed this or mentioned it. Now that I was aware of the issue, I told them all that we must change our hours. Morale was already bad, and everyone went on and on about morale because we had to change our work hours – and it was difficult and complicated. But I said, "We've got to change it. We're here for customers. Obviously, I care about morale – but morale sucks because we suck. Morale will get better when we're better as a company."

WHAT THE HECK IS CULTURE?

What is culture anyway? I struggle with this one a little bit because I think it's a lot of the things I'm speaking about here. A great culture is created by what you do and not by what you say.

When we talk about the culture of our company, we include the hundreds of thousands of people who work for our company and what they believe in, as well as the role of our company in society. For those people, our employees, we work hard to foster an environment that enables them to thrive as curious, honest, hard-working and empathetic individuals who care not only about each other but about our customers as well – to be people who want to do the right thing – and it's very important we get this right. Of course, there are good people and bad people, but I like to think we're almost all good people. Similarly, there can be people you don't trust: Sometimes you don't trust them because they lie – or they shape the truth. Or you can't trust them because you don't trust their judgment. Watch out for them and don't follow them.

Unfortunately, sometimes the bad people are our customers. I fire bad clients: corporate clients, individuals. There used to be a wealthy guy who would come into a branch yelling and screaming. He was verbally abusive to our staff multiple times. I finally heard about it and called him and said, "I want you to take all your business out of the bank. And by the way, you're not going to treat our people that way." If we have a client who is disrespectful to our people and the way we operate, we will fire them. And life will go on.

And recognition is important. Recognition says someone did something that you didn't, that they taught you something. I was never particularly good at recognition. But I've learned lessons about recognition by watching "Ted Lasso" and observing David Novak, former CEO of Yum! Brands. They taught me that recognition is a form of humility and acknowledgment. And this directly aligns with our company's values and, importantly, our actions. Organizations build a great culture by recognizing people's actions day in and day out – not by serving up platitudes.

Creating a good culture is possible only if everyone understands a company's purpose – in our case, the role of our bank. I think our purpose is to lift up society, to help people, which is an enormous responsibility. We have millions of customers, employees and shareholders who count on us. I think if you don't share this vision, you don't belong at our company.

And have a little heart. One example: Many years ago, when I was new to JPMorganChase, I learned that the company's security guards had been outsourced – to save money. But after outsourcing, the same guards continued coming to work every day at the same salary, and I wondered, "How could this be?" (FYI, this was brought to my attention by the head of a large union, who came to see me personally over the objection of my management team.) The reason we were saving money was because the benefits were cut in half for the guards and their family members (currently worth more than $19,000 a year), and the savings were split with us. This was a heartless thing to do – and the second I found out, I reversed the decision. JPMorganChase's success will not be built off the backs of our guards – it will be the result of fair treatment of all of our employees – and we're thankful that many of those guards are still with our company today.

LEADING THE TEAM.

It's very important to have regular business reviews and to attack problems by putting all the dead cats, the hard issues, on the table. Emphasize the negatives. Make it fun and foster a collaborative environment when you're facing tough subjects. Share all the facts and recognize that disagreement is a good thing.

Loyalty is earned when people receive full input and know that they've had a chance to offer theirs. Everyone should provide their input, review the facts and then make decisions – but not before that. Sometimes in meetings, colleagues urge others to "stay in your lane." Absolutely do not stay in your lane! That is a bureaucratic, stupid direction. Our biggest mistakes happen when people think something is kind of a problem, but they are afraid to raise it in the right room where it might be provocative. There's nothing wrong with disagreement. Ever.

And make it fun. You know, it's our job to have fun in life and make everything we do fun. Just do it all the time in your unit and ask others to do the same.

For example, see mom and dad when you go on the road. When I went to Kenya this year, I invited two of our senior executives from Kenya who now work for our company in the United States to join me – and we invited their mothers to attend the client reception in Nairobi. It was quite moving to meet their families – what a gift to see what those women had accomplished with those wonderful kids. And moms and dads love to see us. Also, when you take the management teams to dinner, try to include their spouses. It's a lot of fun, and you learn a lot about each other on the team.

WHY IT'S HARD TO ACHIEVE GOOD GROWTH AND INNOVATE.

Testing and learning are important – there's nothing that can't be improved by testing and learning. You can kill innovation with too many resources, too few resources or bureaucracy, and you've got to really think through what you are trying to accomplish. Similarly, it's important to evaluate innovative ideas through testing and learning rather than rote analysis, which can stifle creativity. Companies that want to foster growth through forward thinking need to nurture that effort and support innovation.

The conversions at both J.P. Morgan/Chase and Bank One are good examples. There was resistance to the integration, and the conversions were costly. They took time and different resources. But there were approximately seven loan systems, five deposit systems and 25 general ledgers that all needed to be consolidated to develop the best systems. You just do the tough stuff like this. And then what happens when you get these consolidations done is you make the company better at it over time. Transformation is a constant effort to improve.

In many cases, expansion is fought – and it's most often fought from within the existing ranks. The current workforce is often resistant to grow the team because they think it's going to come out of their compensation. That's not right – the company pays for the additional bankers.

I confronted this resistance years ago when we wanted to grow the Global Corporate Bank – again, there was pushback from our current bankers. I saw the same resistance from within when we were growing Chase Wealth Management. But we looked at how big the opportunity was in each of these cases to grow, expand and be able to compete more effectively. And each of these efforts has been a home run for us.

MANAGEMENT TRICKS AND TOOLS.

Now I want to talk about some management tricks and tools.

Effective leaders are responsive and treat everyone fairly and with respect. You have to be direct and honest, which is all about respect (though I recognize I get too worked up sometimes!). But I'm not only talking about bosses – I'm talking about people at every level. Treat everyone well, from clerks to CEOs, no matter who they are.

While leaders should celebrate successes, it's still important to emphasize the negatives and focus on continuous improvement. Be a skeptic but not a cynic. Utilize management techniques that work.

I'm a big fan of this one: Write memos yourself. Don't always let others write them for you. Similarly, when I ask someone a question, I want to hear directly back from that person, not their boss's boss up the chain. And if I call that person directly, I want to talk to them. And share all the facts. Don't hoard facts. The facts don't lie.

Another tip: Always make follow-up lists. I keep my own follow-up lists with me almost all the time. Regarding communications, avoid management pablum. It's a pet peeve of mine. Talk like you speak – get rid of the jargon.

And turning to meetings, if one is required, make it count. I ALWAYS do the pre-read. I give it 100% of my attention. I see people in meetings all the time who are getting notifications and personal texts or who are reading emails. This has to stop. It's disrespectful. It wastes time. Finally, if you're going to a meeting to present a new product or service, write a press release about it. This exercise forces you to answer lots of questions people are likely to ask. When you write down what you're going to say, it focuses the mind and helps you explain things better.

Work smarter, not longer. Don't read the same email two or three times. Most can be addressed immediately. And while this all sounds serious, make work fun. We spend the vast majority of our waking hours at work – it's our job to try to make it fun and fulfilling.

And another important one: Take care of yourself. If you don't take care of yourself, it doesn't work.

Last, always answer this question: "What would you do if you were queen or king for a day?" That's the big one – what would you do?

I'm going to stop here. Thank you for all the great things you said, for the great things you've done. And just so you know, while I may be saying this, I want to be self-critical, too. I'm awed by you all. Thank you for spending time with me.

In Closing

It's been more than 20 years since the JPMorganChase-Bank One merger – and it's been an extraordinary journey. I can't even begin to express my heartfelt appreciation and respect for the tremendous character and capabilities of the management team that got us through the good times and the bad times to where we stand today. And I recognize that we all stand on the shoulders of many others who came before us in building this exceptional company of ours.

A beautiful physical manifestation of our company is our new headquarters in New York City, which we look forward to opening later this year. It is a great example of how we treat our people with wonderful places to work – in New York City, across the country and around the world. Our new headquarters also shows how you can deconstruct something and rebuild it in a powerful way – that's good for our colleagues, our clients and our community.

I would also like to express my deep gratitude to the 300,000+ employees, and their families, of JPMorganChase. Through these annual letters, I hope shareholders and all readers have gained a deeper understanding of what it takes to be an "endgame winner" in a rapidly changing world. More important, I hope you are as proud of what we all have achieved – as a business, as a bank and as a community investor – as I am. Thank you for your partnership.

Finally, we sincerely hope to see the world on the path to peace and prosperity.



Jamie Dimon
Chairman and Chief Executive Officer

April 7, 2025

Footnotes

Client Franchises Built Over the Long Term (page 8)

Note: Figures may not sum due to rounding.

1 Certain wealth management clients were realigned from Asset & Wealth Management (AWM) to Consumer & Community Banking (CCB) in 4Q20. 2005 and 2014 amounts were not revised in connection with this realignment.

2 Federal Deposit Insurance Corporation (FDIC) Summary of Deposits survey per S&P Global Market Intelligence applies a $1 billion deposit cap to Chase and industry branches for market share. While many of our branches have more than $1 billion in retail deposits, applying a cap consistently to ourselves and the industry is critical to the integrity of this measurement. Includes all commercial banks, savings banks and savings institutions as defined by the FDIC. Deposit market share and rankings are calculated with historical institutional ownership for each year stated.

3 Barlow Research Associates, Primary Bank Market Share Database. Rolling eight-quarter average of small businesses with revenue of more than $100,000 and less than $25 million. 2023 results include First Republic. Barlow's 2005 Primary Bank Market Share is based on companies with revenue of more than $100,000 and less than $10 million.

4 Total payment volumes reflect Consumer and Small Business customers' digital (ACH, BillPay, PayChase, Zelle, RTP, external transfers, digital wires), nondigital (nondigital wires, ATM, teller, checks), and credit and debit card payment outflows.

5 Digital noncard payment transactions include outflows for ACH, BillPay, PayChase, Zelle, RTP, external transfers and digital wires, excluding credit and debit card sales. 2005 is based on internal JPMorganChase estimates.

6 Represents general purpose credit card (GPCC) spend, which excludes private label and Commercial Card. Based on company filings and JPMorganChase estimates.

7 Represents GPCC loans outstanding, which excludes private label, Citi Retail Cards and Commercial Card. Based on loans outstanding disclosures by peers and internal JPMorganChase estimates.

8 Represents users of all web and/or mobile platforms who have logged in within the past 90 days.

9 Represents users of all mobile platforms who have logged in within the past 90 days.

10 Measures satisfaction with wealth management websites and apps. Learn more: jdpower.com/awards.

11 Based on 2024 sales volume and loans outstanding disclosures by peers (American Express Company (AXP), Bank of America Corporation, Capital One Financial Corporation, Citigroup Inc. and Discover Financial Services) and JPMorganChase estimates. Sales volume excludes private label and Commercial Card. AXP reflects the U.S. Consumer segment and JPMorganChase estimates for AXP's U.S. small business sales. Loans outstanding exclude private label, Citi Retail Cards and Commercial Card.

12 Inside Mortgage Finance, Top Owned Mortgage Servicers as of 4Q24.

13 Measures customer satisfaction with the mortgage servicing experience. Learn more: jdpower.com/awards.

14 Experian Velocity data as of Full Year 2024. Reflects financing market share for new and used loan and lease units at franchised and independent dealers.

15 Measures satisfaction with automotive finance websites and apps. Learn more: jdpower.com/awards.

16 Coalition Greenwich Competitor Analytics (preliminary for Full Year 2024). Market share is based on JPMorganChase's internal business structure, footprint and revenue. Ranks are based on Coalition Index Banks for Markets. 2006 rank is based on JPMorganChase analysis.

17 Dealogic as of January 2, 2025, excludes the impact of UBS/Credit Suisse merger prior to the year of the acquisition (2023).

18 Client deposits and other third-party liabilities pertain to the Payments and Securities Services businesses.

19 Includes client deposits and other third-party liabilities. 2005 includes Corporate Client Banking.

20 Payments revenue metrics exclude the net impact of equity investments; 2005 data represents Treasury Services firmwide revenue only. All other periods include Merchant Services revenue.

21 Coalition Greenwich Competitor Analytics (preliminary for Full Year 2024) reflects global firmwide Treasury Services business (Corporate & Investment Banking and Commercial Banking). Market share is based on JPMorganChase's internal business structure, footprint and revenue. Ranks are based on Coalition Index Banks for Treasury Services.

22 Data in 2005 column is as of 12/31/2006.

23 Balances represented for 2005 include certain loans in the Markets business.

24 Balances represented for 2005 do not include certain loans related to Community Development Banking.

25 S&P Global Market Intelligence as of December 31, 2024.

26 Global Banking (GB) is a client coverage view within the Banking & Payments business and primarily composed of the Global Corporate Banking, Global Investment Banking and Commercial Banking Client Coverage segments. The number of bankers represented includes bankers that are not aligned with Commercial Banking and Global Corporate Banking and Global Investment Banking client segments.

27 Extel: an Institutional Investor Company.

28 Represents U.S. dollar payment instructions for direct payments and credit transfers processed over Society for Worldwide Interbank Financial Telecommunications (SWIFT) in the countries where J.P. Morgan has sales coverage. Market share is based on December 2024.

29 Nilson, Full Year 2024.

30 Coalition Greenwich Competitor Analytics (preliminary for Full Year 2024). Rank is based on JPMorganChase's internal business structure, footprint and revenue. Ranks are based on Coalition Index Banks for Securities Services.

31 Middle Market Bookrunner rank based on data from London Stock Exchange Group, Full Year 2024.

32 Part of the Firm's $30 billion Racial Equity Commitment, excluding any adjustments to the prior periods reported.

33 Percentage of active mutual fund and active exchange-traded funds (ETF) assets under management (AUM) in funds ranked in the 1st or 2nd quartile (one, three and five years): All quartile rankings, the assigned peer categories and the asset values used to derive these rankings are sourced from the fund rating providers. Quartile rankings are based on the net-of-fee absolute return of each fund. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on fund performance and associated peer rankings at the share class level for U.S.-domiciled funds, at a primary share class level to represent the quartile ranking for U.K., Luxembourg and Hong Kong SAR funds, and at the fund level for all other funds. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results. "Primary share class" means the C share class for European funds and ACC share class for Hong Kong SAR and Taiwan funds. If these share classes are not available, the oldest share class is used as the primary share class. Due to a methodology change effective September 30, 2023, prior results include all long-term mutual fund assets and exclude active ETF assets.

34 In the fourth quarter of 2020, the Firm realigned certain wealth management clients from AWM to CCB. Prior-period amounts have been revised to conform with the current presentation.

35 Traditional assets include Equity, Fixed Income, Multi-Asset and Liquidity AUM; Brokerage, Administration and Custody assets under supervision.

36 Alternatives assets include Private Equity, Private Credit, Real Assets, Hedge Funds, Liquid Alternatives and other nontraditional assets. Assets calculated using net asset value of investments (except for certain Real Asset strategies, which use gross asset value) plus undrawn, committed capital. AUM only for 2005. 2023 restated due to product reclassification.

37 Percentage of active mutual fund and active ETF AUM in funds rated 4- or 5-star: Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industrywide ranked funds. A 4-star rating represents the next 22.5% of industrywide ranked funds. A 3-star rating represents the next 35% of industrywide ranked funds. A 2-star rating represents the next 22.5% of industrywide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industrywide ranked funds. An overall Morningstar rating is derived from a weighted average of the performance associated with a fund's three-, five- and 10-year (if applicable) Morningstar rating metrics. For U.S.-domiciled funds, separate star ratings are provided at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence are excluded from these rankings. All ratings, the assigned peer categories and the asset values used to derive these rankings are sourced from the applicable fund rating provider. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on star ratings at the share class level for U.S.-domiciled funds and at a primary share class level to represent the star rating of all other funds except for Japan, for which Nomura provides ratings at the fund level. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.

38 Source: Company filings and JPMorganChase estimates. Rankings reflect publicly traded peer group as follows: Allianz, Bank of America, Bank of New York, BlackRock, Charles Schwab, DWS, Franklin Templeton, Goldman Sachs, Invesco, Morgan Stanley, State Street, T. Rowe Price and UBS. JPMorganChase ranking reflects AWM client assets, U.S. Wealth Management investments and new-to-firm Chase Private Client deposits.

39 Source: Public filings, company websites, Morningstar

40 Source: iMoneynet

41 Source: Global Finance magazine

JPMorganChase Exhibits Strength in Both Efficiency and Returns When Compared with Large Peers and Best-in-Class Peers (page 11)

1 Bank of America Corporation (BAC), Citigroup Inc. (C), The Goldman Sachs Group, Inc. (GS), Morgan Stanley (MS) and Wells Fargo & Company (WFC).

2 Managed overhead ratio = total noninterest expense/managed revenue; revenue for GS and MS is reflected on a reported basis.

3 JPM's adjusted ROTCE excludes $5.4 billion from net income in 2024 as a result of the net gain related to Visa shares and the donation of Visa shares to pre-fund contributions to the Firm's Foundation. This is a non-GAAP financial measure.

4 Best-in-class overhead ratio of comparable peer business segments and firms: Capital One Domestic Card and Consumer Banking (COF-DC & CB), Bank of America Global Banking and Global Markets (BAC-GB & GM), Northern Trust Wealth Management (NTRS-WM) and Allianz Group (ALLIANZ-AM). Peer segment overhead ratio is estimated based on public disclosure where unavailable.

5 Best-in-class ROTCE of comparable peer business segments and firms: Bank of America Consumer Banking (BAC-CB), Goldman Sachs Global Banking & Markets (GS-GBM) and Morgan Stanley Wealth Management & Investment Management (MS-WM & IM). Peer segment ROTCE is estimated based on public disclosure where unavailable.

6 Best-in-class ROTCE of comparable GSIB peer business segments: Bank of America Consumer Banking (BAC-CB), Goldman Sachs Global Banking & Markets (GS-GBM) and Morgan Stanley Wealth Management & Investment Management (MS-WM & IM). Peer segment ROTCE is estimated based on public disclosure where unavailable.

7 Given comparisons are at the business segment level, where available; allocation methodologies across peers may be inconsistent with JPM's.

Our Fortress Balance Sheet (page 12)

1 Tangible Common Equity (TCE) 2005-2007 reflects common stockholder's equity less goodwill and other intangibles assets.

2 Basel III Transitional rules became effective January 1, 2014; prior-period common equity Tier 1 (CET1) data is based on Basel I rules. As of December 31, 2014, the ratios represent the more binding of the Standardized or Advanced approach calculated under the Basel III Fully Phased-in basis. Capital results reflect the current expected credit loss (CECL) capital transition provisions starting in 2020.

3 Capital returned to common shareholders includes common dividends and net repurchases.

4 Includes eligible High Quality Liquid Assets (HQLA) as defined in the liquidity coverage ratio (LCR) rule and unencumbered marketable securities, such as equity and debt securities, that the Firm believes would be available to raise liquidity, including excess eligible HQLA securities at JPMorganChase Bank, N.A. that are not transferable to nonbank affiliates. For December 31, 2022-2024, the balance includes eligible end-of-period HQLA as defined in the LCR rule, issued December 19, 2016. For December 31, 2017-2021, the balance includes average eligible HQLA. Periods prior to 2017 represent period-end balances. December 31, 2016 and 2015 balances are under the initial U.S. rule approved on September 3, 2014. The December 31, 2014 amount is estimated prior to the effective date of the initial rule and under the Basel III liquidity coverage ratio (Basel III LCR) for December 31, 2013. December 31, 2005-2012 reflect cash, cash due from banks and investment securities.

Size of the Financial Sector/Industry (page 37)

1 GDP in current prices; Source: International Monetary Fund

2 Consists of cash assets and Treasury and agency securities.

3 Private equity assets under management includes Balanced, Buyout, Co-investment, Co-investment Multi-Manager, Growth, Hybrid and Private Investments in Public Equity in closed-end commingled funds and excludes Venture Capital, Secondaries and Fund of Funds. 2024 private equity data as of June 2024.

4 Top 50 fund AUM data per Sovereign Wealth Fund Institute. 2007 and 2010 AUM for entities in the top 50 in 2024.

5 Sources: Preqin, Dealogic, JPM Credit Research

6 Source: Preqin; venture capital AUM includes early stage, venture and expansion/late-stage capital in closed-end commingled funds only. Excludes secondaries and Fund of Funds to avoid the double counting of funds. 2024 venture capital AUM reflects data as of June 2024

7 Loans held by nonbank entities per the FRB Z.1 Financial Accounts of the United States.

8 U.S. money market fund investment holdings of securities issued by entities worldwide.

9 NYSE + NASDAQ; excludes investment funds, exchange-traded fund unit trusts and companies whose business goal is to hold shares of other listed companies; a company with several classes of shares is counted only once.

10 Inside Mortgage Finance and JPMorganChase internal data; consists of Top 50 Originators (Top 40 for 2007).

Future-Proofing the Company and Our Operations

JPMorganChase is a world-class institution. We operate in more than 100 global markets, serve millions of customers and process nearly $10 trillion daily through our wholesale payments business. Our footprint is as broad as the globe and as deep as the very personal, individual interactions our employees have each day with the governments, businesses, nonprofits, individuals and communities that we serve.

In my new capacity as Chief Operating Officer for the firm, I have the responsibility and privilege of looking after critical operations that function as the foundation and engine for our employees to deliver excellence in financial services around the world each day.

INVESTING IN THE TECHNOLOGY OF THE FUTURE

In addition to the day-to-day operations of the firm, I am focused on making certain that we are investing in our future. We are a technology-driven company as much as we are a bank, and technology is fundamental to everything that we do.

We employ more than 60,000 technologists across the globe, and we've made remarkable strides modernizing our technology infrastructure and engineering practices. Our technology estate consists of more than 6,000 applications and nearly an exabyte of data, with a multi-cloud strategy that enables us to continuously innovate our businesses. We have also been recognized as a leader in banking in frontier technologies like artificial intelligence (AI) and quantum computing research.

We know that investments we made in technology years ago are helping our business, products and services to be best-in-class today. Our software engineers are seeing up to 10-20% productivity in the software development life cycle through AI coding assistant tools, freeing them up to work on other tasks and projects. We also just achieved an industry milestone, the first successful demonstration of a novel quantum computing protocol to generate Certified Randomness, with industry-leading partners.

We'll continue to invest in technology to ensure we are on the front lines of innovation and to set the company up for future success.

We recognize that AI is not just a technological advancement but a transformative force that is reshaping the financial services landscape. In 2024, we launched our flagship generative AI product, LLM Suite, to more than 200,000 of our colleagues around the world. LLM Suite enables employees to access leading GenAI capabilities on their desktop in a controlled environment that protects our customer and company data. In addition, it also enables businesses across the enterprise to develop use cases and to integrate GenAI more easily into their workflows by leveraging a shared set of capabilities available on the platform.

While we have made substantial progress in our AI journey over the past decade, we are still in the early stages. As the technology continues to evolve to offer more reasoning and complex problem-solving capabilities, AI will play a critical part in helping us produce faster and better results for our business.

INVESTING IN THE WORKFORCE OF TODAY AND TOMORROW

Our technology would be rudderless without the incredible people who run it.

Our workforce reflects the very best and brightest talent from many different backgrounds and perspectives. We support career growth with competitive pay, comprehensive benefit packages and opportunities to develop new skills through training and education benefits. With our global footprint, thousands of open roles across a myriad of job types, and a mobility mindset, we offer a depth of incredible career possibilities that most companies simply cannot.

We also recently made enhancements to our leading benefits based on employee feedback, including expanded parental and bereavement leave time, education reimbursement, special awards for employees on their savings plans, expanded matching contributions, decreased costs on medical plans, increased wellness benefits, mental health resources, special perks and discounts, and more.

Over the past two years, Human Resources (HR), Global Technology and our Chief Administrative Office have been working in partnership to reinvent the employee experience. We're innovating across platforms and functions to deliver a more cohesive, frictionless, personalized experience for our employees, which in turn, helps them better serve our customers and clients. GenAI is helping us reimagine how teams collaborate and connect, driving greater efficiency and effectiveness and ultimately a better employee experience.

Simply put, JPMorganChase is a great place to work.

We believe that the office remains the primary place for people to work. It's where we foster and deepen our great culture, collaboration and career mobility.

We also recognize we need to continue to invest in the workplace of the future that delivers an elevated experience for employees, clients and visitors. That's why we're working to upgrade our global real estate portfolio, modernizing 125,000 seats with plans to deliver an incremental 75,000 additional new or modernized seats over the next five years. It's also why we opened two new corporate centers in India, a technology center in Glasgow and renovated our Columbus headquarters, all completed within the last two years. Our strategy is focused on creating excellent workspaces that have more communal, collaborative and restorative areas, advanced environmental systems and best-in-class amenities.

It's also why we are so excited to cut the ribbon on our new headquarters building, a true architectural marvel. When complete, it will be New York City's largest all-electric building totally powered by renewable energy, with net zero operational emissions. Special features include outdoor spaces, 30% more daylight and the capacity to support more than 50,000 connected devices, including computers and mobile devices, making it the most connected, data-driven high-rise building in New York City.

When we invest in improving our real estate, not only are we investing in our employees – we're investing in the local community. We are a major employer in local communities across the globe, with thousands of employees who significantly contribute to the local economy surrounding their workplace, stimulating additional jobs across local industries such as restaurants, coffee shops, dry cleaners, local retailers and gas stations. We recognize the critical role we play not only as a steward of the global financial system but also as a catalyst in boosting local economic health in the communities where we operate.

Our Guiding Principles Remain Unchanged:

- We seek to **make dreams possible for everyone, everywhere, every day**.
- We do not believe that talent is concentrated in any particular demographic group(s) and are **dedicated to equal employment opportunity for talent across all backgrounds**.
- We **strictly prohibit unlawful discrimination, harassment and abusive conduct** of any kind. We are dedicated to treating all individuals fairly and with respect.
- We seek to **attract and retain the best talent.** We recognize that our people are our strength and the diverse talents and perspectives they bring to our global workforce are directly linked to our success.
- We strive to **build and foster an inclusive work environment** where our employees are respected, trusted and empowered. Our experience is that if our teams are more diverse, we will generate better ideas and outcomes, enjoy a stronger corporate culture and outperform our competitors.
- We are **dedicated – and in many places obligated – to supporting underserved communities as part of our commitment to corporate responsibility and long-term shareholder value**. We strive to empower individuals and improve lives through our business practices and community outreach efforts that we have seen are good for customers, communities and our business.

OUR PURPOSE AT WORK

Our Purpose is to make dreams possible for everyone, everywhere, every day. We bring that to life with passion and grit through every interaction we have with our colleagues, customers and clients.

Our business and people practices are all anchored to the correct governance and controls that hold us to account for the policies and processes we put in place. We have the highest standards of excellence and are constantly asking ourselves how we can get better.

Part of that includes doing the right thing, upholding our code of conduct, and how we treat our customers and clients – never turning anyone away because of who they are or what they believe. This Purpose also extends to our treatment of our employees and to our belief that a culture where everyone is afforded respect and dignity creates the best workplace and business outcomes.

Indeed, we believe our strong culture is what makes us deliver so well for our shareholders, clients and customers, and that includes our belief in the power of a diverse workforce, which strengthens our business and builds trust within our communities. As I mentioned recently in a note to employees, our Diversity, Opportunity and Inclusion organization, along with the lines of business, HR and Corporate Responsibility, will continue our efforts to reach the most customers and clients to grow our business, uplift the people and communities we serve, and create an inclusive workplace for our employees.

We will continuously evaluate programs across every part of our business to ensure they make commercial sense, are driving the right business outcomes and comply with current laws as they evolve. And we'll stay true to our long-standing core principle and practice of reducing barriers because we know that talent and potential are equally distributed but that access and opportunity are not.

As a global company, we are dedicated to serving communities worldwide, from Baltimore and Huntsville to Paris and Hyderabad. Initiatives born from the model of our successful work in cities like Detroit to spur economic opportunity have led to innovation in products and services. Our offerings – including affordable housing and the expansion of branches, products and services in urban and rural areas – are now embedded in our everyday business and are, and always have been, available to all. Sometimes you start with a problem statement around a very particular issue or community, but the solutions benefit all.

Our virtual call centers, first piloted in Detroit in 2022, have created more than 200 jobs. Since 2022 we have expanded to other cities, including Atlanta and Baltimore, where we recently welcomed a new cohort of 40 employees who are military spouses. Hiring veterans is another win for everyone, and I'm proud to break the news here that the Veteran Jobs Mission, a coalition of more than 300 companies that we helped to found in 2011, just reached 1 million veterans hired. That includes nearly 20,000 veterans hired within our firm. Removing barriers through these initiatives and others, like our second chance hiring and tapping different communities for the skills and expertise that they lend our business, has helped our firm to thrive.

Successful companies require thriving communities. It makes good business sense to invest in the broader ecosystem.

OUR VALUES

Our Purpose is realized through living our Values – Excellence, Heart, Service, Courage and Curiosity.

Each one of these words and the ethos they carry is what sets us apart: striving for better every day; serving our customers, communities and each other with heart; always having the courage to do the right thing – especially when it's hard; and staying humble in our approach and curious to learn.

This is how we deliver for our shareholders, invest in the JPMorganChase of tomorrow and keep our business not only running well, but also as one of the most successful in the world – and our people are the fuel that enables it all.





Jennifer Piepszak
Chief Operating Officer

Consumer & Community Banking

I'm very proud of how Consumer & Community Banking (CCB) delivered for our customers, communities and employees in 2024, as we focused on our priorities to:

1. Grow and deepen relationships by engaging customers with products and services they love and expanding our distribution.
2. Deliver best-in-class financial performance.
3. Leverage technology, data and artificial intelligence (AI) to drive customer value and speed to market.
4. Protect our customers and the firm through a strong risk and controls environment.
5. Cultivate talent to build high-performing, diverse teams where culture is a competitive advantage.

This consistent, long-term strategy has served us well through volatile and uncertain times, and we believe it positions us well for the future.

1. GROW, ENGAGE AND DEEPEN RELATIONSHIPS

Across CCB, we serve more than 84 million consumers and 7 million small business clients[1]. We've grown consumer relationships by 14% from 2019 (3% year-over-year) and small business relationships by 51% (10% year-over-year) by engaging customers with products, services and seamless experiences across both digital and branch channels. Our branches are still the storefront of JPMorganChase, with more than 41 million customers choosing to visit a Chase branch in 2024, up 12% since 2019 (4% year-over-year). Nearly 71 million customers were digitally active, up 35% since 2019 (6% year-over-year).

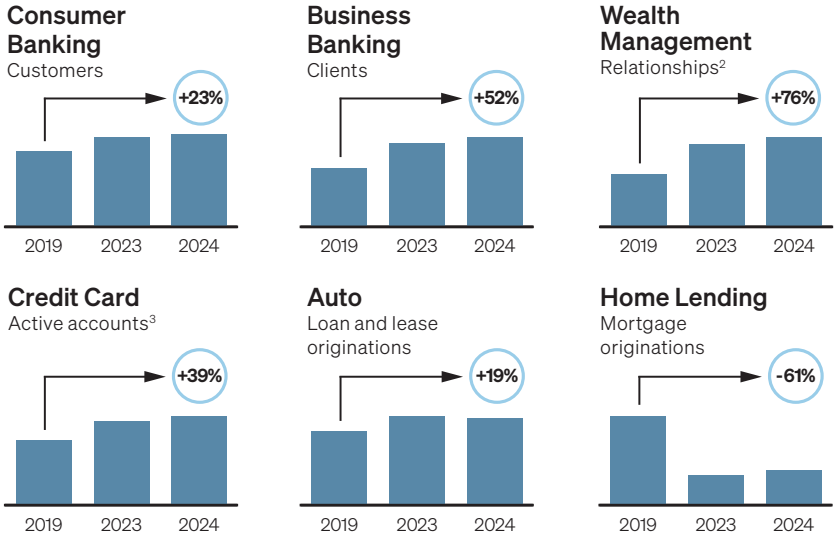
We're not just growing our customer base. We're also creating deep, enduring relationships by investing in industry-leading products and capabilities and improving the customer experience. Today, 28% of customers have at least two discrete products with us, up from 24% in 2019 (27% in 2023).

2. DELIVER BEST-IN-CLASS FINANCIAL PERFORMANCE

We're proud of our financial results, which are an outcome of a customer-first approach and a focus on operational excellence. We manage the business with a long-term, through-the-cycle view. While the goal is to deliver best-in-class performance in any year or environment, we also aim to realize durable and profitable growth that is consistent with our 25% through-the-cycle return on equity (ROE) target. For the fourth consecutive year, we exceeded that objective, delivering a 32% ROE in 2024.

Consumers remain healthy despite excess cash having been largely drained from their balance sheets, which, to date, we view as normalization. Spend remains strong, fueled by a healthy labor market. By recent historical standards, today's interest rates are elevated, even after a 100-basis-point reduction in 2024, and yield-seeking behaviors continue, albeit at a slower pace. Importantly, we are successfully defending primary bank relationships and capturing money in motion. In 2024, we retained over 85% of flows within Banking and Wealth Management. As expected, declining rates drove deposit margin compression, while ongoing yield-seeking behavior resulted in a 6% decline in

2019 to 2024 Performance



average deposit balances from 2023. In Card, we continue to see strong demand for our products and low levels of attrition, which resulted in a 12% increase in average loans over 2023. Taking deposits and loans together, where we see offsetting impacts, net interest income was $54.9 billion, flat compared with 2023.

Noninterest revenue of $16.6 billion increased 10%, driven by strong annual fee growth in Card, coupled with the scaling of Wealth Management and Connected Commerce, and the easing of cyclical and secular headwinds in both Home Lending and Auto.

Expenses of $38 billion were up 9% from 2023. We grew our distribution capacity as we added an incremental 800 bankers, approximately 300 advisors and nearly 70 branches to our network, all of which drive long-term growth. Through investments in data and technology, we've made great progress modernizing our infrastructure and developing products customers love. In marketing, where we have a data-driven, proven track record of success, we remain focused on opportunities to acquire customers across products and segments. Additionally, we saw strong account and transaction growth and engagement.

Against a macroeconomic backdrop similar to 2023, credit remains in line with expectations.

Maintaining our #1 position across industry-leading businesses

We're the clear market leader in Consumer and Business Banking, as well as Card, on the back of strong new account acquisition and primary bank relationships.

Consumer and Business Banking: We maintained the #1 position in 2024 and outperformed large bank peers with 11.3% national retail deposit share, up 220 basis points since 2019 (down 7 basis points year-over-year). We also remained #1 in small business with 9.7% primary bank share, up 28 basis points since 2019 (up 25 basis points year-over-year). We ended 2024 with 44 million Consumer Banking relationships (up 4% year-over-year) and 7 million small business clients[1] (up 10% year-over-year). Approximately 80% of consumers and 65% of small business owners with whom we have banking relationships consider us their primary bank.

This position reflects strong new account acquisition, as well as over a decade of investment in our branch network. Historic investments continue to mature, and we invest for the future with plans to get to 15% national retail deposit share.

Banking is local, and nearly 1 million customers walk into a Chase branch each day. The bank's team of approximately 50,000 experts helps customers transact, open accounts, and get information and advice. In 2024, 85% of business checking accounts and nearly 30% of Chase-branded cards were opened in branches.

Branch expansion remains core to long-term growth. Since 2019, we've added over 860 new branches, more than all large bank peers combined, and we are the only bank with a presence in all 48 contiguous states. As a result, Chase covers more Americans than any other bank, with 68% of the U.S. population within an accessible drive to one of our branches. We are on track to meet the goals we announced last year to build 500 new branches by 2027, contributing to our long-term plans of reaching 75% of the national population within an accessible drive and over 50% within each state. This goal demonstrates our commitment to providing local banking services in all communities, from urban centers to rural areas across America's heartland.

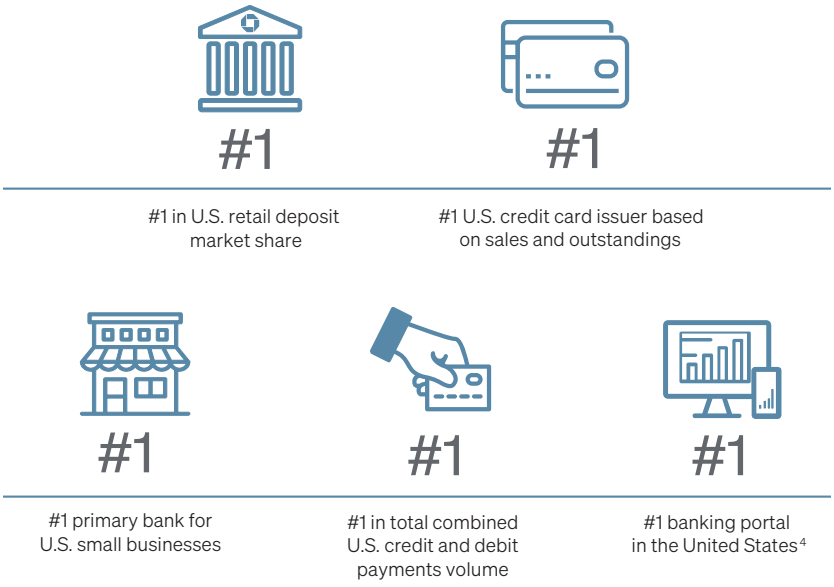
In 2024, we entered 10 new markets, opened approximately 150 new branches – including the first two J.P. Morgan Financial Centers in Manhattan and San Francisco – and three Community Center branches in the Bronx and Brooklyn in New York City and Columbus, Ohio. We're also investing in existing branches, refreshing nearly 450 in 2024.

We aim to be the bank for all and remain committed to evolving products, services and experiences to meet the unique needs of each customer segment. In 2024, we enhanced Secure Banking℠, a product geared toward emerging segments, and introduced J.P. Morgan Private Client as a new tier in our affluent product continuum. We also launched new tools to help small business owners run their businesses, including invoicing, payroll and customer insights.

The First Republic integration is complete, and we're proud to have retained approximately 90% of banking clients and over 95% of deposit balances across the firm. In the Wealth Management businesses, we retained nearly 80% of advisors and assets.

Card: In 2024, we remained the #1 credit card issuer in the U.S. and continued to gain share. We increased total active accounts to nearly 60 million and outstandings to $214 billion (up 12% year-over-year). This fueled market share gains to 23.5% share of sales and 17.3% share of outstandings, up 110 basis points and 90 basis points, respectively, since 2019 (each up 60 basis points year-over-year).

Our ongoing investment in marketing distribution is driving strong new account production and engaging existing cardmembers. In 2019, we booked 7.8 million new card accounts, and since 2022, we've consistently booked approximately 10 million new accounts each year with strong return



profiles. This step-change in growth will serve as a solid financial foundation for the Card franchise for years to come. Through industry-leading product benefits, we drove engagement with existing cardmembers, and in 2024, more than 60% of customers chose Chase as their top-of-wallet card[5], which is a record high.

We invest in benefits and capabilities to keep our cards fresh and relevant, and in 2024:

- Refreshed the Marriott Bonvoy Bold® card with an embedded lending benefit, inspiring cardmembers to "Travel Now, Pay Later" and to divide qualifying purchases into equal monthly payments with no interest or plan fees.
- Launched Chase Pay Over Time® at Amazon checkout so customers can break up large purchases into fixed monthly payments without requiring a credit check or forfeiting rewards.
- Extended our partnership with InterContinental Hotels Group and further deepened the relationship into Chase Travel℠ and other businesses.

We continue to focus on adding value for key segments where we have outsized opportunity to grow, including:

- New-to-credit customers: Continued to scale the Freedom Rise® card while increasing the number of annual new accounts within this segment by 85% year-over-year.
- Small businesses: Refreshed the Ink Business Cash® card to better serve the needs of smaller businesses. Continued to deepen with Chase Business Banking clients, who contributed to over 50% of business card spend growth.
- Affluent clients: Expanded our award-winning lounge network, opening five new Sapphire airport lounges, including at LaGuardia Airport. The Points Guy named it the best new U.S. airport lounge and recognized the Sapphire Preferred® card as the best travel rewards card in 2024.

These strategies will fuel our plans to get to 20% share of outstandings.

Scaling growth businesses

In Connected Commerce and Wealth Management, we have the assets to win and outsized opportunity to grow to what we view is our fair share, given the breadth of CCB relationships. These businesses are natural adjacencies to credit card and banking, and both diversify and strengthen the CCB franchise.

Connected Commerce: We continue to build a powerful two-sided platform to connect customers with relevant merchant brands. In 2024, we reached over $23 billion in volume and are on track to reach $30 billion in volume in 2025. Since launching Connected Commerce in 2021, we've doubled volume on both Travel and Offers platforms.

Travel – We maintained our rank as a top five consumer leisure travel provider and secured the #3 spot[6] in 2024. We launched Chase Travel℠ as a standalone brand in 2024 to help customers discover, plan and experience travel and delivered $11 billion in booked volume, up 9% year-over-year. We also scaled The Edit by Chase Travel℠ to more than 1,000 hotels, offering customers exclusive benefits and experiences at our curated list of premium hotels. The share of Chase proprietary card spend on our platform has increased by more than 200 basis points since 2021, and we expect ongoing growth.

Chase Media Solutions℠ – Our new digital media business connects customers' personal passions and interests with brands they love. Customers benefit from the ability to earn extra cash back at places where they already shop or just discovered. Since launching last year, we've experienced strong growth with 18 billion offers and $12 billion of customer spend on the platform in 2024, up 31% year-over-year.

Payments and Lending Innovation – In payments, trust and security are top priorities. We continue to invest and use assets that we believe will help protect customers from fraud and scams. This includes adding steps in the Zelle℠ user flow to warn customers about scams. As a result, we had a 26% reduction in fraud and scam claim rates in 2024. We are making enhancements to new capabilities, including

preventing higher-risk transactions that originate from social media. To introduce new, secure payments solutions, we've rolled out Paze℠, a digital wallet created in partnership with Early Warning Services. We've onboarded 40 merchants and expect it will continue to scale.

In lending, we now offer a range of Pay Over Time® solutions across credit and debit cards, both in our own and partner digital channels, and we've had strong customer adoption. In 2024, over 6 million customers used our flexible payments and lending solutions (compared with over 5 million in 2023), totaling $10.7 billion in originations, up from $8.5 billion in 2023.

Wealth Management: We reached a milestone of $1 trillion in client investment assets ahead of schedule, doubling assets since 2019 (up 34% year-over-year). While the First Republic acquisition and strong market performance in 2024 provided tailwinds, nearly half of this growth was driven by a record 150,000 first-time investors[7] (up 27% year-over-year), product enhancements (such as launching fractional shares in Self-Directed Investing) and investments in advisor hiring (adding approximately 300 net advisors in 2024 alone). In fact, we had a record year for advisors, doubling net flows per advisor relative to 2019. These factors should continue to spur growth. Our branch referral program was particularly impactful with more than 90% of first-time investors[7] being introduced to J.P. Morgan Wealth Management by their banker.

We have tremendous opportunity to further advance growth by leveraging existing assets and continuing to invest in products and distribution.

Customers increasingly want to manage their banking and investments together, and we are uniquely positioned to fill that need and capitalize on the opportunity. More than 5 million affluent households have banking relationships with us, but the majority still have their investment relationships elsewhere.

We continue to invest to meet customers' evolving wealth management needs. As a result, 2024 was a breakthrough year in which we made significant progress in our digital customer experience. In 2024, J.D. Power ranked us #1 in Wealth Management Digital Experience Satisfaction[8] among full-service and self-directed investors.

Secured Lending

In both Home Lending and Auto, we've faced a few years of challenging market conditions, but we continue to focus on what we can control while managing returns on a through-the-cycle basis. We make ongoing investments in products, experiences and technology platforms that position us for growth as conditions become more favorable. These two businesses remain strategically important, as they provide diversification and help us serve customers' needs in life's key moments.

Home Lending: We continue to face some of the strongest market headwinds we've seen in generations, as high rates are coupled with limited housing supply and elevated prices. Since 2019, home prices are up more than 50% (roughly flat year-over-year), inventory is down approximately 15% (albeit recovering strongly and up over 20% year-over-year) and mortgage rates have increased to nearly 7% (roughly flat from 2023).

Despite these challenges, in 2024 we scaled originations to $41 billion in volume, up from $35 billion in 2023, while maintaining our position as the #1 owned servicer. We scaled Chase MyHome℠, a digital home shopping platform, to promote deeper engagement and generate leads. In 2024, over 9 million unique users visited Chase MyHome℠ (up 46% year-over-year). We experienced an increase of approximately 20% in customers who engage with high-value features, including searching for homes, viewing insights on their current property and mortgage, and understanding how much they can afford.

Our investments in technology, data and AI enhance our sales and underwriting capabilities, improve productivity, and facilitate efficiencies and speed to market. Our newly modernized loan origination system enabled us to roll out a home equity product in 2024 to provide additional lending options for customers.

Auto: The industry showed signs of improvement, with COVID-era, secular headwinds abating. In 2024, new vehicle sales recovered from pandemic lows to about 90% of 2019 levels (up 2% year-over-year).

While the industry outlook remains uncertain, Chase Auto has been on a strong growth trajectory. Up 19% from 2019, the business originated $40 billion in 2024 compared with $41 billion the year prior. Notably, lease originations have rebounded from recent lows, though they remain below pre-pandemic levels. We continue to enhance digital capabilities and drive engagement with customers. In 2024, over 13 million unique users visited our digital car shopping and financing platform, Finance & Drive℠, down 12% year-over-year. Importantly, the number of customers engaging with high-value features (including shopping for a car and pre-qualifying for a loan) was up 16% year-over-year, which reflects our focus to deepen engagement with our digital tools.

J.D. Power scores indicate our products and services resonate with customers, as we ranked #1 in Digital Experience for Customer Satisfaction among Non-Captive Automotive Finance Lenders[9].

Finally, we've increased operational efficiency across the business. About 80% of all applications are automatically decisioned, and we continue to streamline and automate more back-end processes.

3. LEVERAGE TECHNOLOGY, DATA AND AI TO DRIVE CUSTOMER VALUE AND SPEED TO MARKET

Our technology investments enable business growth and customer engagement, resulting in market share gains, record channel satisfaction and continued improvements to net promoter scores.

In 2024, we increased investments in product, technology and customer experience to approximately $4 billion to accelerate innovation, modernization and AI readiness.

Our innovation agenda focuses on improving digital products and investing in personalized customer experiences. These investments support increased payment volumes, more targeted offers and enhanced financial planning tools.

Modernization investments improve our scale, resilience and speed to market. With the migration to new data centers largely behind us, we're investing to enhance core platforms, particularly in Card, Consumer Banking and Home Lending. Modernization efforts aren't just about technology but also about elevating the quality, accessibility and usability of our data. We've nearly completed the migration of our data to the public cloud, which is critical for scaling experimentation and innovation.

Investments in technology and data are essential for AI readiness. We were early movers in AI and have invested in it for over a decade. We initially focused on risk management, such as fraud detection. We've since made significant progress in operational efficiencies and revenue growth, including personalization and sales effectiveness. To increase AI readiness, we continue to modernize data and invest in platforms to scale AI and machine learning broadly across the organization. As we implement these ideas in a controlled manner, we're driving efficiencies – both large and small – in every process, function and product.

4. PROTECT OUR CUSTOMERS AND THE FIRM

A strong risk and controls environment is core to who we are and what we do. We earn customers' trust by providing safe and secure access to banking, and we protect the firm and shareholders through a rigorous commitment to a fortress balance sheet and through-the-cycle decision making.

5. CULTIVATE TALENT

Our more than 140,000 employees across the globe help make dreams possible for tens of millions of customers, strengthening the communities where we operate and the economy overall. People and culture continue to be our greatest competitive advantages, helping us achieve the best business outcomes. We're proud to attract and develop employees who reflect diverse backgrounds and perspectives, and we are committed to helping employees build rewarding, long-term careers at the firm.

2025 LOOK AHEAD

CCB continues to be a growth-oriented franchise that operates from a position of strength with strong financial performance. We focus on building durable customer relationships across segments and in communities across the U.S.

From where we stand today, we're confidently building upon a stable foundation. Consumers and small businesses have healthy balance sheets, and cash sorting feels largely behind us.

While the regulatory environment looks different from a year ago, there's still a significant amount of uncertainty. In this – like everything – we'll focus more on where the puck is going instead of reacting to a specific moment in time to create maximum strategic flexibility and adapt accordingly. We can't predict everything 2025 will bring, but we have confidence in our growth strategy and discipline.



Marianne

Marianne Lake
CEO, Consumer & Community Banking

1 Includes clients across all CCB lines of business.
2 Unique families with primary and joint account owners for open and funded accounts.
3 Defined as average sales debit active accounts.
4 #1 most visited banking portal in the U.S. (chase.com) amongst registered banks based on Similarweb.
5 Defined as the percentage of monthly active customers who have 10 or more transactions or $10,000 or more annualized spend.
6 Skift research.
7 Customers investing for the first time with a J.P. Morgan Private Client Advisor.
8 Measures satisfaction with wealth management websites and apps. Learn more: jdpower.com/awards.
9 Measures satisfaction with automotive finance websites and apps. Learn more: jdpower.com/awards.

Commercial & Investment Bank

2024 was a transformative year for our business. The combination of our Commercial Banking and Corporate & Investment Bank businesses was a significant step forward in our mission to deliver more value to our clients and maximize the value of our franchise.

The new Commercial & Investment Bank (CIB) leverages the combined strengths of our united businesses and offers a more cohesive organization, enabling us to better align our capabilities for clients of all sizes across the globe, from startups to multinationals.

We are well-positioned to respond to significant industry trends, such as the rapid growth of private markets and the expansion of important client ecosystems, including financial sponsors and the Innovation Economy.

Our performance in 2024 highlighted the effectiveness of this strategy and the value it is creating for our clients and shareholders.

DELIVERING RECORD RESULTS

In 2024, financial markets continued to adjust following the injection of trillions of dollars into the global economy during the pandemic. Economic optimism rose among business leaders in both large companies and the middle market. Dealmaking rebounded and trading surged as investors repositioned their portfolios in response to inflation data, interest rate cuts and the busiest international election calendar on record.

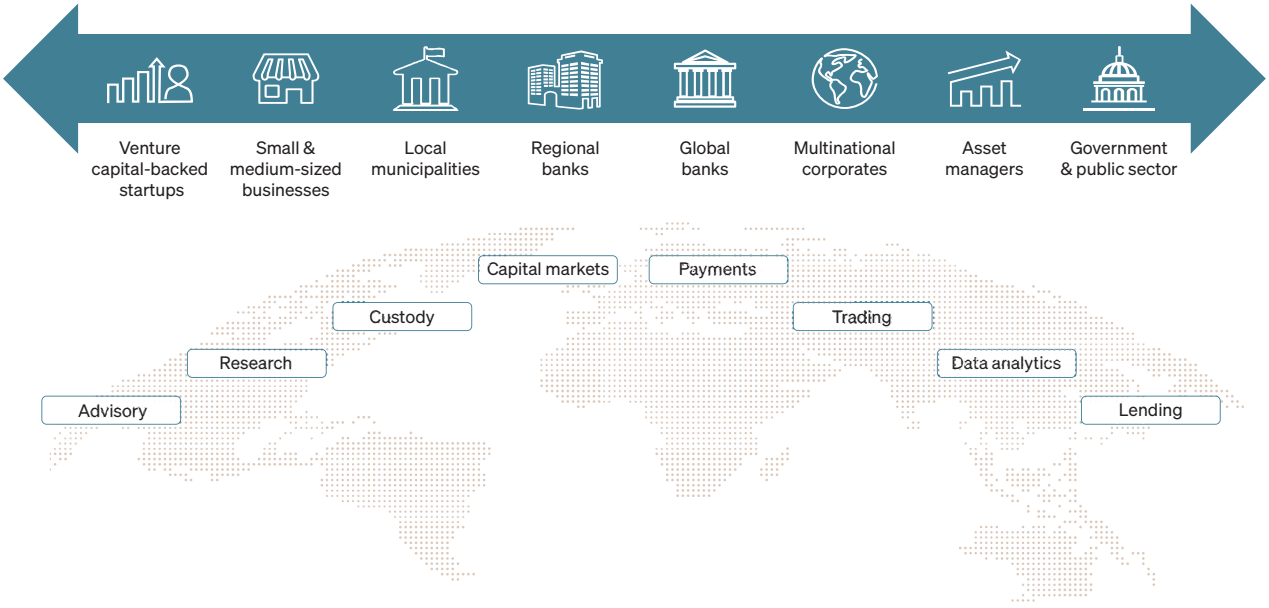
Against this backdrop, the CIB reported net income of $25 billion on record $70 billion in revenue, setting new benchmarks across major business lines and achieving a full-year return on equity of 18%.

Global Banking

Our Investment Banking franchise maintained its top position in global fees with a 9.3% market share[1] and, for the first time, ranked #1 in M&A, debt capital markets (DCM) and equity capital markets (ECM)[1]. This exceptional performance is a testament to our strategic focus and strength of our client relationships.

In M&A, J.P. Morgan ended the year as the top advisor, advising on 395 transactions totaling more than $744 billion[1]. The business earned $3.3 billion in advisory fees to finish the year with a leading 9.6% market share[1]. Meanwhile, in capital markets, lower

Powerful Client Capabilities across the Globe



volatility and interest rate cuts supported a pickup in debt underwriting fees and equity transactions, with DCM fees rising to $4.1 billion, up from $2.7 billion in 2023, and ECM fees increasing to $1.7 billion from $1.2 billion. We maintained our #1 position in both areas with wallet share of 8.4% and 11.0% in DCM and ECM[1], respectively.

Our Commercial Banking and Global Corporate Banking (GCB) businesses are also key growth drivers for the new CIB. Middle Market Banking revenue has doubled since 2020, driven by client acquisition and market expansion, including the purchase of First Republic. In 2024, we added more than 2,500 new clients, and we now have a strong presence in 90 of the top 100 U.S. metropolitan areas. Similarly, GCB added over 450 new clients last year. With bankers in over 40 countries, we are covering the largest firms across the world. And in Commercial Real Estate, where we have long been the #1 multifamily lender in the U.S., we are deepening relationships and becoming the primary operating bank for our clients.

Payments

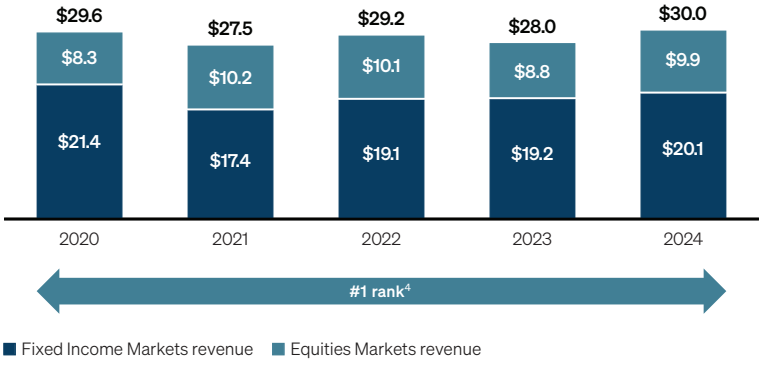
In Payments, we delivered record revenue of $18.4 billion[2]. The business has experienced impressive growth, gaining 260 basis points over the last five years[3] to reach a market share of 9.5% for Treasury Services. A key competitive advantage is our ability to provide a complete set of advanced payments solutions to clients around the world.

Markets

Markets reported record revenue of $30 billion, a 7% increase year-over-year, with equities up 13% and fixed income up 5%. In a year dominated by macro themes, our rates, foreign exchange, commodities and emerging markets desks excelled in helping clients navigate complex markets.

Maintaining Strength in Markets

Markets revenue
($ in billions)



Note: Totals may not sum due to rounding.

The year began with expectations of aggressive Federal Reserve easing, but global inflation proved stickier than anticipated, prompting adjustments across institutional portfolios. We have consistently ranked #1 in Markets, finishing 2024 with an overall market share of 11.4%.

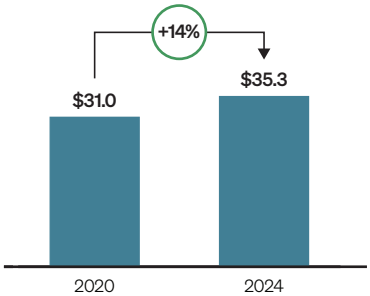
Securities Services

Securities Services delivered another record year with $5.1 billion in revenue[5], an increase of over $800 million since 2020. This business plays a central role in J.P. Morgan's strategy to act as a complete counterparty to institutional investor clients, enabling the firm to meet their needs across the full investment life cycle. Securities Services operates at remarkable scale, with assets under custody growing by 14% in the last five years to over $35 trillion at the end of 2024.

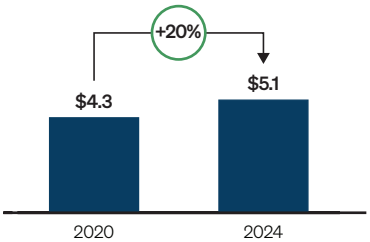
The exceptional results across the CIB are a true testament to our incredible teams and their continued focus on our clients. We are honored by the trust placed in us and understand the importance of earning it every day.

Leadership in Securities Services

Assets under custody[6]
($ in trillions)



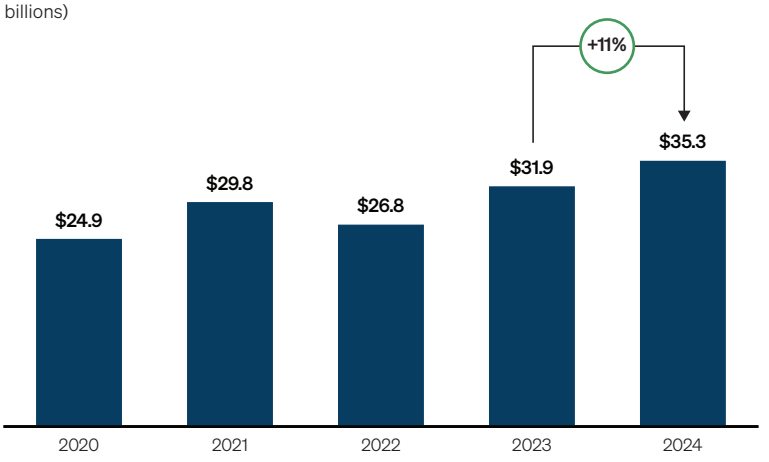
Securities Services revenue[5]
($ in billions)



Banking and Payments Revenue Growth

Combined Banking and Payments revenue

($ in billions)



While we are proud of our performance, we aren't standing still.

In an environment of fierce competition, it's crucial to adapt and innovate. We continue to make sustained investments in our capabilities and solutions, leveraging the full force of JPMorganChase to stay ahead and provide what's best for our clients.

INCREASING OUR FOOTPRINT

To serve clients where they are and to provide deep sector expertise, we are expanding into new geographies and investing in our capabilities.

Our global growth plans are underway with a particular focus on expanding our footprint to new markets. Over the past five years, we have organically added banking coverage of midsized companies across 24 new countries. Extending our capabilities adds tremendous value for our clients seeking access to markets and capital around the world. This international growth has contributed to an increase in Banking and Payments revenue from roughly $25 billion to more than $35 billion over the same period.

We are also investing in key growth sectors. Since the start of 2024, we've hired more than 300 bankers across Global Banking. Our goal is to continue to grow market share across 28 subsectors in investment banking with a particular emphasis on healthcare, technology, infrastructure and the middle market. Despite being the leading franchise in the world for more than a decade, there are still plenty of ways we can grow and expand our relationships over time.

Serving client ecosystems

We are partnering across the firm to deliver more value to important client ecosystems, such as financial sponsors, the Innovation Economy, sovereign wealth funds and family offices.

Financial sponsors represent a major market opportunity, with an estimated $3 trillion[7] of investable assets. Over the last five years, about half of the Investment Banking wallet from sponsors has come from middle-market-sized transactions[8]. As the bank to over 32,000 middle market companies, we have a significant competitive advantage. To support our growth, we've expanded our teams globally. Strong collaboration among our Markets, Banking and Private Bank teams has resulted in differentiated dialogue with financial sponsor clients, who are expected to drive a significant amount of activity around the world.

By strengthening the partnership between Banking and Markets, we have been able to bolster our capabilities in private credit. Over the past four years, we have successfully deployed more than $10 billion in 100 direct lending financings. Recently, we announced that we are dedicating up to $50 billion from our own balance sheet, along with nearly $15 billion from our co-lending partners, highlighting our determination to be a leader in both the broadly syndicated and private credit markets.

Our investment also continues in banking the full Innovation Economy ecosystem – the network of venture-backed companies, founders and investors – where we had nearly 30% client growth in 2024. Our ability to support clients throughout every stage of their life cycle is a true differentiator. As they scale and grow, we are uniquely positioned to meet their increasingly complex and global needs.

Delivering leading capabilities

In Global Banking, we're equipping our commercial, corporate and investment banking teams with data-enabled analytics and intuitive applications to best serve our clients. Leveraging the latest technology and J.P. Morgan's unparalleled access to data across global markets, we are empowering our teams with rich market insights that lead to better client outcomes.

In Payments, we operate at scale, processing over $10 trillion[9] in payments daily, with a 5% increase in volumes year-over-year. J.P. Morgan is also the largest U.S. dollar clearer globally, with over 28% of SWIFT market share[10], and the largest merchant

acquirer in North America[11], with settled sales of about $2.6 trillion globally. There is still significant room for growth, particularly with corporates and in international markets. With that goal, we are investing in innovation, enhancing product capabilities and modernizing to improve the resiliency of our platforms. We have expanded our biometric payments offerings, rebranded our blockchain business to Kinexys by J.P. Morgan – processing over $2 billion in transactions daily – and launched our acquiring services in France through our partnership with the Cartes Bancaires network.

In Markets, we continue to add value for clients across the trading life cycle, from research and market insights to execution and post-trade services. The Global Research team, which plays a crucial role in acquiring and retaining clients in this business, achieved a clean sweep of #1 rankings in Extel's Global Leaders Tables for research providers. J.P. Morgan was named the world's top research house for the fifth consecutive year. J.P. Morgan Markets, our client research platform, underwent a redesign to improve the user experience, personalize content and make it easier to access our trading services.

Investments in technology have also enhanced the scale and resiliency of our Securities Services platforms, enabling revenue growth and securing major new wins. Among recent innovations, our Fusion platform provides clients with tools for data discovery, simplified access to consistent data, and proprietary analytics within a robust governance framework.

INVESTING IN THE CLIENT EXPERIENCE

To maintain our leadership positions in highly competitive markets, enhancing the client experience on our digital platforms is a top priority. This year, we will continue to harmonize platforms, creating a more seamless and consistent experience and providing easier access to J.P. Morgan's extensive thought leadership and global capabilities.

By simplifying and updating our systems, we'll eliminate barriers clients may have encountered when switching among applications and workflows. In addition, greater personalization will ensure that the firm's wide range of content, products and services is tailored to each client's specific needs. We expect these investments to boost client satisfaction and open up revenue opportunities - while decreasing complexity and costs.

The first step in achieving these objectives has been to modernize our infrastructure and make the necessary investments to move core infrastructure into the cloud. As of today, 98% of production applications have been successfully migrated to strategic data centers and the public cloud, and approximately 50% of applications now operate on the public or private cloud. This positions us to leverage cloud, data and artificial intelligence (AI) innovations that will be critical for the future of our business.

HARNESSING THE POWER OF OUR DATA

The CIB has incredibly rich proprietary data assets.

We have made significant strides to build a data-driven business and transform the way we work. Using our data, we are reimagining how we serve clients, manage risk and optimize our operations. We are investing to build the data infrastructure needed to integrate AI into our operating environment.

The CIB now has over 175 AI use cases in production, with large parts of our team using our internal large language model platform to deliver insights and improve efficiency across a range of daily tasks.

Among other operational efficiency gains, AI and machine learning technology has enabled the CIB to improve its know your customer processes, leading to a nearly 40% reduction in unit costs. It also meaningfully improved the cost and effectiveness of sanctions screening and fraud protection.

Meanwhile, AI is enabling us to improve the client experience and offering, using data across the business to create recommendations based on client interactions in over 40 countries. Firmwide data also plays a key role in the unified client dashboard we are developing for our bankers, an especially important initiative as we look to better serve complex client segments like financial sponsors.

Other AI use cases include tools to help corporate clients better predict cash flows, to optimize the use of capital in our trading business and, in Global Research, to quickly find relevant insights from reports and economic data.

MAKING A POSITIVE IMPACT AROUND THE WORLD

We are a purpose-led organization and continue to dedicate capital, expertise and resources to drive real impact for our clients and communities.

In 2024, we supported vital institutions – including hospitals, schools, nonprofits, state and local governments,

and transportation infrastructure – with more than $8 billion in credit facilities and over $19 billion in capital markets financing, as well as provided funding for over 8,000 incremental affordable housing and rental units[12].

In the United States, we financed affordable housing in Chicago's Lincoln Park neighborhood and the renovation of a vital blood sciences unit in New York City, as well as the construction of the world's first purpose-built women's soccer stadium in Kansas City. Internationally, our Public Sector group continued to help clients invest in a more sustainable future and improve economic prospects for people around the world. Among its work, the team supported conservation efforts in El Salvador with a $1 billion loan facility to free up funds for the Lempa River watershed and, in Brazil, we arranged an $800 million loan to Banco do Brasil to help smallholder farmers operate their land more sustainably.

In the CIB, we believe that our true success is not purely defined by financial performance but also derived from making a positive impact and uplifting communities around the world.

LOOKING FORWARD

J.P. Morgan's new CIB has further strengthened its market position. The integration of two industry-leading businesses will drive value for years to come, enabling us to offer more seamless and tailored solutions to meet the distinct needs of diverse businesses.

We have a tremendous client franchise and a complete set of products and services. We also have the capacity to invest through cycles, enabling us to innovate to extend our competitive advantage and focus relentlessly on improving the client experience.

Even in the face of uncertain times, J.P. Morgan stands ready to support our clients. Our strong operating discipline and fortress principles allow us to be there for them in any market environment.

We are incredibly proud of our exceptional team for everything they do to support our clients and communities around the world. Looking forward, we are excited about the many opportunities ahead for this extraordinary franchise.





Troy L. Rohrbaugh

Co-CEO, Commercial & Investment Bank



Douglas B. Petno

Co-CEO, Commercial & Investment Bank

1 Dealogic as of January 2, 2025.
2 Payments revenue excludes the net impact of equity investments.
3 Coalition Greenwich Competitor Analytics (preliminary for FY24) reflects global firmwide Treasury Services business (CIB and CB). Market share is based on JPMorganChase's internal business structure, footprint and revenue.
4 Coalition Greenwich Competitor Analytics (preliminary for FY24). Market share is based on JPMorganChase's internal business structure, footprint and revenue. Ranks are based on Coalition Index Banks for Markets. Institutional client share based on Coalition Greenwich 2020-9M24 Institutional Client Analytics for Markets.
5 Revenue reflects J.P. Morgan reported revenue.
6 Represents assets held directly or indirectly on behalf of clients under safekeeping, custody and servicing arrangements.
7 Preqin.
8 Dealogic as of March 28, 2025.
9 Based on firmwide data using regulatory reporting guidelines prescribed by the Federal Reserve for U.S. Title 1 planning purposes; includes internal settlements, global payments to and through third-party processors and banks, and other internal transfers.
10 Represents U.S. dollar payment instructions for direct payments and credit transfers processed over Society for Worldwide Interbank Financial Telecommunications (SWIFT) in the countries where J.P. Morgan has sales coverage. Market share is based on December 2024.
11 Nilson, Full Year 2024.
12 Part of the Firm's $30 billion Racial Equity Commitment, excluding any adjustments to the prior periods reported units.

Asset & Wealth Management

J.P. Morgan has a proud fiduciary history spanning nearly two centuries of managing client assets. Throughout each decade, we have consistently delivered valuable insights and strong performance to a distinguished clientele worldwide, including governments, major institutions, central banks, sovereign wealth funds, CEOs, founders and individuals. Our steadfast commitment to delivering strong and consistent results has solidified our position as a leader in industry growth. Whether supporting a first-time saver seeking cash management solutions or retirement options at a Chase branch or serving a major state pension plan in need of tactical asset allocation overlay strategies, our franchise continues to strengthen with each new relationship, earning the trust of our clients.

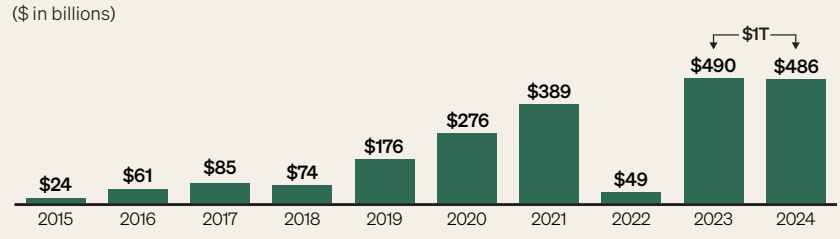
Having had the privilege of working for Jamie Dimon for over two decades, I am reminded every day that success is not accidental and should never be taken for granted. Sustainable growth requires constant innovation, extraordinary focus, intensity and drive, coupled with a fortress mindset – always preparing for the toughest challenges while remaining poised to seize new opportunities. We are in a fiercely competitive race to identify the best opportunities for our clients and for our future growth while simultaneously maintaining our unwavering focus on cutting waste and achieving operational excellence.

In Asset & Wealth Management (AWM), my partners and I work tirelessly to optimize client portfolios and future-proof them for what lies ahead. We achieve this by delivering leading investment performance, leveraging what I believe is the most exceptional talent in the industry and executing **our most ambitious investment agenda to date**. Our focus on investing in cutting-edge technology and our elite talent, while driving out inefficiencies, has led us to highly profitable growth for our shareholders.

Our clients vote daily on our success with their consistent contribution of new assets. They have demonstrated their ongoing confidence in our strategy by **entrusting us with an additional $486 billion in net new assets, bringing the total to nearly $1 trillion of inflows over the past two years**. This remarkable achievement stands as the ultimate testament to the strength and effectiveness of our business.

Building on this tremendous momentum, we have achieved record results across nearly all financial metrics, reaching all-time highs in five key performance indicators, as shown in the top right chart on this page.

Client Asset Flows[1]



A Record-Breaking Year

$22B ✓
Revenue

$7B ✓
Pre-tax Income

$5B ✓
Net Income

$236B ✓
Loans (EOP)

$6T ✓
Client Assets

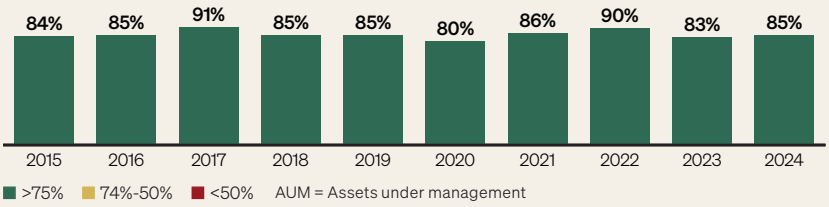
EOP = End of period ✓= Record

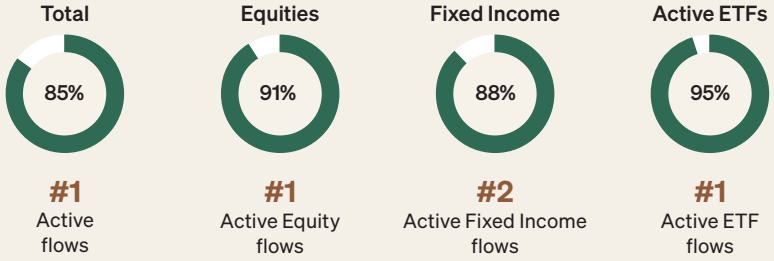
ACTIVELY MANAGING OUR CLIENTS' ASSETS

Over the past two decades, we have focused on and invested in the industry's leading active management platform, even as many of our peers double down on passive strategies. In today's market environment, where having fundamental insights is critical, we believe our responsibility is to proactively seek opportunities that are not yet reflected in backward-looking benchmark weightings. We have responded swiftly and adeptly to various market cycles, consistently achieving world-class investment performance. Our peer-leading performance has enabled us to deliver positive outcomes for our investors, strengthening our clients' trust in us as their long-term partner and attracting more clients than ever before.

Investment Performance and Global Rankings by Flows[2, 3]

J.P. Morgan Asset Management Long-Term Funds AUM (%) Outperforming Peer Median Over 10 Years





A key component of our strategy to be the industry's leading active manager is our substantial investment in our research capabilities. In 2024, we employed 490 proprietary research analysts across various asset classes, underscoring our commitment to making informed decisions and embedding research into our culture and business ecosystem. In the past year alone, our research team provided coverage on approximately 4,700 companies and conducted nearly 11,000 company visits and engagements. These real-time, on-the-ground insights from around the world, infused with JPMorganChase's dominant technology, empower our teams to adeptly navigate complex global markets for our clients.

By harnessing and leveraging advanced technologies – such as artificial intelligence (AI), machine learning and proprietary data science – we enhance all aspects of our business, significantly improving our risk management capabilities, streamlining operations and boosting overall efficiency. Our recent launch of GPT-Insights exemplifies this commitment, streamlining the research process for Asset Management (AM) investors. This proprietary generative AI tool creates comprehensive company reports from multiple sources, highlighting both internal and external perspectives in an easily digestible format. Since its December 2024 launch, GPT-Insights has reduced research task times by up to 85%, guiding investors on where to delve deeper. Our dedication to leveraging state-of-the-art technology not only strengthens our competitive edge but also aligns with our broader goal of delivering superior value to our clients – from pilot to production to profitability. We are setting a new standard of innovation in the banking industry, driving sustainable growth and long-term shareholder value.

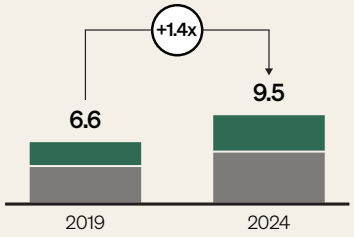
Lastly, in recent years we have made significant investments in our exchange-traded funds (ETF) platform. The combination of top active management performance and ETF expertise has positioned us as a leader in the rapidly expanding field of active ETFs. In 2024, we were the leader in inflows in both active management and active ETFs across the industry.

BEST-IN-CLASS ADVISORY TEAMS

Over the past five years, we have strategically invested in expanding and elevating our global advisor teams to enhance our capabilities and meet clients' diverse and evolving needs. This includes both hiring new advisors and expanding our comprehensive training programs to equip them with the latest knowledge and skills, ensuring they remain at the forefront of industry trends. With over 9,500 advisors, our Wealth Management network reflects a 6% growth in 2024 – a notable achievement given industry stagnation – demonstrating the scale of our global platform and our commitment to first-class service and expertise. We aim to build future-ready advisory teams in Wealth Management, Institutional and Retail/Funds, setting a standard that is admired by our competitors.

Advisor Growth and Client Coverage

Wealth Management Advisors (in thousands)



57% Largest Pensions/Sovereign Wealth Funds as clients

70%+ U.S. Financial Advisors opportunity covered

680+ Global billionaires as 23 Wall clients; ~$3T in wealth

AI Use Case Examples

Connect Coach

- Improves customer experience through proactive engagement
- Utilizes client and market data to provide tailored recommendations
- Boosts productivity with detailed call summaries

~95% quicker at locating relevant content to drive impactful conversation with clients

Sales Assist

- Transcribes calls and presents relevant information in real time
- Supports discussion with key product info and thought leadership
- Summarizes calls/tags client data for consistent entry and analysis

~20% higher gross sales supported by Sales Assist YoY, enhanced by focusing on high-impact client work

YoY = Year-over-year

In addition to hiring and training, we equip our advisors with cutting-edge AI tools like Connect Coach and Sales Assist, significantly enhancing their productivity and scope. With over 80% of AWM Front Office utilizing our J.P. Morgan Large Language Model (AI) Suite, each day we uncover opportunities to eliminate "no joy" work and repetitive tasks, allowing our teams to focus on higher-value activities. These initiatives are integral to delivering exceptional service and driving sustainable growth.

HIGHLY CUSTOMIZED SOLUTIONS FOR EACH INDIVIDUAL

Our vision for personalized advice focuses on empowering both clients and advisors to make choices tailored to each unique situation. To enhance our capabilities, we made two important acquisitions: 55ip (in 2020) and OpenInvest (in 2021). Our technology teams leverage these acquisitions, alongside continuous proprietary developments, to equip every portfolio team with the most modern and advanced tools and resources. This enables them to customize preferences and concentrations, adapt to tax considerations and create portfolios that are aligned with their specific needs. **We don't believe any fiduciary manager should dictate choice or preferences for a client's investment portfolio. Instead, we empower clients to specify criteria important to them, and J.P. Morgan teams execute accordingly.**

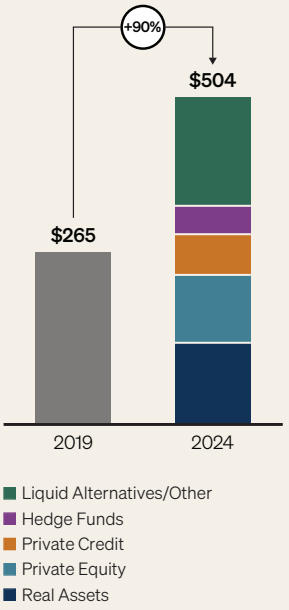
We believe our fiduciary voice should be leveraged to influence the companies we invest in, drawing on our two centuries of collective knowledge to enhance long-term shareholder value creation. Our in-house stewardship teams operate independently, without relying on external proxy advisors to vote for us. In fact, we have taken major steps to minimize the influence of proxy advisory firms on our teams and no longer incorporate their research into the governance decisions made by our stewardship and investment professionals. We take pride in the active role our fundamental investors play in the governance process, utilizing their expertise and insights to ensure strong oversight for client portfolios.

ALTERNATIVES

Alternatives have always been a key differentiator in our clients' portfolios, as we are among the leading providers and investors globally. Recently, this asset class has emerged as one of the industry's largest and fastest-growing areas, primarily driven by the open-ended structure now available to individual investors. In response, we have strategically restructured our coverage into two distinct pillars: AWM Alternative Solutions and AM Private Markets. This new structure is designed to broaden our coverage and enable meaningful growth, leveraging our rich history of over 60 years and our extensive experience across various investment types. With these enhancements, we are poised to expand our coverage and unlock our deep expertise in this area, ultimately providing our clients with innovative and tailored investment solutions across the board – from third-party strategies to funds managed by our own teams. By aligning our resources and capabilities with the evolving needs of the market, we are well-equipped to navigate the complexities of the financial landscape and drive sustainable growth in this important area.

Alternative Assets

Assets Under Supervision ($ in billions[1,4])



GLOBAL FOOTPRINT

As a business within a firm with hundreds of years of history, we possess a deep understanding of the complex economic and geopolitical landscape that shapes our industry. Today, AWM maintains client coverage in over 150 countries, underscoring our commitment to serving a diverse range of clients globally. In recent years, we have invested in opening new offices in Athens, Jacksonville, Manchester, Munich, Salt Lake City and Scottsdale. Additionally, we have increased our number of advisors by more than 10% in other key offices, including Austin, Fort Lauderdale and Frankfurt. In China, we have one of the largest teams of research analysts covering Chinese stocks among foreign-owned asset managers. These investments build a strong foundation for AWM for decades to come.

In addition to expanding our geographic footprint, we cultivate a culture of excellence through talent mobility, ensuring our teams are not only adept in local market dynamics but also aligned with our cohesive global culture. This combination allows us to remain agile and responsive, positioning us to capitalize on emerging trends and to deliver a consistent experience to our clients worldwide. Lastly, in most of AWM locations around the world, we co-locate with our Consumer & Community Banking and Commercial & Investment Bank partners, significantly amplifying our impact on clients and communities.

EVIDENCE THAT THIS STRATEGY IS WORKING: STRONG ROE FOR OUR FIRM AND SHAREHOLDERS

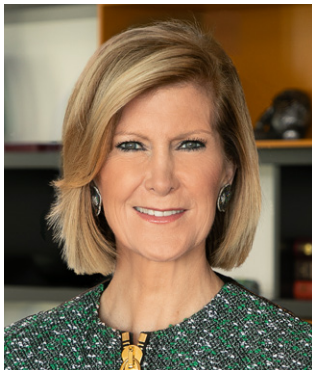
Our results are not only strong compared with every major competitor but are also crucial for the broader success of JPMorganChase. Our ability to deliver industry-leading return on equity (ROE) stems from our disciplined approach to managing every dollar on our balance sheet, contributing to a robust blended ROE for our shareholders. These results, achieved while maintaining significant investment in our business, speak to the strength of our franchise and the focus of our strategic investment agenda.

CONCLUSION

Our fiduciary commitment to our clients serves as our north star, guiding every aspect of our work. I am proud of how we have successfully guided our clients and shareholders through the challenges and volatility of recent years, all while making significant investments in the future.

As each of the three lines of business at JPMorganChase strives every day to excel in our respective areas, we are acutely aware that our collective strength surpasses the sum of our individual parts. Together with my Operating Committee partners in AWM, we work relentlessly to maximize the firm's value to every client, delivering investment advice, liquidity management, capital markets expertise, credit, payments, custody and full-service banking. Clients benefit from being part of the broader JPMorganChase ecosystem, as does each line of business, with access to unparalleled resources and scale that set us apart from the competition.

We are deeply grateful for the trust our clients and shareholders place in us and remain dedicated to delivering excellence every day. By leveraging the strengths of JPMorganChase, we are confident in our ability to deliver exceptional value and maintain our leadership position in the industry. As we look to the future, we are committed to driving innovation and consistent growth, ensuring that we continue to meet and exceed your expectations.



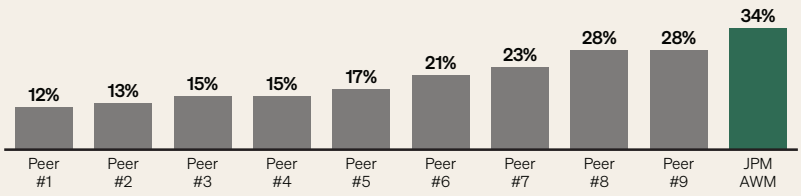


Mary Callahan Erdoes

CEO, Asset & Wealth Management

Peer-Leading Performance

2024 Return on Equity for 10 Largest Asset and Wealth Managers[5]



1 For footnote, refer to page 58 footnote 34 in this Annual Report.

2 For footnote, refer to page 58 footnote 33 in this Annual Report.

3 Source: Public filings, company website, Morningstar.

4 For footnote, refer to page 59 footnote 36 in this Annual Report.

5 Source: Public filings; return on equity (ROE) or comparable metric is based on as reported figures, where available. For peers that do not report ROE or a comparable metric, calculations were derived from reported net income attributable to common shareholders and the reported average common shareholders' equity.

Corporate Responsibility

More than 10 years ago, JPMorganChase began a historic investment in Detroit's economic recovery after the city filed for bankruptcy. Leveraging research and data, we focused on the areas where our firm's expertise and resources could make the greatest impact. As a result, we devoted business, philanthropic and human capital to promote neighborhood revitalization and affordable housing, skills training and job creation, small business growth and financial security for residents. Most important, despite being a bank headquartered in New York City, we showed up like a bank headquartered in Detroit.

The firm's investments in Detroit, which helped spur economic growth throughout the city, also gave way to new commercial opportunities for our business. As the city's credit rating jumped from junk bond to investment grade status and as home values doubled, our market share and commercial loans increased; so did our consumer and business banking accounts and balances. The takeaway – and business model it informed – was clear: Thriving communities are good for business.

Fast forward to today: The Corporate Responsibility department's work is a central part of our firm's strategy. With team members around the world, we help JPMorganChase develop hyperlocal solutions to community challenges and forge meaningful partnerships with leaders in the public, private and nonprofit sectors. This multipronged approach contributes to the firm's resiliency through economic cycles and creates strong local business conditions that bolster our competitive advantage.

Many of our current initiatives that are designed to help generate economic growth originated in Detroit. Take our virtual call centers (VCC), which provide training and employment to customer service specialists who work from home. First launched in 2022, the VCC program grew from a collaboration with Detroit's workforce agency (established with our help in 2017) to help us attract top talent in markets where we did not have traditional call centers. Our VCC team members have earned high customer satisfaction ratings, leading us to expand the program and tailor it to other markets, including Greater Baltimore, which recently welcomed a cohort of employees who are military spouses, and Atlanta, which offers customer support in English and Spanish.

Similarly, in Detroit we partnered with nonprofit and local government leaders to open Financial Empowerment Centers that offer guidance on how to manage finances, pay down debt, increase savings and access banking products. This model helped inspire many of the services we provide in our Community Center branches, where we help residents access affordable home loans, low-cost checking accounts and financial health education workshops in neighborhoods in Akron (Ohio), Dallas, Minneapolis and New Orleans, among others.

As we continually expand our work in communities, I am often asked, "Where's the next Detroit?" My answer is simple: It's every market we serve. From Columbus to the United Kingdom, San Francisco to Alabama, we take the time to understand a locale and what it needs to grow its economy.

We then apply lessons we've learned in Detroit and elsewhere to execute a tailored approach with goals like creating jobs, training workers, increasing access to housing and helping people grow their savings – all while strengthening the firm's bottom line.

Our efforts in four very different markets, described below, just scratch the surface of how our team helps communities build wealth and catalyzes commercial impact. Click here to learn more.

COLUMBUS, OHIO

With more than 18,000 employees, 720,000 customers, 57,800 small business clients and eight office buildings, it's safe to say that JPMorganChase's presence in Columbus is robust.

As one of the largest employers in Ohio, we have a bird's-eye view of the incredible talent coming out of local educational institutions – but we have also observed that many workers struggle to access career paths in growing industries. Given our own local hiring needs, as well as those of our clients, over the last decade we have zeroed in on the opportunity to invest in students, supporting JPMorganChase's recruiting and the region's long-term economic outlook.

In 2020, we selected Columbus as one of five U.S. cities to participate in the firm's New Skills Ready Network, a five-year, $35 million initiative to give young people real-world work experiences and help them access high-wage, in-demand jobs across industries like information technology (IT) and healthcare. Since then, according to our partner Ohio Excels, student participation in IT and healthcare career pathways



Attendees of a roundtable discussion following the announcement of a new philanthropic commitment to advance local career pathways. Participants included Columbus Mayor Andrew Ginther, Columbus City Schools Superintendent and CEO Dr. Angela Chapman, and other members of the regional workforce collaborative.

has risen across Columbus City Schools, Columbus State Community College and The Ohio State University — with a significant increase in student participation in these pathways at Columbus City Schools among economically disadvantaged students.

Building on this foundation and armed with the insights we gained while strengthening Detroit's workforce system, in September 2024 we supported the launch of a new collaborative that convenes business, education, community and elected officials to modernize the regional workforce infrastructure and strategy. Our philanthropic capital will help the collaborative to develop a road map that accounts for critical business needs and priorities, all while aligning efforts and resources across the system. Hand-in-hand with the mayor, public school superintendent and other community leaders, we are helping to build a Columbus where the labor market works for everybody.

Because despite being a bank headquartered in New York City, we are proud to show up like a bank headquartered in Columbus.

THE UNITED KINGDOM

JPMorganChase has a growing presence in the U.K. with more than 22,000 employees across the country, our regional headquarters in London, a new technology center in Glasgow, and a significant footprint in Bournemouth and Edinburgh. Our business continues to prosper: We provide more than $614 billion in credit and capital to nearly 4,500 medium and large companies and support over 2 million retail customers.

Despite being the sixth largest economy and second biggest exporter of services globally, the U.K. is burdened with income inequality that is higher than any other large European country. Weak productivity growth has contributed to flattening wages and sluggish income growth that impact our clients, customers, employees and, by extension, our business.

Alongside local partners across sectors, we asked, "What else can we do about this?" Last May, we announced $50 million in funding that is focused on helping people access job opportunities and strengthen their financial future, bringing the firm's total philanthropic support in the U.K. since 2019 to $110 million.

To carry this out, we are leveraging our position as a large employer by refreshing our recruitment practices to emphasize skills-based hiring and expanding this approach to entry-level operations jobs. We continue to offer a work experience program to young people in secondary school in



Team members joined with nonprofit and government partners to discuss the firm's latest commitment to help drive economic growth in the U.K.

Bournemouth, Glasgow and London, and we will launch the program in Edinburgh later this year. This initiative to help students develop the key skills employers look for on candidates' resumes complements the firm's existing degree-level apprenticeship program and our Aspiring Professionals Programme (APP), which I wrote about in last year's shareholder letter. The APP, run in partnership with the Social Mobility Foundation, has helped more than 850 young people secure a job at JPMorganChase and other firms since 2012.

At the same time, we are continuing to work with nonprofits and the U.K. government, British Business Bank and other industry leaders to support small businesses, consumers, workers, entrepreneurs and investors. We're engaged in a range of initiatives, including the Careers and Enterprise Company's efforts to help prepare young people for a career in growth sectors and Nest Insight's work to test product innovations to help low-paid employees build savings in preparation for unexpected expenses.

Because despite being a bank headquartered in New York City, we are proud to show up like a bank headquartered in the United Kingdom.

SAN FRANCISCO, CALIFORNIA

Our history in the Greater Bay Area dates back more than 120 years. In the past decade, we have opened a technology campus in Palo Alto and a Community Center branch in Oakland, and we have expanded our Innovation Economy banking franchise across industries, including applied technology, enterprise software, life sciences and disruptive commerce. On top of this, we have hosted our annual Healthcare Conference in downtown San Francisco for more than 40 years, driving an estimated $104.9 million in economic impact to the city in 2025 alone.



Our Corporate Responsibility Management team joined our nonprofit partner Union Square Foundation for a walking tour of the neighborhood.

However, partially due to the pandemic, the city has experienced reduced foot traffic, with shuttered storefronts and office vacancies hitting 36% by the end of 2024. This drop in economic activity continues to hinder a business's ability to reach current and prospective customers and employees, prompting us to work with other companies, including Visa and Gap, to pave the way for a more vibrant downtown. Together, we are collaborating on two initiatives: the Downtown Volunteer Coalition, focused on engaging employees to revitalize San Francisco, and Advance SF, a coalition of leading corporate employers working to address issues impacting San Francisco's businesses.

In addition to these initiatives, we are pursuing philanthropic programs – modeled after those that contributed to Detroit's comeback – to support local businesses, clean up the streets, and bring residents and visitors back to the city's downtown. A portion of new philanthropic capital will help launch the Downtown San Francisco Vibrancy Loan Fund, with additional support from U.S. Bank and the City of San Francisco's Office of Economic and Workforce Development, to help promote the recovery of small businesses through low-interest loans provided by Main Street Launch, a local nonprofit lender. At the same time, we are making continued investments to upgrade our office building in the heart of the city for our clients and employees, helping to boost commerce in the neighborhood.

Because despite being a bank headquartered in New York City, we are proud to show up like a bank headquartered in San Francisco.

STATE OF ALABAMA

JPMorganChase has provided banking and financial services to consumers, businesses and vital institutions across Alabama since 1973, and today we proudly bank Auburn University along with other colleges across the state. We've helped support the state's economy by financing the construction of manufacturing, wholesale distribution and recycling facilities, as well as the development of more than 650 affordable housing units. Our funding has been wide ranging and had a positive impact on local economies. In Foley – one of the fastest-growing cities in the United States and a place where we plan to expand our branch presence



Team members at the ribbon cutting for a new Chase branch in Madison, Alabama.

next year – we invested $2.6 million through New Markets Tax Credits to the Coastal Alabama Farmers and Fishermens Market, which helped it grow to host 30 vendors, two retail stores and a wholesale distribution facility for vendors to sell local and fresh seafood, produce and meats.

Five years ago, we opened our first bank branch in Alabama, creating a new opportunity for us to connect with consumers and to share insights gained from JPMorganChase Institute research. Earlier this year, the Institute published a report on how small businesses outside of metropolitan areas, like those beyond the boundaries of Alabama's cities, fare in scaling to $1 million in annual revenue – a key milestone of business development and sustainability.

Moved by the countless stories we heard from Alabamians eager to utilize our branches' resources – and with the support of partners, including the Huntsville mayor and members of Congress – we've grown our banking network to include 11 branches statewide, with plans to triple that number and hire an additional 170 bankers by 2030.

While our branch network's expansion will help Alabamians access tools to bolster their financial health and even launch a company, we know the importance of working across sectors to develop community infrastructure aligned with these goals. To do so, we have supported nonprofits, providing technical assistance and community development finance throughout the state through partners like Appalachian Community Capital, the Southern Capital Project, Neighborhood Concepts and the Alabama Small Business Development Initiative.

Because despite being a bank headquartered in New York City, we are proud to show up like a bank headquartered in Alabama.

THE WORK AHEAD

Actions speak louder than words. In our branches and offices, with our clients, customers and community partners, and through innovative products and services developed to help make it easier for people to generate wealth, we are focused on walking the walk to be the bank for every community we serve.

Make no mistake, this work isn't charity. We place a premium on Corporate Responsibility's investments as important contributors to business growth and our trusted brand. The reality that the firm can't succeed if communities are not strong means it is a business imperative to foster productive relationships, understand the ins and outs of community dynamics, provide excellent services to meet customers' needs and work to tackle the problems holding communities back.

In each market, we are reaching into our toolkit of resources and expertise to implement strategies that will help advance economic growth. We know there's no silver bullet – that's why the work ahead looks different in each place, reflecting the unique nature of the communities where we are lucky enough to be included. The throughline of our approach is bringing businesses, governments and nonprofits together to take big, ambitious ideas and work to turn them into results. Time and again, it is our experience that these types of cross-sector collaboration and buy-in are the key ingredients for meaningful impact at scale.

The business and community outcomes speak for themselves.





Tim Berry

Global Head of Corporate Responsibility, Chairman of the Mid-Atlantic Region

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THREE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS (unaudited)

As of or for the year ended December 31, (in millions, except per share, ratio, employee data and where otherwise noted)	2024	2023	2022
Selected income statement data			
Total net revenue	**$ 177,556** [e]	$ 158,104	$ 128,695
Total noninterest expense	**91,797** [e]	87,172	76,140
Pre-provision profit[a]	**85,759**	70,932	52,555
Provision for credit losses	**10,678**	9,320	6,389
Income before income tax expense	**75,081**	61,612	46,166
Income tax expense	**16,610**	12,060	8,490
Net income	**$ 58,471**	$ 49,552	$ 37,676
Earnings per share data			
Net income: Basic	**$ 19.79**	$ 16.25	$ 12.10
Diluted	**19.75**	16.23	12.09
Average shares: Basic	**2,873.9**	2,938.6	2,965.8
Diluted	**2,879.0**	2,943.1	2,970.0
Market and per common share data			
Market capitalization	**670,618**	489,320	393,484
Common shares at period-end	**2,797.6**	2,876.6	2,934.2
Book value per share	**116.07**	104.45	90.29
Tangible book value per share ("TBVPS")[a]	**97.30**	86.08	73.12
Cash dividends declared per share	**4.80**	4.10	4.00
Selected ratios and metrics			
Return on common equity ("ROE")	**18 %**	17 %	14 %
Return on tangible common equity ("ROTCE")[a]	**22**	21	18
Return on assets ("ROA")	**1.43**	1.30	0.98
Overhead ratio	**52**	55	59
Loans-to-deposits ratio	**56**	55	49
Firm Liquidity coverage ratio ("LCR") (average)[b]	**113**	113	112
JPMorgan Chase Bank, N.A. LCR (average)[b]	**124**	129	151
Common equity Tier 1 ("CET1") capital ratio[c][d]	**15.7**	15.0	13.2
Tier 1 capital ratio[c][d]	**16.8**	16.6	14.9
Total capital ratio[c][d]	**18.5**	18.5	16.8
Tier 1 leverage ratio[b][c]	**7.2**	7.2	6.6
Supplementary leverage ratio ("SLR")[b][c]	**6.1**	6.1	5.6
Selected balance sheet data (period-end)			
Trading assets	**$ 637,784**	$ 540,607	$ 453,799
Investment securities, net of allowance for credit losses	**681,320**	571,552	631,162
Loans	**1,347,988**	1,323,706	1,135,647
Total assets	**4,002,814**	3,875,393	3,665,743
Deposits	**2,406,032**	2,400,688	2,340,179
Long-term debt	**401,418**	391,825	295,865
Common stockholders' equity	**324,708**	300,474	264,928
Total stockholders' equity	**344,758**	327,878	292,332
Employees	**317,233**	309,926	293,723
Credit quality metrics			
Allowances for credit losses	**$ 26,866**	$ 24,765	$ 22,204
Allowance for loan losses to total retained loans	**1.87 %**	1.75 %	1.81 %
Nonperforming assets	**$ 9,300**	$ 7,597	$ 7,247
Net charge-offs	**8,638**	6,209	2,853
Net charge-off rate	**0.68 %**	0.52 %	0.27 %

(a) Pre-provision profit, TBVPS and ROTCE are each non-GAAP financial measures. Tangible common equity ("TCE") is also a non-GAAP financial measure. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 67–69 for a discussion of these measures.

(b) For the years ended December 31, 2024, 2023 and 2022, the percentage represents average ratios for the three months ended December 31, 2024, 2023 and 2022.

(c) The ratios reflect the Current Expected Credit Losses ("CECL") capital transition provisions. Refer to Note 27 for additional information.

(d) Reflects the Firm's ratios under the Basel III Standardized approach. Refer to Capital Risk Management on pages 97–107 for additional information.

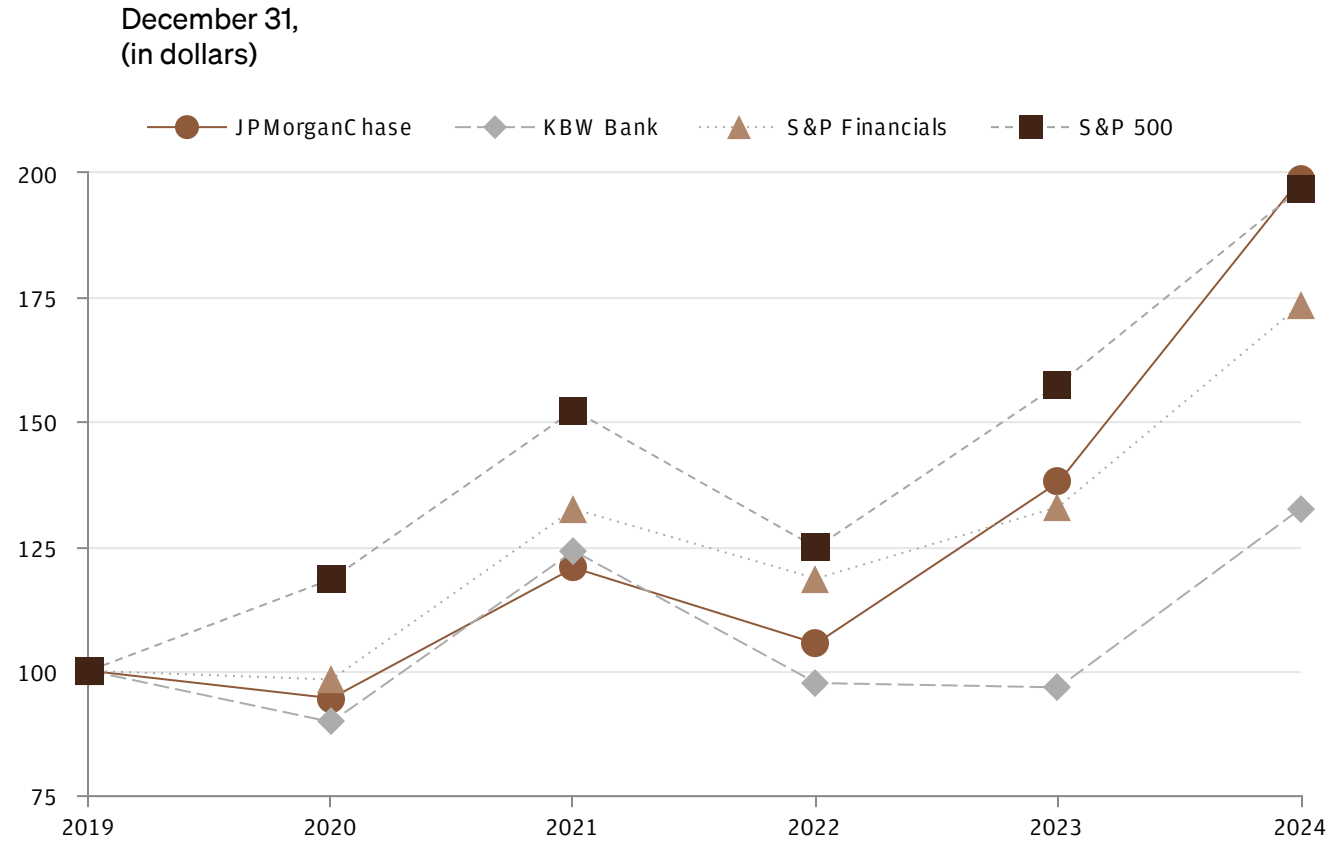
(e) Total net revenue included a $7.9 billion net gain related to Visa shares, and total noninterest expense included a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation, both recorded in the second quarter of 2024. Refer to Executive Overview on pages 54–58, and Notes 2 and 6 for additional information on the exchange offer for Visa Class B-1 common stock.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorganChase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financials Index. The S&P 500 Index is a commonly referenced equity benchmark in the United States of America ("U.S."), consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of leading national money center and regional banks and thrifts. The S&P Financials Index is an index of financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2019, in JPMorganChase common stock and in each of the above indices. The comparison assumes that all dividends were reinvested.

December 31, (in dollars)	2019	2020	2021	2022	2023	**2024**
JPMorganChase	$ 100.00	$ 94.48	$ 120.68	$ 105.48	$ 137.91	**$ 198.96**
KBW Bank Index	100.00	89.69	124.08	97.53	96.66	**132.62**
S&P Financials Index	100.00	98.24	132.50	118.54	132.94	**173.57**
S&P 500 Index	100.00	118.39	152.34	124.75	157.54	**196.96**



The following is Management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorganChase for the year ended December 31, 2024. The MD&A is included in both JPMorganChase's Annual Report for the year ended December 31, 2024 ("Annual Report") and its Annual Report on Form 10-K for the year ended December 31, 2024 ("2024 Form 10-K" or "Form 10-K") filed with the Securities and Exchange Commission ("SEC"). Refer to the Glossary of terms and acronyms on pages 327–333 for definitions of terms and acronyms used throughout the Annual Report and the 2024 Form 10-K.

This Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on the current beliefs and expectations of JPMorganChase's management, speak only as of the date of this Form 10-K and are subject to significant risks and uncertainties. Refer to Forward-looking Statements on page 167 and Part 1, Item 1A: Risk Factors in this Form 10-K on pages 10-37 for a discussion of certain of those risks and uncertainties and the factors that could cause JPMorganChase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results will be in line with any outlook information set forth herein, and the Firm does not undertake to update any forward-looking statements.

INTRODUCTION

JPMorgan Chase & Co. (NYSE: JPM), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the United States of America ("U.S."), with operations worldwide. JPMorganChase had $4.0 trillion in assets and $344.8 billion in stockholders' equity as of December 31, 2024. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers, predominantly in the U.S., and many of the world's most prominent corporate, institutional and government clients globally.

JPMorganChase's principal bank subsidiary is JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 48 states and Washington, D.C. JPMorganChase's principal non-bank subsidiary is J.P. Morgan Securities LLC ("J.P. Morgan Securities"), a U.S. broker-dealer. The bank and non-bank subsidiaries of JPMorganChase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. The Firm's principal operating subsidiaries outside the U.S. are J.P. Morgan Securities plc and J.P. Morgan SE ("JPMSE"), which are subsidiaries of JPMorgan Chase Bank, N.A. and are based in the United Kingdom ("U.K.") and Germany, respectively.

Business segments & Corporate: Effective in the second quarter of 2024, the Firm reorganized its reportable business segments by combining the former Corporate & Investment Bank and Commercial Banking business segments to form one reportable segment, the Commercial & Investment Bank. As a result of the reorganization, the Firm has three reportable business segments – Consumer & Community Banking ("CCB"), Commercial & Investment Bank ("CIB") and Asset & Wealth Management ("AWM") – with the remaining activities in Corporate. The Firm's consumer business segment is CCB, and the Firm's wholesale business segments are CIB and AWM.

A description of each of the Firm's reportable business segments, and the products and services that they provide to their respective client bases, as well as a description of Corporate activities, is provided in the Management's discussion and analysis of financial condition and results of operations section of this Form 10-K ("Management's discussion and analysis" or "MD&A") under the heading "Business Segment & Corporate Results," which begins on page 70, and in Note 32.

First Republic: On May 1, 2023, JPMorganChase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation ("FDIC"). References in this Form 10-K to "associated with First Republic," "impact of First Republic" or similar expressions refer to the relevant effects of the First Republic acquisition, as well as subsequent related business and activities, as applicable. Refer to Note 34 for additional information.

The Firm's website is www.jpmorganchase.com. JPMorganChase makes available on its website, free of charge, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after it electronically files or furnishes such material to the U.S. Securities and Exchange Commission (the "SEC") at www.sec.gov. JPMorganChase makes new and important information about the Firm available on its website at https://www.jpmorganchase.com, including on the Investor Relations section of its website at https://www.jpmorganchase.com/ir. Information on the Firm's website, including documents on the website that are referenced in this Form 10-K, is not incorporated by reference into this 2024 Form 10-K or the Firm's other filings with the SEC.

This executive overview of the MD&A highlights selected information and does not contain all of the information that is important to readers of the Firm's 2024 Form 10-K. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm, the 2024 Form 10-K should be read in its entirety.

Financial performance of JPMorganChase

Year ended December 31, (in millions, except per share data and ratios)	2024	2023	Change
Selected income statement data			
Noninterest revenue	**$ 84,973**	$ 68,837	23%
Net interest income	**92,583**	89,267	4
Total net revenue	**177,556**	158,104	12
Total noninterest expense	**91,797**	87,172	5
Pre-provision profit	**85,759**	70,932	21
Provision for credit losses	**10,678**	9,320	15
Net income	**58,471**	49,552	18
Diluted earnings per share	**19.75**	16.23	22
Selected ratios and metrics			
Return on common equity	**18 %**	17 %	
Return on tangible common equity	**22**	21	
Book value per share	**$ 116.07**	$ 104.45	11
Tangible book value per share	**97.3**	86.08	13
Capital ratios[(a)(b)]			
CET1 capital	**15.7 %**	15.0 %	
Tier 1 capital	**16.8**	16.6	
Total capital	**18.5**	18.5	
Memo:			
NII excluding Markets[(c)]	**$ 92,419**	$ 90,041	3
NIR excluding Markets[(c)]	**58,167**	44,361	31
Markets[(c)]	**30,007**	27,964	7
Total net revenue - managed basis	**$ 180,593**	$ 162,366	11

(a) The ratios reflect the CECL capital transition provisions. Refer to Note 27 for additional information.
(b) Reflects the Firm's ratios under the Basel III Standardized approach. Refer to Capital Risk Management on pages 97–107 for additional information.
(c) NII and NIR refer to net interest income and noninterest revenue, respectively. Markets consists of CIB's Fixed Income Markets and Equity Markets businesses.

Visa shares: On April 8, 2024, Visa Inc. commenced an initial exchange offer for its Class B-1 common shares. On May 6, 2024, the Firm announced that Visa had accepted the Firm's tender of its 37.2 million Visa Class B-1 common shares in exchange for a combination of Visa Class B-2 common shares and Visa Class C common shares ("Visa C shares"), resulting in a $7.9 billion net gain related to Visa shares recorded in the second quarter of 2024. As of September 30, 2024, the Firm had disposed of all of its Visa C shares through sales and through a contribution to the Firm's Foundation. Refer to Market Risk Management on pages 141–149, and Notes 2 and 6 for additional information.

First Republic: JPMorganChase acquired certain assets and assumed certain liabilities of First Republic Bank from the FDIC on May 1, 2023. As a result, the year-to-date results include the twelve-month impact of First Republic compared with eight months in the prior-year period. Where meaningful to the results, this is referred to in this Form 10-K as the "timing impact" of First Republic. Refer to Notes 6 and 34 for additional information.

Comparisons noted in the sections below are for the full year of 2024 versus the full year of 2023, unless otherwise specified.

Firmwide overview

JPMorganChase reported net income of $58.5 billion for 2024, up 18%, earnings per share of $19.75, ROE of 18% and ROTCE of 22%.

- **Total net revenue** was $177.6 billion, up 12%, reflecting:
  - **Net interest income** ("NII") of $92.6 billion, up 4%, driven by the impact of balance sheet actions, primarily reinvestments in the investment securities portfolio, higher revolving balances in Card Services, the timing impact of First Republic, higher wholesale deposit balances, and higher Markets net interest income, largely offset by deposit margin compression across the lines of business and lower average deposit balances in CCB. NII excluding Markets was $92.4 billion, up 3%.
  - **Noninterest revenue** ("NIR") was $85.0 billion, up 23%, predominantly driven by a $7.9 billion net gain related to Visa shares recorded in the second quarter of 2024, higher asset management fees in AWM and CCB, higher investment banking fees, and lower net investment securities losses in Treasury and CIO.

    The prior year included the estimated bargain purchase gain of $2.8 billion associated with First Republic.

- **Noninterest expense** was $91.8 billion, up 5%, driven by higher compensation expense, including higher revenue-related compensation and growth in the number of employees, as well as a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024, partially offset by lower FDIC-related expense, reflecting a $2.9 billion special assessment recognized in the fourth quarter of 2023, compared with a $725 million increase to the FDIC special assessment recognized in the first quarter of 2024.
- The **provision for credit losses** was $10.7 billion, reflecting $8.6 billion of net charge-offs and a net addition to the allowance for credit losses of $2.0 billion. Net charge-offs increased by $2.4 billion, driven by Card Services, reflecting the seasoning of vintages originated in recent years, credit normalization, and balance growth. The net addition to the allowance for credit losses included a net addition of $2.1 billion in **consumer**, driven by Card Services, and a net reduction of $19 million in **wholesale**.

  The provision in the prior year was $9.3 billion, reflecting $6.2 billion of net charge-offs and a $3.1 billion net addition to the allowance for credit losses.
- The total **allowance for credit losses** was $26.9 billion at December 31, 2024. The Firm had an allowance for loan losses to retained loans coverage ratio of 1.87%, compared with 1.75% in the prior year.
- The Firm's **nonperforming assets** totaled $9.3 billion at December 31, 2024, up 22%, driven by higher wholesale nonaccrual loans, which reflected downgrades in Real Estate, concentrated in Office, partially offset by lower consumer nonaccrual loans, which included loan sales. Refer to Wholesale Credit Portfolio and Consumer Credit Portfolio on pages 126–136 and pages 120–125, respectively, for additional information.
- Firmwide **average loans** of $1.3 trillion were up 6%, driven by higher loans across the lines of business.
- Firmwide **average deposits** of $2.4 trillion were up 1%, reflecting:
  - net inflows in Payments and net issuances of structured notes in Markets,
  - the timing impact of First Republic, and
  - growth in balances in new and existing client accounts in AWM,

  predominantly offset by
  - a decline in CCB primarily driven by a decrease in balances in existing accounts due to increased customer spending.

  Refer to Liquidity Risk Management on pages 108–115 for additional information.

Selected capital and other metrics

- **CET1 capital** was $275.5 billion, and the Standardized and Advanced CET1 ratios were 15.7% and 15.8%, respectively.
- **SLR** was 6.1%.
- **TBVPS** grew 13.0%, ending 2024 at $97.30.
- As of December 31, 2024, the Firm had eligible end-of-period **High Quality Liquid Assets** ("HQLA") of approximately $834 billion and **unencumbered marketable securities** with a fair value of approximately $594 billion, resulting in approximately $1.4 trillion of liquidity sources. Refer to Liquidity Risk Management on pages 108–115 for additional information.

Refer to Consolidated Results of Operations and Consolidated Balance Sheets Analysis on pages 59–62 and pages 63–65, respectively, for a further discussion of the Firm's results, including the provision for credit losses, and Note 34 for additional information on the First Republic acquisition.

Pre-provision profit, ROTCE, TCE, TBVPS, NII and NIR excluding Markets, and total net revenue on a managed basis are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 67–69 for a further discussion of each of these measures.

Business segment highlights

Selected business metrics for each of the Firm's lines of business ("LOB") are presented below for the full year of 2024.

CCB ROE 32%	• Average deposits down 6%; client investment assets up 14% • Average loans up 9%; Card Services net charge-off rate of 3.34% • Debit and credit card sales volume[(a)] up 8% • Active mobile customers[(b)] up 7%
CIB[(c)] ROE 18%	• Investment Banking fees up 37%; #1 ranking for Global Investment Banking fees with 9.3% wallet share for the year • Markets revenue up 7%, with Fixed Income Markets up 5% and Equity Markets up 13% • Average Banking & Payments loans up 2%; average client deposits[(d)] up 5%
AWM ROE 34%	• Assets under management ("AUM") of $4.0 trillion, up 18% • Average loans up 3%; average deposits up 9% including the transfer of First Republic deposits to AWM in 4Q23[(e)]

(a) Excludes Commercial Card.
(b) Users of all mobile platforms who have logged in within the past 90 days.
(c) Reflects the reorganization of the Firm's business segments. Refer to Business Segment & Corporate Results on pages 70–90 for additional information.
(d) Represents client deposits and other third-party liabilities pertaining to the Payments and Securities Services businesses.
(e) In the fourth quarter of 2023, CCB transferred certain deposits associated with First Republic to AWM and CIB.

Refer to the Business Segment & Corporate Results on pages 70–90 for a detailed discussion of results by business segment.

Credit provided and capital raised

JPMorganChase continues to support consumers, businesses and communities around the globe. The Firm provided new and renewed credit and raised capital for wholesale and consumer clients during 2024, consisting of approximately:

$2.8 trillion	Total credit provided and capital raised (including loans and commitments)
$250 billion	Credit for consumers
$40 billion	Credit for U.S. small businesses
$2.4 trillion	Credit and capital for corporations and non-U.S. government entities[(a)]
$65 billion	Credit and capital for nonprofit and U.S. government entities[(b)]

(a) Includes Individuals and Individual Entities primarily consisting of Global Private Bank clients within AWM.
(b) Includes states, municipalities, hospitals and universities.

Recent events

- On January 14, 2025, JPMorganChase announced new responsibilities for several of its senior executives:
  - Daniel Pinto, President and Chief Operating Officer ("COO"), will retire at the end of 2026. Mr. Pinto will relinquish his responsibilities as President and COO as of June 30, 2025. He will continue to serve the Firm as Vice Chairman through the end of 2026.
  - Jennifer Piepszak, Co-Chief Executive Officer of the Commercial & Investment Bank ("CIB"), was named a COO of the Firm, effective January 14, 2025.
  - Doug Petno, Co-head of Global Banking, succeeded Ms. Piepszak as Co-Chief Executive Officer of CIB.
- On December 12, 2024, the Firm announced that Michele G. Buck, 63, had been elected as a director of the Firm, effective March 17, 2025. Ms. Buck is Chairman of the Board, President and CEO of The Hershey Company.

Outlook

These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorganChase's management, speak only as of the date of this Form 10-K, and are subject to significant risks and uncertainties. Refer to Forward-Looking Statements on page 167 and Part I, Item 1A: Risk Factors on pages 10-37 of this Form 10-K for a further discussion of certain of those risks and uncertainties and the other factors that could cause JPMorganChase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results in 2025 will be in line with the outlook information set forth below, and the Firm does not undertake to update any forward-looking statements.

JPMorganChase's current outlook for full-year 2025 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client and customer activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these factors will affect the performance of the Firm. The Firm will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the business, economic, regulatory and legal environments in which it operates.

Full-year 2025

- Management expects net interest income to be approximately $94.0 billion and net interest income excluding Markets to be approximately $90.0 billion, market dependent.
- Management expects adjusted expense to be approximately $95.0 billion, market dependent.
- Management expects the net charge-off rate in Card Services to be approximately 3.60%.

Net interest income excluding Markets and adjusted expense are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 67–69.

Business Developments

First Republic acquisition

On May 1, 2023, JPMorganChase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation (“FDIC”), as receiver.

As of December 31, 2024, the Firm had substantially completed the conversion of operations, and the integration of clients, products and services, associated with the First Republic acquisition to align with the Firm’s businesses and operations.

Refer to Note 34 for additional information on First Republic.

CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion of JPMorganChase's Consolidated Results of Operations on a reported basis for the two-year period ended December 31, 2024, unless otherwise specified. Refer to Consolidated Results of Operations on pages 54-57 of the Firm's Annual Report on Form 10-K for the year ended December 31, 2023 (the "2023 Form 10-K") for a discussion of the 2023 versus 2022 results. Factors that relate primarily to a single business segment or Corporate are discussed in more detail in the results of that segment or Corporate. Refer to pages 161–164 for a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations.

Revenue

Year ended December 31, (in millions)	2024	2023	2022
Investment banking fees	**$ 8,910**	$ 6,519	$ 6,686
Principal transactions	**24,787**	24,460	19,912
Lending- and deposit-related fees	**7,606**	7,413	7,098
Asset management fees	**17,801**	15,220	14,096
Commissions and other fees	**7,530**	6,836	6,581
Investment securities losses	**(1,021)**	(3,180)	(2,380)
Mortgage fees and related income	**1,401**	1,176	1,250
Card income	**5,497**	4,784	4,420
Other income[a][b]	**12,462** [c]	5,609 [d]	4,322
Noninterest revenue	**84,973**	68,837	61,985
Net interest income	**92,583**	89,267	66,710
Total net revenue	**$177,556**	$ 158,104	$ 128,695

(a) Included operating lease income of $2.8 billion, $2.8 billion and $3.7 billion for the years ended December 31, 2024, 2023 and 2022, respectively. Refer to Note 6 for additional information.

(b) Effective January 1, 2024, as a result of adopting updates to the Accounting for Investments in Tax Credit Structures guidance, the amortization of certain of the Firm's alternative energy tax-oriented investments that was previously recognized in other income is now recognized in income tax expense. Refer to Notes 1, 6, 14 and 25 for additional information.

(c) Included the net gain related to Visa shares of $7.9 billion recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.

(d) Included the estimated bargain purchase gain of $2.8 billion for the year ended December 31, 2023 associated with the First Republic acquisition. Refer to Notes 6 and 34 for additional information.

2024 compared with 2023

Investment banking fees increased, reflecting in CIB the benefit of favorable market conditions, which resulted in:

- higher debt underwriting fees predominantly driven by higher industry-wide issuances in leveraged loans, and in high-grade and high-yield bonds,
- higher equity underwriting fees driven by higher industry-wide fees and wallet share gains in IPOs, and in follow-on and convertible securities offerings, and
- higher advisory fees driven by higher industry-wide mergers and acquisitions ("M&A") activity and wallet share gains.

Refer to CIB segment results on pages 77–83 and Note 6 for additional information.

Principal transactions revenue increased driven by CIB, reflecting:

- higher Equity Markets revenue in Prime Finance and Equity Derivatives,

predominantly offset by

- lower Fixed Income Markets revenue, reflecting the net impact of declines in revenue across macro businesses and higher revenue in Securitized Products.

Principal transactions revenue in CIB generally has offsets across other revenue lines, including net interest income. The Firm assesses the performance of its Markets business on a total net revenue basis.

The increase in CIB was partially offset by a net decrease in Corporate, reflecting lower revenue in Treasury and CIO, and gains compared with a net loss on certain legacy private equity investments in the prior year.

Refer to CIB segment and Corporate results on pages 77–83 and pages 88–90, respectively, and Note 6 for additional information.

Lending- and deposit-related fees increased, reflecting, in CIB, higher deposit-related fees, including cash management fees in Payments, on higher volume; and higher lending-related fees, including loan commitment fees. These factors were largely offset by a decline in the amortization of the fair value discount on certain acquired lending-related commitments associated with First Republic, primarily in AWM, as certain of the commitments have expired.

Refer to CIB and AWM segment results on pages 77–83 and pages 84–87, respectively, and Note 6 for additional information.

Asset management fees increased, reflecting, in AWM and CCB, higher average market levels and net inflows, as well as higher performance fees in AWM; and in CCB, the timing impact of First Republic. Refer to CCB and AWM segment results on pages 73–76 and pages 84–87, respectively, and Note 6 for additional information.

Commissions and other fees increased, predominantly due to higher brokerage commissions and fees on higher volume, and higher custody fees, in both CIB and AWM, as well as higher annuity sales commissions in CCB. Refer to CCB, CIB and AWM segment results on pages 73–76, pages 77–83 and pages 84–87, respectively, and Note 6 for additional information.

Investment securities losses decreased, reflecting lower losses on sales of securities, primarily U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio in Treasury and CIO. Refer to Corporate results on pages 88–90 and Note 10 for additional information.

Mortgage fees and related income increased in Home Lending, reflecting higher production revenue, which included the timing impact of First Republic. Refer to CCB segment results on pages 73–76, and Note 6 and 15 for additional information.

Card income increased, reflecting higher net interchange on increased debit and credit card sales volume, as well as higher annual fees in CCB, partially offset by an increase in amortization related to new account origination costs. Refer to CCB segment results on pages 73–76 and Note 6 for additional information.

Other income increased, reflecting:

- in Corporate:
  - the $7.9 billion net gain related to Visa shares recorded in the second quarter of 2024,

  partially offset by
  - the absence of the prior-year $2.8 billion estimated bargain purchase gain associated with the First Republic acquisition, and
- in CIB:
  - the impact of the adoption of updates to the Accounting for Investments in Tax Credit Structures guidance effective January 1, 2024, resulting in the amortization of certain of the Firm's alternative energy tax-oriented investments previously recognized in other income which is now recognized in income tax expense.

  Both periods included impairment losses related to certain equity investments.

The prior year included a gain of $339 million on the original minority interest in China International Fund Management ("CIFM"), partially offset by net investment valuation losses, both in AWM.

Refer to AWM segment results on pages 84–87 for additional information on CIFM; Notes 1, 6, 14 and 25 for additional information on the adoption of updates to the Accounting for Investments in Tax Credit Structures guidance; Notes 2 and 6 for additional information on Visa shares; and Notes 6 and 34 for additional information on the First Republic acquisition.

Net interest income increased driven by the impact of balance sheet actions, primarily reinvestments in the investment securities portfolio, higher revolving balances in Card Services, the timing impact of First Republic, higher wholesale deposit balances and higher Markets net interest income. These factors were largely offset by deposit margin compression across the lines of business and lower average deposit balances in CCB.

The Firm's average interest-earning assets were $3.5 trillion, up $212 billion, and the yield was 5.50%, up 36 bps. The net yield on these assets, on an FTE basis, was 2.63%, a decrease of 7 bps. The net yield excluding Markets was 3.84%, relatively flat when compared to the prior year.

Refer to the Consolidated average balance sheets, interest and rates schedule on pages 322–326 for additional information. Net yield excluding Markets is a non-GAAP financial measure. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 67–69 for an additional discussion of net yield excluding Markets.

Provision for credit losses

Year ended December 31, (in millions)	2024	2023	2022
Consumer, excluding credit card	**$ 631**	$ 935	$ 506
Credit card	**9,292**	6,048	3,353
Total consumer	**9,923**	6,983	3,859
Wholesale	**731**	2,299	2,476
Investment securities	**24**	38	54
Total provision for credit losses	**$10,678**	$ 9,320	$ 6,389

2024 compared with 2023

The **provision for credit losses** was $10.7 billion, reflecting $8.6 billion of net charge-offs and a $2.0 billion net addition to the allowance for credit losses.

Net charge-offs included $7.8 billion in **consumer**, predominantly driven by Card Services, reflecting the seasoning of vintages originated in recent years, credit normalization and balance growth, and $0.8 billion in **wholesale**, primarily in Real Estate, largely concentrated in Office.

The net addition to the allowance for credit losses consisted of:

- $2.1 billion in **consumer**, reflecting:
  - a $2.2 billion net addition in Card Services, predominantly driven by loan growth, reflecting higher revolving balances, including the seasoning of vintages originated in recent years,

  partially offset by

  - a $125 million net reduction in Home Lending in the first quarter of 2024, and
- a net reduction of $19 million in **wholesale**, reflecting:
  - changes in certain macroeconomic variables, an update to loss assumptions on certain loans in Markets, and a reduction due to charge-offs largely from collateral-dependent loans,

  predominantly offset by

  - net downgrade activity, primarily in Real Estate, and the impact of incorporating the First Republic portfolio into the Firm's modeled credit loss estimates in the second quarter of 2024.

The provision in the prior year was $9.3 billion, reflecting net charge-offs of $6.2 billion and a $3.1 billion net addition to the allowance for credit losses, which included $1.2 billion to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

Refer to CCB, CIB and AWM segment and Corporate results on pages 73–76, pages 77–83, pages 84–87, and pages 88–90, respectively; Allowance for Credit Losses on pages 137–139; Critical Accounting Estimates Used by the Firm on pages 161–164; and Notes 12 and 13 for additional information on the credit portfolio and the allowance for credit losses.

Noninterest expense

Year ended December 31, (in millions)	2024		2023	2022
Compensation expense	**$ 51,357**		$46,465	$ 41,636
Noncompensation expense:				
Occupancy	**5,026**		4,590	4,696
Technology, communications and equipment[a]	**9,831**		9,246	9,358
Professional and outside services	**11,057**		10,235	10,174
Marketing	**4,974**		4,591	3,911
Other expense	**9,552**	[c]	12,045	6,365
Total noncompensation expense	**40,440**		40,707	34,504
Total noninterest expense	**$ 91,797**		$ 87,172	$ 76,140
Certain components of other expense[b]				
Legal expense	**$ 740**		$ 1,436	$ 266
FDIC-related expense	**1,893**		4,203	860
Operating losses	**1,417**		1,228	1,101

(a) Includes depreciation expense associated with auto operating lease assets. Refer to Note 18 for additional information.
(b) Refer to Note 6 for additional information.
(c) Included a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.

2024 compared with 2023

Compensation expense increased driven by:

- higher revenue-related compensation across the LOBs,
- growth in the number of employees across the LOBs and Corporate, primarily in front office and technology, and
- the impact of First Republic, predominantly in CCB, reflecting timing and the classification of the prior-year expense, which was recognized in other expense in Corporate in the second quarter of 2023 as the individuals associated with First Republic were not employees of the Firm until July 2023.

Noncompensation expense decreased as a result of:

- lower FDIC-related expense recognized in Corporate, which included the impact of a $2.9 billion special assessment recognized in the fourth quarter of 2023, compared with a $725 million increase to the FDIC special assessment recognized in the first quarter of 2024, and
- lower legal expense, reflecting the net impact of declines in CCB, CIB and Corporate, and an increase in AWM,

predominantly offset by

- a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024 in Corporate,
- higher investments in technology in the businesses, as well as marketing, predominantly in CCB,
- higher occupancy expense, which included the impact of net additions to the Firm's properties,
- higher distribution fees in AWM and brokerage expense in CIB, and
- the timing impact associated with First Republic, offset by the alignment of expense to compensation expense, as noted above.

Refer to Notes 2 and 6 for additional information on Visa shares; Note 6 for additional information on other expense; and Note 34 for additional information on the First Republic acquisition.

Income tax expense

Year ended December 31, (in millions, except rate)	2024		2023	2022
Income before income tax expense	**$ 75,081**		$ 61,612	$ 46,166
Income tax expense	**16,610**	[a]	12,060	8,490
Effective tax rate	**22.1 %**		19.6 %	18.4 %

(a) Effective January 1, 2024, as a result of adopting updates to the Accounting for Investments in Tax Credit Structures guidance, the amortization of certain of the Firm's alternative energy tax-oriented investments is now recognized in income tax expense. Refer to Notes 1, 6, 14 and 25 for additional information.

2024 compared with 2023

The **effective tax rate** increased predominantly driven by:

- the adoption of updates to the Accounting for Investments in Tax Credit Structures guidance on January 1, 2024, and
- a higher level of pretax income and changes in the mix of income and expenses subject to U.S. federal, state and local taxes, including the impact of the net gain on Visa shares and the contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024.

The prior year included the impact to income tax expense associated with the First Republic acquisition that was reflected in the estimated bargain purchase gain, and an income tax benefit related to the finalization of certain income tax regulations, both of which resulted in a reduction in the Firm's effective tax rate.

Refer to Note 25 for additional information.

Consolidated balance sheets analysis

The following is a discussion of the significant changes between December 31, 2024 and 2023. Refer to pages 161–164 for a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Balance Sheets.

Selected Consolidated balance sheets data

December 31, (in millions)	2024	2023	Change
Assets			
Cash and due from banks	**$ 23,372**	$ 29,066	(20)%
Deposits with banks	**445,945**	595,085	(25)
Federal funds sold and securities purchased under resale agreements	**295,001**	276,152	7
Securities borrowed	**219,546**	200,436	10
Trading assets	**637,784**	540,607	18
Available-for-sale securities	**406,852**	201,704	102
Held-to-maturity securities	**274,468**	369,848	(26)
Investment securities, net of allowance for credit losses	**681,320**	571,552	19
Loans	**1,347,988**	1,323,706	2
Allowance for loan losses	**(24,345)**	(22,420)	9
Loans, net of allowance for loan losses	**1,323,643**	1,301,286	2
Accrued interest and accounts receivable	**101,223**	107,363	(6)
Premises and equipment	**32,223**	30,157	7
Goodwill, MSRs and other intangible assets	**64,560**	64,381	—
Other assets	**178,197**	159,308	12
Total assets	**$ 4,002,814**	$ 3,875,393	3 %

Cash and due from banks and deposits with banks decreased driven by higher investment securities in Treasury and CIO, and Markets activities in CIB.

Federal funds sold and securities purchased under resale agreements increased driven by Markets, reflecting higher client-driven market-making activities.

Securities borrowed increased driven by Markets, reflecting a higher demand for securities to cover short positions.

Refer to Note 11 for additional information on securities purchased under resale agreements and securities borrowed.

Trading assets increased predominantly due to higher levels of debt and equity instruments in Markets related to client-driven market-making activities. Refer to Notes 2 and 5 for additional information.

Investment securities increased due to:

- higher available-for-sale ("AFS") securities, reflecting net purchases, primarily U.S. Treasuries and non-U.S. government debt securities, partially offset by maturities and paydowns, and
- lower held to-maturity ("HTM") securities driven by maturities and paydowns.

Refer to Corporate results on pages 88–90, Investment Portfolio Risk Management on page 140, and Notes 2 and 10 for additional information.

Loans increased, reflecting:

- higher outstanding balances in Card Services driven by growth in new accounts and normalization of revolving balances,
- higher wholesale loans in CIB, and
- higher securities-based lending in AWM due to higher client demand,

partially offset by

- a decline in Home Lending as paydowns and loan sales outpaced originations.

The **allowance for loan losses** increased, reflecting a net addition to the allowance for loan losses of $1.9 billion, consisting of:

- $2.1 billion net addition in **consumer**, primarily in Card Services, predominantly driven by loan growth, reflecting higher revolving balances, including the seasoning of vintages originated in recent years, partially offset by a net reduction in Home Lending in the first quarter of 2024, and
- a net reduction of $176 million in **wholesale**, reflecting:
  - changes in certain macroeconomic variables, an update to loss assumptions on certain loans in

Markets, and a reduction due to charge-offs largely from collateral-dependent loans,

predominantly offset by

– net downgrade activity, primarily in Real Estate, and the impact of incorporating the First Republic portfolio into the Firm's modeled credit loss estimates in the second quarter of 2024.

There was also a $128 million net addition to the allowance for lending-related commitments recognized in other liabilities on the Consolidated balance sheets.

Refer to Consolidated Results of Operations and Credit and Investment Risk Management on pages 59–62 and pages 117–140, respectively, Critical Accounting Estimates Used by the Firm on pages 161–164, and Notes 2, 3, 12 and 13 for additional information on loans and the total allowance for credit losses.

Accrued interest and accounts receivable decreased primarily driven by lower receivables in Payments related to the timing of processing payment activities, due to December 31, 2023 falling on a weekend, as well as lower client receivables related to client-driven activities in Markets.

Premises and equipment increased primarily as a result of the construction-in-process associated with the Firm's headquarters, and purchases of properties. Refer to Notes 16 and 18 for additional information.

Goodwill, MSRs and other intangibles: Refer to Note 15 for additional information.

Other assets increased primarily due to higher cash collateral placed with central counterparties ("CCP") in Markets, the impact of the adoption of updates to the Accounting for Investments in Tax Credit Structures guidance effective January 1, 2024, and higher auto operating lease assets in CCB. Refer to Notes 1, 6, 14 and 25 for additional information on updates to the accounting guidance.

Selected Consolidated balance sheets data (continued)

December 31, (in millions)	2024	2023	Change
Liabilities			
Deposits	**$ 2,406,032**	$ 2,400,688	—
Federal funds purchased and securities loaned or sold under repurchase agreements	**296,835**	216,535	37
Short-term borrowings	**52,893**	44,712	18
Trading liabilities	**192,883**	180,428	7
Accounts payable and other liabilities	**280,672**	290,307	(3)
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**27,323**	23,020	19
Long-term debt	**401,418**	391,825	2
Total liabilities	**3,658,056**	3,547,515	3
Stockholders' equity	**344,758**	327,878	5
Total liabilities and stockholders' equity	**$ 4,002,814**	$ 3,875,393	3 %

Deposits increased, reflecting:

- an increase in CIB due to net inflows predominantly in Payments, largely offset by net maturities of structured notes in Markets,
- an increase in AWM as a result of growth in balances in new and existing client accounts, reflecting the impact of higher-yielding product offerings, largely offset by continued migration into other investments, and
- a decline in CCB primarily driven by a decrease in balances in existing accounts due to increased customer spending and migration into higher-yielding investments, predominantly offset by new accounts.

Federal funds purchased and securities loaned or sold under repurchase agreements increased driven by Markets, reflecting higher client-driven market-making activities and higher secured financing of trading assets.

Short-term borrowings increased driven by Markets, reflecting net issuance of structured notes due to client demand, and higher financing requirements.

Refer to Liquidity Risk Management on pages 108–115 for additional information on deposits, federal funds purchased and securities loaned or sold under repurchase agreements, and short-term borrowings; Notes 2 and 17 for deposits; and Note 11 for federal funds purchased and securities loaned or sold under repurchase agreements.

Trading liabilities increased due to client-driven market-making activities primarily in Fixed Income Markets, which resulted in higher levels of short positions in debt instruments. Refer to Notes 2 and 5 for additional information.

Accounts payable and other liabilities decreased primarily driven by lower payables in Payments related to the timing of processing payment activities, due to December 31, 2023 falling on a weekend, as well as lower client payables related to client-driven activities in Markets, partially offset by the impact of the adoption of updates to the Accounting for Investments in Tax Credit Structures guidance effective January 1, 2024. Refer to Note 19 for additional information on accounts payable; and Notes 1, 6, 14 and 25 for additional information on updates to the accounting guidance.

Beneficial interests issued by consolidated VIEs increased driven by the issuance of credit card securitizations in Treasury and CIO, and activity in municipal bond vehicles in CIB.

Refer to Liquidity Risk Management on pages 108–115; and Notes 14 and 28 for additional information on Firm-sponsored VIEs and loan securitization trusts.

Long-term debt increased, primarily driven by:

- net issuances of structured notes in Markets due to client demand,

partially offset by

- a decline in Treasury and CIO, reflecting the net impact of lower FHLB advances and higher long-term debt from net issuances.

Refer to Liquidity Risk Management on pages 108–115 and Note 34 for additional information on the First Republic acquisition.

Stockholders' equity increased, reflecting:

- net income,

largely offset by

- the impact of capital actions, including repurchases of common shares, the declaration of common and preferred stock dividends, and net redemption of preferred stock, and
- net unrealized losses in AOCI, including the impact of higher interest rates on cash flow hedges in Treasury and CIO.

Refer to Consolidated Statements of changes in stockholders' equity on page 175, Capital Actions on page 105, and Note 24 for additional information.

Consolidated cash flows analysis

The following is a discussion of cash flow activities during the years ended December 31, 2024 and 2023. Refer to Consolidated cash flows analysis on page 61 of the Firm's 2023 Form 10-K for a discussion of the 2022 activities.

	Year ended December 31,		
(in millions)	**2024**	2023	2022
Net cash provided by/ (used in)			
Operating activities	**$ (42,012)**	$ 12,974	$ 107,119
Investing activities	**(163,403)**	67,643	(137,819)
Financing activities	**63,447**	(25,571)	(126,257)
Effect of exchange rate changes on cash	**(12,866)**	1,871	(16,643)
Net increase/(decrease) in cash and due from banks and deposits with banks	**$(154,834)**	$ 56,917	$(173,600)

Operating activities

JPMorganChase's operating assets and liabilities primarily support the Firm's lending and capital markets activities. These assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes that cash flows from operations, available cash and other liquidity sources, and its capacity to generate cash through secured and unsecured sources, are sufficient to meet its operating liquidity needs.

- In 2024, cash used resulted from higher trading assets and higher securities borrowed, largely offset by net income.
- In 2023, cash provided primarily reflected net income, lower other assets, and accrued interest and accounts receivable, predominantly offset by higher trading assets, lower accounts payable and other liabilities, and higher securities borrowed.

Investing activities

The Firm's investing activities predominantly include originating held-for-investment loans, investing in the investment securities portfolio and other short-term instruments.

- In 2024, cash used resulted from net purchases of investment securities, net loan originations and higher securities purchased under resale agreements, partially offset by proceeds from sales and securitizations of loans held-for-investment.
- In 2023, cash provided resulted from net proceeds from investment securities, proceeds from sales and securitizations of loans held-for-investment, and lower securities purchased under resale agreements, largely offset by net originations of loans and net cash used in the First Republic Bank acquisition.

Financing activities

The Firm's financing activities include acquiring customer deposits and issuing long-term debt and preferred stock.

- In 2024, cash provided primarily reflected higher securities loaned or sold under repurchase agreements and net proceeds from long- and short-term borrowings, partially offset by net redemption of preferred stock.
- In 2023, cash used reflected lower deposits, which included the impact of the repayment of the deposits provided to First Republic Bank by the consortium of large U.S. banks that the Firm assumed as part of the First Republic acquisition, partially offset by higher securities loaned under repurchase agreements and net proceeds from long- and short-term borrowings.
- For both periods, cash was used for repurchases of common stock and cash dividends on common and preferred stock.

* * *

Refer to Consolidated Balance Sheets Analysis on pages 63–65, Capital Risk Management on pages 97–107, and Liquidity Risk Management on pages 108–115, and the Consolidated Statements of Cash Flows on page 176 for a further discussion of the activities affecting the Firm's cash flows.

Non-GAAP financial measures

The Firm prepares its Consolidated Financial Statements in accordance with U.S. GAAP; these financial statements appear on pages 172–176. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year-to-year and enables a comparison of the Firm's performance with the U.S. GAAP financial statements of other companies.

In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are non-GAAP financial measures. The Firm also reviews the results of the lines of business on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm as a whole, and for each of the reportable business segments and Corporate, on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by each of the lines of business and Corporate.

Management also uses certain non-GAAP financial measures at the Firm and business-segment levels because these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Firm or of the particular business segment, as the case may be, and therefore facilitate a comparison of the Firm or the business segment with the performance of its relevant competitors. Refer to Business Segment & Corporate Results on pages 70–90 for additional information on these non-GAAP measures. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

	2024			2023			2022		
Year ended December 31, (in millions, except ratios)	Reported	Fully taxable-equivalent adjustments[b]	Managed basis	Reported	Fully taxable-equivalent adjustments[b]	Managed basis	Reported	Fully taxable-equivalent adjustments[b]	Managed basis
Other income	**$12,462** [a]	**$ 2,560** [a]	**$15,022**	$ 5,609	$ 3,782	$ 9,391	$ 4,322	$ 3,148	$ 7,470
Total noninterest revenue	**84,973**	**2,560**	**87,533**	68,837	3,782	72,619	61,985	3,148	65,133
Net interest income	**92,583**	**477**	**93,060**	89,267	480	89,747	66,710	434	67,144
Total net revenue	**177,556**	**3,037**	**180,593**	158,104	4,262	162,366	128,695	3,582	132,277
Total noninterest expense	**91,797**	**NA**	**91,797**	87,172	NA	87,172	76,140	NA	76,140
Pre-provision profit	**85,759**	**3,037**	**88,796**	70,932	4,262	75,194	52,555	3,582	56,137
Provision for credit losses	**10,678**	**NA**	**10,678**	9,320	NA	9,320	6,389	NA	6,389
Income before income tax expense	**75,081**	**3,037**	**78,118**	61,612	4,262	65,874	46,166	3,582	49,748
Income tax expense	**16,610** [a]	**3,037** [a]	**19,647**	12,060	4,262	16,322	8,490	3,582	12,072
Net income	**$58,471**	**NA**	**$58,471**	$49,552	NA	$49,552	$37,676	NA	$37,676
Overhead ratio	**52 %**	**NM**	**51 %**	55 %	NM	54 %	59 %	NM	58 %

(a) Effective January 1, 2024, the Firm adopted updates to the Accounting for Investments in Tax Credit Structures guidance, under the modified retrospective method. Refer to Notes 1, 6, 14 and 25 for additional information.
(b) Predominantly recognized in CIB and Corporate.

Net interest income, net yield, and noninterest revenue excluding Markets

In addition to reviewing net interest income, net yield, and noninterest revenue on a managed basis, management also reviews these metrics excluding Markets, as shown below. Markets consists of CIB's Fixed Income Markets and Equity Markets. These metrics, which exclude Markets, are non-GAAP financial measures. Management reviews these metrics to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities, apart from any volatility associated with Markets activities. In addition, management also assesses Markets business performance on a total revenue basis as offsets may occur across revenue lines. Management believes that these measures provide investors and analysts with alternative measures to analyze the revenue trends of the Firm.

Year ended December 31, (in millions, except rates)	2024	2023	2022
Net interest income – reported[a]	**$ 92,583**	$ 89,267	$ 66,710
Fully taxable-equivalent adjustments	**477**	480	434
Net interest income – managed basis	**$ 93,060**	$ 89,747	$ 67,144
Less: Markets net interest income[b]	**641**	(294)	4,789
Net interest income excluding Markets	**$ 92,419**	$ 90,041	$ 62,355
Average interest-earning assets[a]	**$3,537,567**	$3,325,708	$3,349,079
Less: Average Markets interest-earning assets[b]	**1,128,153**	985,777	953,195
Average interest-earning assets excluding Markets	**$2,409,414**	$2,339,931	$2,395,884
Net yield on average interest-earning assets – managed basis	**2.63 %**	2.70 %	2.00 %
Net yield on average Markets interest-earning assets[b]	**0.06**	(0.03)	0.50
Net yield on average interest-earning assets excluding Markets	**3.84 %**	3.85 %	2.60 %
Noninterest revenue – reported[c]	**$ 84,973**	$ 68,837	$ 61,985
Fully taxable-equivalent adjustments[c]	**2,560**	3,782	3,148
Noninterest revenue – managed basis	**$ 87,533**	$ 72,619	$ 65,133
Less: Markets noninterest revenue[b][d]	**29,366**	28,258	24,373
Noninterest revenue excluding Markets	**$ 58,167**	$ 44,361	$ 40,760
Memo: Total Markets net revenue[b]	**$ 30,007**	$ 27,964	$ 29,162

(a) Includes the effect of derivatives that qualify for hedge accounting. Taxable-equivalent amounts are used, also where applicable. Refer to Note 5 for additional information on hedge accounting.
(b) Refer to pages 81–82 for further information on Markets.
(c) Effective January 1, 2024, the Firm adopted updates to the Accounting for Investment in Tax Credit Stricture guidance, under the modified retrospective method. Refer to Notes 1, 6, 14 and 25 for additional information.
(d) Includes the market-related revenues of the former Commercial Banking business segment. Prior-period amounts have been revised to conform with the current presentation.

Calculation of certain U.S. GAAP and non-GAAP financial measures

Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end / Common shares at period-end

Overhead ratio
Total noninterest expense / Total net revenue

ROA
Reported net income / Total average assets

ROE
Net income* / Average common stockholders' equity

ROTCE
Net income* / Average tangible common equity

TBVPS
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

In addition, the Firm reviews other non-GAAP measures such as:

- Adjusted expense, which represents noninterest expense excluding Firmwide legal expense, and
- Pre-provision profit, which represents total net revenue less total noninterest expense.

Management believes that these measures help investors to understand the effect of these items on reported results and provide an alternative presentation of the Firm's performance.

TCE, ROTCE and TBVPS

TCE, ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

	Period-end		Average		
			Year ended December 31,		
(in millions, except per share and ratio data)	**Dec 31, 2024**	Dec 31, 2023	**2024**	2023	2022
Common stockholders' equity	**$ 324,708**	$ 300,474	**$ 312,370**	$ 282,056	$ 253,068
Less: Goodwill	**52,565**	52,634	**52,627**	52,258	50,952
Less: Other intangible assets	**2,874**	3,225	**3,042**	2,572	1,112
Add: Certain deferred tax liabilities[(a)]	**2,943**	2,996	**2,970**	2,883	2,505
Tangible common equity	**$ 272,212**	$ 247,611	**$ 259,671**	$ 230,109	$ 203,509
Return on tangible common equity	**NA**	NA	**22 %**	21 %	18 %
Tangible book value per share	**$ 97.30**	$ 86.08	**NA**	NA	NA

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

BUSINESS SEGMENT & CORPORATE RESULTS

The Firm is managed on an LOB basis. Effective in the second quarter of 2024, the Firm reorganized its reportable business segments by combining the former Corporate & Investment Bank and Commercial Banking business segments to form one reportable segment, the Commercial & Investment Bank ("CIB"). As a result of the reorganization, the Firm has three reportable business segments – Consumer & Community Banking, Commercial & Investment Bank, and Asset & Wealth Management – with the remaining activities in Corporate.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is evaluated by the Firm's Operating Committee, whose members act collectively as the Firm's chief operating decision maker. Segment results are presented on a managed basis. Refer to Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures, on pages 67–69 for a definition of managed basis.

The following table depicts the Firm's reportable business segments.

JPMorganChase					
Consumer Business Segment			Wholesale Business Segments		
Consumer & Community Banking			Commercial & Investment Bank		Asset & Wealth Management
Banking & Wealth Management	Home Lending	Card Services & Auto	Banking & Payments	Markets & Securities Services	• Asset Management • Global Private Bank
• Consumer Banking • Business Banking • J.P. Morgan Wealth Management	• Home Lending Production • Home Lending Servicing • Real Estate Portfolios	• Card Services • Auto	• Investment Banking • Payments • Lending • Other	• Fixed Income Markets • Equity Markets • Securities Services • Credit Adjustments & Other	

Description of business segment reporting methodology

Results of the reportable business segments are intended to present each segment as if it were a stand-alone business. The management reporting process that derives business segment results includes the allocation of certain income and expense items. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and therefore further refinements may be implemented in future periods. The Firm also assesses the level of capital required for each LOB on at least an annual basis. The Firm's LOBs also provide various business metrics which are utilized by the Firm and its investors and analysts in assessing performance.

Revenue sharing

When business segments or businesses within each segment join efforts to sell products and services to the Firm's clients and customers, the participating businesses may agree to share revenue from those transactions. Revenue is generally recognized in the segment responsible for the related product or service, with allocations to the other segments or businesses involved in the transaction. The segment and business results reflect these revenue-sharing agreements.

Expense allocation
Where business segments use services provided by Corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on the actual cost and use of services provided. In contrast, certain costs and investments related to Corporate that are not currently utilized by any LOB are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes costs that would not be incurred if the segments were stand-alone businesses, and other items not solely aligned with a particular reportable business segment.

Funds transfer pricing
Funds transfer pricing ("FTP") is the process by which the Firm allocates interest income and expense to the LOBs and Other Corporate and transfers the primary interest rate risk and liquidity risk to Treasury and CIO.

The funds transfer pricing process considers the interest rate and liquidity risk characteristics of assets and liabilities and off-balance sheet products. Periodically, the methodology and assumptions utilized in the FTP process are adjusted to reflect economic conditions and other factors, which may impact the allocation of net interest income to the segments. Effective in the fourth quarter of 2024, the Firm updated its FTP with respect to consumer deposits, which resulted in an increase in the funding benefit reflected within CCB's net interest income that is fully offset in Corporate, with no effect on the Firm's net interest income.

As a result of higher average interest rates, the cost of funds for assets and the FTP benefit earned for liabilities have generally increased in the current year, impacting the net interest income of the business segments. During the period ended December 31, 2024, this has resulted in a higher cost of funds for loans and Markets activities. In addition, rates paid to deposit holders increased more than the FTP benefit increase during the year, resulting in deposit margin compression.

Foreign exchange risk
Foreign exchange risk is transferred from the LOBs and Other Corporate to Treasury and CIO for certain revenues and expenses. Treasury and CIO manages these risks centrally and reports the impact of foreign exchange rate movements related to the transferred risk in its results. Refer to Market Risk Management on page 149 for additional information.

Debt expense and preferred stock dividend allocation
As part of the FTP process, almost all of the cost of the credit spread component of outstanding unsecured long-term debt and preferred stock dividends is allocated to the reportable business segments, while the balance of the cost is retained in Corporate. The methodology to allocate the cost of unsecured long-term debt and preferred stock dividends to the business segments is aligned with the relevant regulatory capital requirements and funding needs of the LOBs, as applicable. The allocated cost of unsecured long-term debt is included in a business segment's net interest income, and net income is reduced by preferred stock dividends, to arrive at a business segment's net income applicable to common equity. Refer to Capital Risk Management on pages 97–107 for additional information.

Capital allocation
The amount of capital assigned to each LOB and Corporate is referred to as equity. The Firm's current equity allocation methodology incorporates Basel III Standardized risk-weighted assets ("RWA") and the global systemically important banks ("GSIB") surcharge, both under rules currently in effect, as well as a simulation of capital depletion in a severe stress environment. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs and Corporate may change. Refer to Line of business and Corporate equity on page 104 for additional information on capital allocation.

Segment & Corporate Results – Managed Basis

The following tables summarize the Firm's results by business segments and Corporate for the periods indicated.

Year ended December 31,	Consumer & Community Banking				Commercial & Investment Bank				Asset & Wealth Management			
(in millions, except ratios)	**2024**	2023	2022		**2024**	2023	2022		**2024**	2023	2022	
Total net revenue	**$ 71,507**	$ 70,148	$ 54,814	(a)	**$ 70,114**	$ 64,353	$ 59,635	(a)	**$ 21,578**	$ 19,827	$ 17,748	
Total noninterest expense	**38,036**	34,819	31,208	(a)	**35,353**	33,972	32,069	(a)	**14,414**	12,780	11,829	
Pre-provision profit/(loss)	**33,471**	35,329	23,606		**34,761**	30,381	27,566		**7,164**	7,047	5,919	
Provision for credit losses	**9,974**	6,899	3,813		**762**	2,091	2,426		**(68)**	159	128	
Net income/(loss)	**17,603**	21,232	14,916	(a)	**24,846**	20,272	19,138	(a)	**5,421**	5,227	4,365	
Return on equity ("ROE")	**32 %**	38 %	29 %		**18 %**	14 %	14 %		**34 %**	31 %	25 %	

Year ended December 31,	Corporate				Total			
(in millions, except ratios)	**2024**	2023	2022		**2024**	2023	2022	
Total net revenue	**$ 17,394**	$ 8,038	$ 80	(b)	**$180,593**	$162,366	$ 132,277	(b)
Total noninterest expense	**3,994**	5,601	1,034	(c)	**91,797**	87,172	76,140	(c)
Pre-provision profit/(loss)	**13,400**	2,437	(954)		**88,796**	75,194	56,137	
Provision for credit losses	**10**	171	22		**10,678**	9,320	6,389	
Net income/(loss)	**10,601**	2,821	(743)		**58,471**	49,552	37,676	
Return on equity ("ROE")	**NM**	NM	NM		**18 %**	17 %	14 %	

(a) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.

(b) Included a $7.9 billion net gain related to Visa shares recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.

(c) Included a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.

Refer to Note 32 for further details on total net revenue and total noninterest expense.

The following sections provide a comparative discussion of the Firm's results by business segments and Corporate as of or for the years ended December 31, 2024 and 2023, unless otherwise specified.

Consumer & Community Banking offers products and services to consumers and small businesses through bank branches, ATMs, digital (including mobile and online) and telephone banking. CCB is organized into Banking & Wealth Management (including Consumer Banking, Business Banking and J.P. Morgan Wealth Management), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card Services & Auto. Banking & Wealth Management offers deposit, investment and lending products, cash management, payments and services. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card Services issues credit cards and offers travel services. Auto originates and services auto loans and leases.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2024	2023	2022
Revenue			
Lending- and deposit-related fees	**$ 3,387**	$ 3,356	$ 3,316
Asset management fees	**4,014**	3,282	2,734
Mortgage fees and related income	**1,378**	1,175	1,236
Card income	**3,139**	2,532	2,469
All other income[a]	**4,731**	4,773	5,131
Noninterest revenue	**16,649**	15,118	14,886
Net interest income	**54,858**	55,030	39,928
Total net revenue	**71,507**	70,148	54,814
Provision for credit losses	**9,974**	6,899	3,813
Noninterest expense			
Compensation expense	**17,045**	15,171	13,092
Noncompensation expense[b]	**20,991**	19,648	18,116
Total noninterest expense	**38,036**	34,819 [d]	31,208
Income before income tax expense	**23,497**	28,430	19,793
Income tax expense	**5,894**	7,198	4,877
Net income	**$17,603**	$ 21,232	$ 14,916
Revenue by business			
Banking & Wealth Management	**$40,943**	$ 43,199	$ 30,059
Home Lending	**5,097**	4,140	3,674
Card Services & Auto	**25,467**	22,809	21,081
Mortgage fees and related income details:			
Production revenue	**627**	421	497
Net mortgage servicing revenue[c]	**751**	754	739
Mortgage fees and related income	**$ 1,378**	$ 1,175	$ 1,236
Financial ratios			
Return on equity	**32 %**	38 %	29 %
Overhead ratio	**53**	50	57

(a) Primarily includes operating lease income and commissions and other fees. Operating lease income was $2.8 billion, $2.8 billion and $3.6 billion for the years ended December 31, 2024, 2023 and 2022, respectively.
(b) Included depreciation expense on leased assets of $1.7 billion, $1.7 billion and $2.4 billion for the years ended December 31, 2024, 2023 and 2022, respectively.
(c) Included MSR risk management results of $159 million, $131 million and $93 million for the years ended December 31, 2024, 2023 and 2022, respectively.
(d) In the second quarter of 2023, substantially all of the expense associated with First Republic was reported in Corporate. Commencing in the third quarter of 2023, the expense was aligned to the appropriate LOB.

2024 compared with 2023

Net income was $17.6 billion, down 17%.

Net revenue was $71.5 billion, up 2%.

Net interest income was $54.9 billion, flat when compared with the prior year, reflecting:

- lower NII in Banking & Wealth Management ("BWM"), predominantly driven by deposit margin compression and lower average deposits,

offset by

- higher Card Services NII, predominantly driven by higher revolving balances, and
- the timing impact of First Republic in Home Lending.

Noninterest revenue was $16.6 billion, up 10%, predominantly driven by:

- higher asset management fees reflecting higher average market levels, including the timing impact of First Republic and, to a lesser extent, net inflows, as well as higher commissions from annuity sales in BWM,
- higher card income, driven by higher net interchange reflecting increased debit and credit card sales volume, and higher annual fees, partially offset by an increase in amortization related to new account origination costs, as well as
- higher production revenue in Home Lending, including the timing impact of First Republic.

Refer to Note 6 for additional information on card income, asset management fees, and commissions and other fees; and Critical Accounting Estimates on pages 161–164 for additional information on the credit card rewards liability.

Refer to Executive Overview on page 54 and Note 34 for additional information on First Republic.

Noninterest expense was $38.0 billion, up 9%, reflecting First Republic-related expense that was aligned to CCB from Corporate starting in the third quarter of 2023, impacting both compensation and noncompensation expense.

The increase in expense also reflected:

- higher compensation expense, largely driven by higher revenue-related compensation predominantly for advisors and bankers, and an increase in the number of employees, including in technology, and
- higher noncompensation expense, largely driven by continued investments in technology and marketing, as well as higher operating losses, partially offset by lower legal expense.

The provision for credit losses was $10.0 billion, reflecting:

- net charge-offs of $7.9 billion, up $2.6 billion, including $2.4 billion in Card Services, reflecting the seasoning of vintages originated in recent years, credit normalization and balance growth, and
- a $2.0 billion net addition to the allowance for credit losses, consisting of:
  - $2.2 billion in Card Services, predominantly driven by loan growth, reflecting higher revolving balances, including the seasoning of vintages originated in recent years,

  partially offset by

  - a $125 million net reduction in Home Lending, primarily due to improvements in the outlook for home prices in the first quarter of 2024.

The provision in the prior year was $6.9 billion, reflecting net charge-offs of $5.3 billion, a $1.2 billion net addition to the allowance for credit losses, predominantly driven by Card Services, and a $408 million net addition to the allowance for credit losses to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

Refer to Credit and Investment Risk Management on pages 117–140 and Allowance for Credit Losses on pages 137–139 for a further discussion of the credit portfolios and the allowance for credit losses.

Selected metrics

As of or for the year ended December 31, (in millions, except employees)	2024	2023	2022
Selected balance sheet data (period-end)			
Total assets	**$650,268**	$ 642,951	$ 514,085
Loans:			
Banking & Wealth Management	**33,221**	31,142	29,008
Home Lending[(a)]	**246,498**	259,181	172,554
Card Services	**233,016**	211,175	185,175
Auto	**73,619**	77,705	68,191
Total loans	**586,354**	579,203	454,928
Deposits[(b)]	**1,056,652**	1,094,738	1,131,611
Equity	**54,500**	55,500	50,000
Selected balance sheet data (average)			
Total assets	**$ 631,648**	$ 584,367	$ 497,263
Loans:			
Banking & Wealth Management	**31,544**	30,142	31,545
Home Lending[(c)]	**252,542**	232,115	176,285
Card Services	**214,139**	191,424	163,335
Auto	**75,009**	72,674	68,098
Total loans	**573,234**	526,355	439,263
Deposits[(b)]	**1,064,215**	1,126,552	1,162,680
Equity	**54,500**	54,349	50,000
Employees	**144,989**	141,640	135,347

(a) At December 31, 2024, 2023 and 2022, Home Lending loans held-for-sale and loans at fair value were $8.1 billion, $3.4 billion and $3.0 billion, respectively.
(b) In the fourth quarter of 2023, CCB transferred approximately $18.8 billion of deposits associated with First Republic to AWM and CIB.
(c) Average Home Lending loans held-for-sale and loans at fair value were $7.1 billion, $4.8 billion and $7.3 billion for the years ended December 31, 2024, 2023 and 2022, respectively.

Selected metrics

As of or for the year ended December 31, (in millions, except ratio data)	2024	2023	2022
Credit data and quality statistics			
Nonaccrual loans[(a)]	**$ 3,366**	$3,740	$ 3,899
Net charge-offs/(recoveries)			
Banking & Wealth Management	**442**	340	370
Home Lending	**(106)**	(56)	(229)
Card Services	**7,148**	4,699	2,403
Auto	**444**	357	144
Total net charge-offs/ (recoveries)	**$ 7,928**	$5,340	$ 2,688
Net charge-off/(recovery) rate			
Banking & Wealth Management	**1.40 %**	1.13 %	1.17 %
Home Lending	**(0.04)**	(0.02)	(0.14)
Card Services	**3.34**	2.45	1.47
Auto	**0.59**	0.49	0.21
Total net charge-off/ (recovery) rate	**1.40 %**	1.02 %	0.62 %
30+ day delinquency rate			
Home Lending[(b)]	**0.78 %**	0.66 %	0.83 %
Card Services	**2.17**	2.14	1.45
Auto	**1.43**	1.19	1.01
90+ day delinquency rate - Card Services	**1.14 %**	1.05 %	0.68 %
Allowance for loan losses			
Banking & Wealth Management	**$ 764**	$ 685	$ 722
Home Lending	**447**	578	867
Card Services	**14,608**	12,453	11,200
Auto	**692**	742	715
Total allowance for loan losses	**$ 16,511**	$14,458	$13,504

(a) Excludes mortgage loans past due and insured by U.S. government agencies, which are primarily 90 or more days past due. These loans have been excluded based upon the government guarantee. At December 31, 2024, 2023 and 2022, mortgage loans 90 or more days past due and insured by U.S. government agencies were $84 million, $123 million and $187 million, respectively. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance
(b) At December 31, 2024, 2023 and 2022, excluded mortgage loans insured by U.S. government agencies of $122 million, $176 million and $258 million, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

Selected metrics

As of or for the year ended December 31, (in billions, except ratios and where otherwise noted)	2024	2023	2022
Business Metrics			
CCB Consumer customers (in millions)	**84.4**	82.1	79.2
CCB Small business customers (in millions)	**7.0**	6.4	5.7
Number of branches	**4,966**	4,897	4,787
Active digital customers (in thousands)[(a)]	**70,813**	66,983	63,136
Active mobile customers (in thousands)[(b)]	**57,821**	53,828	49,710
Debit and credit card sales volume	**$1,805.4**	$1,678.6	$1,555.4
Total payments transaction volume (in trillions)[(c)]	**6.4**	5.9	5.6
Banking & Wealth Management			
Average deposits	**$1,049.3**	$ 1,111.7	$ 1,145.7
Deposit margin	**2.66 %**	2.84 %	1.71 %
Business Banking average loans	**$ 19.5**	$ 19.6	$ 22.3
Business Banking origination volume	**4.5**	4.8	4.3
Client investment assets[(d)]	**1,087.6**	951.1	647.1
Number of client advisors	**5,755**	5,456	5,029
Home Lending			
Mortgage origination volume by channel			
Retail	**$ 25.5**	$ 22.4	$ 38.5
Correspondent	**15.3**	12.7	26.9
Total mortgage origination volume[(e)]	**$ 40.8**	$ 35.1	$ 65.4
Third-party mortgage loans serviced (period-end)	**$ 648.0**	$ 631.2	$ 584.3
MSR carrying value (period-end)	**9.1**	8.5	8.0
Card Services			
Sales volume, excluding commercial card	**$1,259.3**	$ 1,163.6	$1,064.7
Net revenue rate	**10.03 %**	9.72 %	9.87 %
Net yield on average loans	**9.73**	9.61	9.77
New credit card accounts opened (in millions)	**10.0**	10.0	9.6
Auto			
Loan and lease origination volume	**$ 40.3**	$ 41.3	$ 30.4
Average auto operating lease assets	**11.1**	10.9	14.3

(a) Users of all web and/or mobile platforms who have logged in within the past 90 days.
(b) Users of all mobile platforms who have logged in within the past 90 days.
(c) Total payments transaction volume includes debit and credit card sales volume and gross outflows of ACH, ATM, teller, wires, BillPay, PayChase, Zelle, person-to-person and checks.
(d) Includes assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager. Refer to AWM segment results on pages 84–87 for additional information.
(e) Firmwide mortgage origination volume was $47.4 billion, $41.4 billion and $81.8 billion for the years ended December 31, 2024, 2023 and 2022, respectively.

COMMERCIAL & INVESTMENT BANK[a]

The Commercial & Investment Bank is comprised of the Banking & Payments and Markets & Securities Services businesses. These businesses offer investment banking, lending, payments, market-making, financing, custody and securities products and services to a global base of corporate and institutional clients. Banking & Payments offers products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, and loan origination and syndication. Banking & Payments also provides services that enable clients to manage payments globally across liquidity and account solutions, commerce solutions, clearing, trade, and working capital. Markets & Securities Services includes Markets, which is a global market-maker across products, including cash and derivative instruments, and also offers sophisticated risk management solutions, lending, prime brokerage, clearing and research. Markets & Securities Services also includes Securities Services, a leading global custodian that provides custody, fund services, liquidity and trading services, and data solutions products.

(a) Reflects the reorganization of the Firm's business segments in the second quarter of 2024. Refer to Business Segment & Corporate Results on pages 70–90 for additional information.

Selected income statement data

Year ended December 31, (in millions)	2024	2023	2022
Revenue			
Investment banking fees	**$ 9,116**	$ 6,631	$ 6,977
Principal transactions	**24,382**	23,794	19,792
Lending- and deposit-related fees	**3,914**	3,423	3,662
Commissions and other fees	**5,278**	4,879	5,113
Card income	**2,310**	2,213	1,934
All other income	**3,253**	2,869	2,060
Noninterest revenue	**48,253**	43,809	39,538
Net interest income	**21,861**	20,544	20,097
Total net revenue[a]	**70,114**	64,353	59,635
Provision for credit losses	**762**	2,091	2,426
Noninterest expense			
Compensation expense	**18,191**	17,105	16,214
Noncompensation expense	**17,162**	16,867	15,855
Total noninterest expense	**35,353**	33,972	32,069
Income before income tax expense	**33,999**	28,290	25,140
Income tax expense	**9,153**	8,018	6,002
Net income	**$24,846**	$20,272	$ 19,138

(a) Included tax equivalent adjustments primarily from income tax credits from investments in alternative energy, affordable housing and new markets, income from tax-exempt securities and loans, and the related amortization and other tax benefits of the investments in alternative energy and affordable housing of $2.8 billion, $4.0 billion and $3.3 billion for the years ended December 31, 2024, 2023 and 2022, respectively. Effective January 1, 2024, the Firm adopted updates to the Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method guidance, under the modified retrospective method. Refer to Notes 1, 6, 14 and 25 for additional information.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2024	2023	2022
Financial ratios			
Return on equity	**18 %**	14 %	14 %
Overhead ratio	**50**	53	54
Compensation expense as percentage of total net revenue	**26**	27	27
Revenue by business			
Investment Banking	**$ 9,636**	$ 7,076	$ 7,205
Payments	**18,085**	17,818	13,490
Lending	**7,470**	6,896	5,882
Other	**76**	107	244
Total Banking & Payments	**35,267**	31,897	26,821
Fixed Income Markets[a]	**20,066**	19,180	19,074
Equity Markets[a]	**9,941**	8,784	10,088
Securities Services	**5,084**	4,772	4,488
Credit Adjustments & Other[b]	**(244)**	(280)	(836)
Total Markets & Securities Services	**34,847**	32,456	32,814
Total net revenue	**$70,114**	$64,353	$59,635

(a) In the fourth quarter of 2024, certain net funding costs that were previously allocated to Fixed Income Markets were reclassified to Equity Markets. Prior-period amounts have been revised to conform with the current presentation.

(b) Consists primarily of centrally-managed credit valuation adjustments ("CVA"), funding valuation adjustments ("FVA") on derivatives, other valuation adjustments, and certain components of fair value option elected liabilities, which are primarily reported in principal transactions revenue. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets. Refer to Notes 2, 3 and 24 for additional information.

Banking & Payments Revenue by Client Coverage Segment: [(a)]

Global Corporate Banking & Global Investment Banking provides banking products and services generally to large corporations, financial institutions and merchants.

Commercial Banking provides banking products and services generally to middle market clients, including start-ups, small and mid-sized companies, local governments, municipalities, and nonprofits, as well as to commercial real estate clients.

Other includes amounts related to credit protection purchased against certain retained loans and lending-related commitments in Lending, the impact of equity investments in Payments and revenues not aligned with a primary client coverage segment.

(a) Global Banking is a client coverage view within the Banking & Payments business and is comprised of the Global Corporate Banking, Global Investment Banking and Commercial Banking client coverage segments.

Selected income statement data

Year ended December 31, (in millions)	2024	2023	2022
Banking & Payments revenue by client coverage segment			
Global Corporate Banking & Global Investment Banking	**$ 24,549**	$ 21,700	$ 19,325
Commercial Banking	**11,487**	11,050	7,906
Middle Market Banking	**7,759**	7,740	5,443
Commercial Real Estate Banking	**3,728**	3,310	2,463
Other	**(769)**	(853)	(410)
Total Banking & Payments revenue	**$ 35,267**	$ 31,897	$ 26,821

2024 compared with 2023

Net income was $24.8 billion, up 23%.

Net revenue was $70.1 billion, up 9%.

Banking & Payments revenue was $35.3 billion, up 11%.

- Investment Banking revenue was $9.6 billion, up 36%. Investment Banking fees were up 37%, driven by higher fees across products. The Firm ranked #1 for Global Investment Banking fees, according to Dealogic.
  - Debt underwriting fees were $4.1 billion, up 55%, predominantly driven by higher industry-wide issuances in leveraged loans, and in high-grade and high-yield bonds.
  - Equity underwriting fees were $1.7 billion, up 47%, driven by increased industry-wide fees and wallet share gains in IPOs, and in follow-on and convertible securities offerings.
  - Advisory fees were $3.3 billion, up 17%, driven by increased industry-wide M&A activity and wallet share gains.
- Payments revenue was $18.1 billion, up 1%, driven by fee growth on higher volumes as well as higher average deposits, predominantly offset by deposit margin compression, reflecting higher rates paid, and higher deposit-related client credits.
- Lending revenue was $7.5 billion, up 8%, predominantly driven by the impacts of higher rates and the First Republic acquisition.

Markets & Securities Services revenue was $34.8 billion, up 7%. Markets revenue was $30.0 billion, up 7%.

- Equity Markets revenue was $9.9 billion, up 13%, driven by higher revenue in Equity Derivatives and Prime Finance.
- Fixed Income Markets revenue was $20.1 billion, up 5%, driven by higher revenue in the Securitized Products Group, Currencies & Emerging Markets, and Credit, largely offset by lower revenue in Rates and Commodities.
- Securities Services revenue was $5.1 billion, up 7%, predominantly driven by fee growth on higher client activity and market levels.
- Credit Adjustments & Other was a loss of $244 million, compared with a loss of $280 million in the prior year.

Noninterest expense was $35.4 billion, up 4%, driven by higher compensation expense, including revenue-related compensation and an increase in the number of employees, as well as higher technology and brokerage expense partially offset by lower legal expense.

The provision for credit losses was $762 million, reflecting:

- net charge-offs of $617 million, primarily in Real Estate, largely concentrated in Office, and
- a $145 million net addition to the allowance for credit losses, driven by
  - net downgrade activity, primarily in Real Estate, and the impact of incorporating the First Republic portfolio into the Firm's modeled credit loss estimates in the second quarter of 2024,

  predominantly offset by
  - changes in certain macroeconomic variables, an update to loss assumptions on certain loans in Markets, and a reduction due to charge-offs predominantly from collateral-dependent loans.

The provision in the prior year was $2.1 billion, reflecting a $1.5 billion net addition to the allowance for credit losses, which included $608 million to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023, and net charge-offs of $588 million.

Selected metrics

As of or for the year ended December 31, (in millions, except employees)	2024	2023	2022
Selected balance sheet data (period-end)			
Total assets	**$1,773,194**	$1,638,493	$1,591,402
Loans:			
Loans retained	**483,043**	475,186	421,521
Loans held-for-sale and loans at fair value[a]	**40,324**	39,464	43,011
Total loans	**523,367**	514,650	464,532
Equity	**132,000**	138,000	128,000
Banking & Payments loans by client coverage segment (period-end)[b]			
Global Corporate Banking & Global Investment Banking	**$ 125,083**	$ 128,097	$ 128,165
Commercial Banking	**217,674**	221,550	180,624
Middle Market Banking	**72,814**	78,043	72,625
Commercial Real Estate Banking	**144,860**	143,507	107,999
Other	**187**	526	122
Total Banking & Payments loans	**342,944**	350,173	308,911
Selected balance sheet data (average)			
Total assets	**$1,912,466**	$ 1,716,755	$1,649,358
Trading assets-debt and equity instruments	**624,032**	508,792	405,948
Trading assets-derivative receivables	**57,028**	63,862	77,822
Loans:			
Loans retained	**$ 475,426**	$ 457,886	$ 395,015
Loans held-for-sale and loans at fair value[a]	**43,621**	40,891	48,196
Total loans	**$ 519,047**	$ 498,777	$ 443,211
Deposits[c]	**1,061,488**	996,295	1,033,880
Equity	**132,000**	137,507	128,000
Banking & Payments loans by client coverage segment (average)[b]			
Global Corporate Banking & Global Investment Banking	**$ 128,142**	$ 131,230	$ 122,174
Commercial Banking	**220,285**	209,244	173,289
Middle Market Banking	**75,605**	77,130	67,830
Commercial Real Estate Banking	**144,680**	132,114	105,459
Other	**354**	331	168
Total Banking & Payments loans	**$ 348,781**	$ 340,805	$ 295,631
Employees	**93,231**	92,271	88,139

(a) Loans held-for-sale and loans at fair value primarily reflect lending-related positions originated and purchased in Markets, including loans held for securitization.
(b) Refer to page 78 for a description of each of the client coverage segments.
(c) In the fourth quarter of 2023, certain deposits associated with First Republic were transferred to CIB from CCB.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2024	2023	2022
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 689** [d]	$ 588	$ 166
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**$3,258**	$ 1,675	$ 1,484
Nonaccrual loans held-for-sale and loans at fair value[b]	**1,502**	828	848
Total nonaccrual loans	**4,760**	2,503	2,332
Derivative receivables	**145**	364	296
Assets acquired in loan satisfactions	**213**	169	87
Total nonperforming assets	**$ 5,118**	$ 3,036	$ 2,715
Allowance for credit losses:			
Allowance for loan losses	**$7,294**	$ 7,326	$ 5,616
Allowance for lending-related commitments	**1,976**	1,849	2,278
Total allowance for credit losses	**$9,270**	$ 9,175	$ 7,894
Net charge-off/(recovery) rate[c]	**0.14 %**	0.13 %	0.04 %
Allowance for loan losses to period-end loans retained	**1.51**	1.54	1.33
Allowance for loan losses to nonaccrual loans retained[a]	**224**	437	378
Nonaccrual loans to total period-end loans	**0.91**	0.49	0.50

(a) Allowance for loan losses of $435 million, $251 million and $257 million were held against these nonaccrual loans at December 31, 2024, 2023 and 2022, respectively.
(b) Excludes mortgage loans past due and insured by U.S. government agencies, which are primarily 90 or more days past due. These loans have been excluded based upon the government guarantee. At December 31, 2024, 2023 and 2022, mortgage loans 90 or more days past due and insured by U.S. government agencies were $37 million, $59 million and $115 million, respectively.
(c) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(d) Includes $72 million related to a purchased credit deteriorated ("PCD") loan that was charged off in the fourth quarter of 2024.

Investment banking fees

Year ended December 31, (in millions)	2024	2023	2022
Advisory	**$ 3,290**	$ 2,814	$ 3,051
Equity underwriting	**1,692**	1,151	1,034
Debt underwriting[a]	**4,134**	2,666	2,892
Total investment banking fees	**$ 9,116**	$ 6,631	$ 6,977

(a) Represents long-term debt and loan syndications.

League table results – wallet share

	2024		2023		2022	
Year ended December 31,	Rank	Share	Rank	Share	Rank	Share
Based on fees[a]						
M&A[b]						
Global	**# 1**	**9.6 %**	# 2	9.0 %	# 2	7.9 %
U.S.	**1**	**11.4**	2	10.9	2	8.9
Equity and equity-related[c]						
Global	**1**	**11.0**	1	7.7	2	5.7
U.S.	**1**	**14.7**	1	14.4	1	14.0
Long-term debt[d]						
Global	**1**	**7.6**	1	7.0	1	6.9
U.S.	**1**	**11.4**	1	10.9	1	12.1
Loan syndications						
Global	**1**	**10.2**	1	11.9	1	11.0
U.S.	**1**	**11.8**	1	15.1	1	12.9
Global investment banking fees[e]	**# 1**	**9.3 %**	# 1	8.6 %	# 1	7.8 %

(a) Source: Dealogic as of January 2, 2025. Reflects the ranking of revenue wallet and market share.
(b) Global M&A excludes any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S.
(c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
(d) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities ("MBS"); and exclude money market, short-term debt and U.S. municipal securities.
(e) Global investment banking fees exclude money market, short-term debt and shelf securities.

Markets revenue

The following table summarizes selected income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue consists of principal transactions, fees, commissions and other income, as well as net interest income. The Firm assesses its Markets business performance on a total revenue basis, as offsets generally occur across revenue line items. For example, securities that generate net interest income may be risk-managed by derivatives that are reflected at fair value in principal transactions revenue. Refer to Notes 6 and 7 for a description of the composition of these income statement line items.

Principal transactions reflects revenue on financial instruments and commodities transactions that arise from client-driven market-making activity. Principal transactions revenue includes amounts recognized upon executing new transactions with market participants, as well as "inventory-related revenue," which is revenue recognized from gains and losses on derivatives and other instruments that the Firm has been holding in anticipation of, or in response to, client demand, and changes in the fair value of instruments used by the Firm to actively manage the risk exposure arising from such inventory. Principal transactions revenue recognized upon executing new transactions with market participants is affected by many factors including the level of client activity, the bid-offer spread (which is the difference between the price at which a market participant is willing and able to sell an instrument to the Firm and the price at which another market participant is willing and able to buy it from the Firm, and vice versa), market liquidity and volatility. These factors are interrelated and sensitive to the same factors that drive inventory-related revenue, which include general market conditions, such as interest rates, foreign exchange rates, credit spreads, and equity and commodity prices, as well as other macroeconomic conditions.

For the periods presented below, the primary source of principal transactions revenue was the amount recognized upon executing new transactions.

Year ended December 31, (in millions, except where otherwise noted)	2024 Fixed Income Markets	2024 Equity Markets	2024 Total Markets	2023 Fixed Income Markets[c]	2023 Equity Markets[c]	2023 Total Markets	2022 Fixed Income Markets[c]	2022 Equity Markets[c]	2022 Total Markets
Principal transactions	**$ 10,603**	**$ 13,526**	**$ 24,129**	$ 13,198	$ 10,380	$ 23,578	$ 12,244	$ 8,284	$ 20,528
Lending- and deposit-related fees	**391**	**100**	**491**	307	40	347	303	22	325
Commissions and other fees	**605**	**2,086**	**2,691**	596	1,908	2,504	550	1,975	2,525
All other income	**2,120**	**(65)**	**2,055**	1,908	(79)	1,829	1,083	(88)	995
Noninterest revenue	**13,719**	**15,647**	**29,366**	16,009	12,249	28,258	14,180	10,193	24,373
Net interest income[a]	**6,347**	**(5,706)**	**641**	3,171	(3,465)	(294)	4,894	(105)	4,789
Total net revenue	**$ 20,066**	**$ 9,941**	**$ 30,007**	$ 19,180	$ 8,784	$ 27,964	$ 19,074	$ 10,088	$ 29,162
Loss days[b]			**1**			2			7

(a) The decline in Equity Markets net interest income was driven by higher funding costs.
(b) Markets consists of Fixed Income Markets and Equity Markets. Loss days represent the number of days for which Markets recorded losses in total net revenue, which includes revenue related to both trading and non-trading positions. The loss days determined under this measure differ from the measure used to determine backtesting gains and losses. Daily backtesting gains and losses include positions in the Firm's Risk Management value-at-risk ("VaR") measure and exclude certain components of total net revenue, which may more than offset backtesting gains or losses on a particular day. For more information on daily backtesting gains and losses, refer to the VaR discussion on pages 143–145.
(c) In the fourth quarter of 2024, certain net funding costs that were previously allocated to Fixed Income Markets were reclassified to Equity Markets. Prior-period amounts have been revised to conform with the current presentation.

Selected metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)	2024	2023	2022
Assets under custody ("AUC") by asset class (period-end) (in billions):			
Fixed Income	**$ 16,409**	$ 15,543	$ 14,361
Equity	**14,848**	12,927	10,748
Other[a]	**4,023**	3,922	3,526
Total AUC	**$ 35,280**	$ 32,392	$ 28,635
Client deposits and other third-party liabilities (average)[b]	**$ 961,646**	$ 912,859	$ 981,653

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Client deposits and other third-party liabilities pertain to the Payments and Securities Services businesses.

International metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)		2024		2023		2022
Total net revenue[(a)]						
Europe/Middle East/Africa	**$**	**15,191**	$	14,418	$	15,716
Asia-Pacific		**8,867**		7,891		8,043
Latin America/Caribbean		**2,427**		2,161		2,288
Total international net revenue		**26,485**		24,470		26,047
North America		**43,629**		39,883		33,588
Total net revenue	**$**	**70,114**	$	64,353	$	59,635
Loans retained (period-end)[(a)]						
Europe/Middle East/Africa	**$**	**44,374**	$	44,793	$	40,715
Asia-Pacific		**16,107**		15,506		16,764
Latin America/Caribbean		**10,331**		8,610		8,866
Total international loans		**70,812**		68,909		66,345
North America		**412,231**		406,277		355,176
Total loans retained	**$**	**483,043**	$	475,186	$	421,521
Client deposits and other third-party liabilities (average)[(b)]						
Europe/Middle East/Africa	**$**	**264,227**	$	247,804	$	265,061
Asia-Pacific		**141,042**		135,388		136,539
Latin America/Caribbean		**42,716**		39,861		40,531
Total international	**$**	**447,985**	$	423,053	$	442,131
North America		**513,661**		489,806		539,522
Total client deposits and other third-party liabilities	**$**	**961,646**	$	912,859	$	981,653
AUC (period-end)[(b)] **(in billions)**						
North America	**$**	**23,845**	$	21,792	$	19,219
All other regions		**11,435**		10,600		9,416
Total AUC	**$**	**35,280**	$	32,392	$	28,635

(a) Total net revenue and loans retained (excluding loans held-for-sale and loans at fair value) are based on the location of the trading desk, booking location, or domicile of the client, as applicable.

(b) Client deposits and other third-party liabilities pertaining to the Payments and Securities Services businesses, and AUC, are based on the domicile of the client or booking location, as applicable.

Asset & Wealth Management, with client assets of $5.9 trillion, is a global leader in investment and wealth management.

Asset Management
Offers multi-asset investment management solutions across equities, fixed income, alternatives and money market funds to institutional and retail investors providing for a broad range of clients' investment needs.

Global Private Bank
Provides retirement products and services, brokerage, custody, estate planning, lending, deposits and investment management to high net worth clients.

The majority of AWM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2024	2023	2022
Revenue			
Asset management fees	**$13,693**	$11,826	$11,510
Commissions and other fees	**874**	697	$ 662
All other income	**456**	[(a)] 1,037	[(a)(b)] 335
Noninterest revenue	**15,023**	13,560	12,507
Net interest income	**6,555**	6,267	5,241
Total net revenue	**21,578**	19,827	17,748
Provision for credit losses	**(68)**	159	128
Noninterest expense			
Compensation expense	**7,984**	7,115	6,336
Noncompensation expense	**6,430**	5,665	5,493
Total noninterest expense	**14,414**	12,780	11,829
Income before income tax expense	**7,232**	6,888	5,791
Income tax expense	**1,811**	1,661	1,426
Net income	**$ 5,421**	$5,227	$4,365
Revenue by line of business			
Asset Management	**$10,175**	$ 9,129	$ 8,818
Global Private Bank	**11,403**	10,698	8,930
Total net revenue	**$21,578**	$19,827	$17,748
Financial ratios			
Return on equity	**34 %**	31 %	25 %
Overhead ratio	**67**	64	67
Pre-tax margin ratio:			
Asset Management	**31**	31	30
Global Private Bank	**35**	38	35
Asset & Wealth Management	**34**	35	33

(a) Includes the amortization of the fair value discount on certain acquired lending-related commitments associated with First Republic. The discount is deferred in other liabilities and recognized on a straight-line basis over the commitment period and was largely recognized in 2023 as the commitments were generally short term. Refer to Note 34 for additional information.
(b) Includes the gain on the original minority interest in CIFM upon the Firm's acquisition of the remaining 51% interest in the entity.

2024 compared with 2023

Net income was $5.4 billion, up 4%.

Net revenue was $21.6 billion, up 9%. Net interest income was $6.6 billion, up 5%. Noninterest revenue was $15.0 billion, up 11%.

Revenue from Asset Management was $10.2 billion, up 11%, driven by:

- higher asset management fees, reflecting higher average market levels and strong net inflows, as well as
- higher performance fees.

The prior year included a gain of $339 million on the original minority interest in CIFM upon the Firm's acquisition of the remaining 51% interest in the entity.

Revenue from Global Private Bank was $11.4 billion, up 7%, driven by:

- higher noninterest revenue, reflecting:
  - higher management fees on strong net inflows and higher average market levels, as well as higher brokerage fees,

  partially offset by

  - a decline in the amortization of the fair value discount on certain acquired lending-related commitments associated with First Republic that have expired, and
- higher net interest income driven by:
  - higher average deposits associated with First Republic, which were transferred to AWM from CCB in the fourth quarter of 2023, as well as wider spreads on loans and higher average loans,

  largely offset by

  - deposit margin compression reflecting higher rates paid.

The prior year included net investment valuation losses.

Noninterest expense was $14.4 billion, up 13%, predominantly driven by:

- higher compensation, including revenue-related compensation, and continued growth in private banking advisor teams, and
- higher distribution fees and legal expense,

The provision for credit losses was a net benefit of $68 million.

The provision in the prior year was $159 million, reflecting a $146 million addition to the allowance for credit losses to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

Asset Management has two high-level measures of its overall fund performance.

- **Percentage of active mutual fund and active ETF assets under management in funds rated 4- or 5-star:** Mutual fund rating services rank funds based on their risk adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. An overall Morningstar rating is derived from a weighted average of the performance associated with a fund's three-, five and ten-year (if applicable) Morningstar Rating metrics. For U.S.-domiciled funds, separate star ratings are provided at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from these rankings. All ratings, the assigned peer categories and the asset values used to derive these rankings are sourced from the applicable fund rating provider. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on star ratings at the share class level for U.S.-domiciled funds, and at a "primary share class" level to represent the star rating of all other funds, except for Japan, for which Nomura provides ratings at the fund level. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.
- **Percentage of active mutual fund and active ETF assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years)**:All quartile rankings, the assigned peer categories and the asset values used to derive these rankings are sourced from the fund rating providers. Quartile rankings are based on the net-of-fee absolute return of each fund. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on fund performance and associated peer rankings at the share class level for U.S.-domiciled funds, at a "primary share class" level to represent the quartile ranking for U.K., Luxembourg and Hong Kong SAR funds and at the fund level for all other funds. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.

"**Primary share class**" means the C share class for European funds and Acc share class for Hong Kong SAR and Taiwan funds. If these share classes are not available, the oldest share class is used as the primary share class.

Selected metrics

As of or for the year ended December 31, (in millions, except ranking data, ratios and employees)	**2024**	2023	2022
% of JPM mutual fund assets and ETFs rated as 4- or 5-star[a]	**69 %**	69 %	73 %
% of JPM mutual fund assets and ETFs ranked in 1st or 2nd quartile:[b]			
1 year	**73**	40	68
3 years	**75**	67	76
5 years	**77**	71	81
Selected balance sheet data (period-end)[c]			
Total assets	**$255,385**	$245,512	$232,037
Loans	**236,303**	227,929	214,006
Deposits	**248,287**	233,232 [d]	233,130
Equity	**15,500**	17,000	17,000
Selected balance sheet data (average)[c]			
Total assets	**$246,254**	$240,222	$232,438
Loans	**227,676**	220,487	215,582
Deposits	**235,146**	216,178 [d]	261,489
Equity	**15,500**	16,671	17,000
Employees	**29,403**	28,485	26,041
Number of Global Private Bank client advisors	**3,775**	3,515	3,137
Credit data and quality statistics[c]			
Net charge-offs/ (recoveries)	**$ 21**	$ 13	$ (7)
Nonaccrual loans	**700**	650	459
Allowance for credit losses:			
Allowance for loan losses	**$ 539**	$ 633	$ 494
Allowance for lending-related commitments	**35**	28	20
Total allowance for credit losses	**$ 574**	$ 661	$ 514
Net charge-off/(recovery) rate	**0.01 %**	0.01 %	— %
Allowance for loan losses to period-end loans	**0.23**	0.28	0.23
Allowance for loan losses to nonaccrual loans	**77**	97	108
Nonaccrual loans to period-end loans	**0.30**	0.29	0.21

(a) Represents the Morningstar Rating for all domiciled funds except for Japan domiciled funds which use Nomura. Includes only Asset Management retail active open-ended mutual funds and active ETFs that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.

(b) Quartile ranking sourced from Morningstar, Lipper and Nomura based on country of domicile. Includes only Asset Management retail active open-ended mutual funds and active ETFs that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.
(c) Loans, deposits and related credit data and quality statistics relate to the Global Private Bank business.
(d) In the fourth quarter of 2023, certain deposits associated with First Republic were transferred to AWM from CCB.

Client assets

2024 compared with 2023

Assets under management were $4.0 trillion and client assets were $5.9 trillion, each up 18%, driven by continued net inflows and higher market levels.

Client assets

December 31, (in billions)	2024	2023	2022
Assets by asset class			
Liquidity	**$ 1,083**	$ 926	$ 654
Fixed income	**851**	751	638
Equity	**1,128**	868	670
Multi-asset	**764**	680	603
Alternatives	**219**	197	201
Total assets under management	**4,045**	3,422	2,766
Custody/brokerage/ administration/deposits	**1,887**	1,590	1,282
Total client assets[a]	**$ 5,932**	$ 5,012	$ 4,048
Assets by client segment			
Private Banking	**$ 1,234**	$ 974	$ 751
Global Institutional	**1,692**	1,488	1,252
Global Funds	**1,119**	960	763
Total assets under management	**$ 4,045**	$ 3,422	$ 2,766
Private Banking	**$ 2,974**	$ 2,452	$ 1,964
Global Institutional	**1,820**	1,594	1,314
Global Funds	**1,138**	966	770
Total client assets[a]	**$ 5,932**	$ 5,012	$ 4,048

(a) Includes CCB client investment assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager.

Client assets (continued)

Year ended December 31, (in billions)	2024	2023	2022
Assets under management rollforward			
Beginning balance	**$ 3,422**	$ 2,766	$ 3,113
Net asset flows:			
Liquidity	**140**	242	(55)
Fixed income	**91**	70	13
Equity	**114**	70	35
Multi-asset	**19**	1	(9)
Alternatives	**10**	(1)	8
Market/performance/other impacts	**249**	274	(339)
Ending balance, December 31	**$ 4,045**	$ 3,422	$ 2,766
Client assets rollforward			
Beginning balance	**$ 5,012**	$ 4,048	$ 4,295
Net asset flows	**486**	490	49
Market/performance/other impacts	**434**	474	(296)
Ending balance, December 31	**$ 5,932**	$ 5,012	$ 4,048

Selected Metrics

	As of December 31,		
	2024	2023	Change
Firmwide Wealth Management			
Client assets (in billions)[a]	**$ 3,756**	$ 3,177	18 %
Number of client advisors	**9,530**	8,971	6
Stock Plan Administration[b]			
Number of stock plan participants (in thousands)	**1,327**	974	36
Client assets (in billions)	**$ 270**	$ 230	17 %

(a) Consists of Global Private Bank in AWM and client investment assets in J.P. Morgan Wealth Management in CCB.
(b) Relates to an equity plan administration business which was acquired in 2022 with the Firm's purchase of Global Shares. The increase in 2024 includes the impact of onboarding participants in the Firm's employee stock plans during the fourth quarter of 2024.

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2024	2023	2022
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 3,563**	$ 3,377	$ 3,240
Asia-Pacific	**2,023**	1,876	1,836
Latin America/Caribbean	**1,065**	985	967
Total international net revenue	**6,651**	6,238	6,043
North America	**14,927**	13,589	11,705
Total net revenue	**$ 21,578**	$ 19,827	$ 17,748
Assets under management			
Europe/Middle East/Africa	**$ 604**	$ 539	$ 487
Asia-Pacific	**302**	263	218
Latin America/Caribbean	**106**	86	69
Total international assets under management	**1,012**	888	774
North America	**3,033**	2,534	1,992
Total assets under management	**$ 4,045**	$ 3,422	$ 2,766
Client assets			
Europe/Middle East/Africa	**$ 841**	$ 740	$ 610
Asia-Pacific	**482**	406	331
Latin America/Caribbean	**254**	232	189
Total international client assets	**1,577**	1,378	1,130
North America	**4,355**	3,634	2,918
Total client assets	**$ 5,932**	$ 5,012	$ 4,048

(a) Regional revenue is based on the domicile of the client.

Corporate consists of Treasury and Chief Investment Office ("CIO") and Other Corporate. Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks.

Other Corporate includes staff functions and expense that is centrally managed as well as certain Firm initiatives and activities not solely aligned to a specific LOB. The major Other Corporate functions include Real Estate, Technology, Legal, Corporate Finance, Human Resources, Internal Audit, Risk Management, Compliance, Control Management, Corporate Responsibility and various Other Corporate groups.

Selected income statement and balance sheet data

Year ended December 31, (in millions, except employees)	2024		2023		2022
Revenue					
Principal transactions	**$ 152**		$ 302		$ (227)
Investment securities losses	**(1,020)**		(3,180)		(2,380)
All other income	**8,476**	(c)	3,010	(f)	809
Noninterest revenue	**7,608**		132		(1,798)
Net interest income	**9,786**		7,906		1,878
Total net revenue[(a)]	**17,394**		8,038		80
Provision for credit losses	**10**		171		22
Noninterest expense	**3,994**	(d)(e)	5,601	(e)(g)	1,034
Income/(loss) before income tax expense/(benefit)	**13,390**		2,266		(976)
Income tax expense/ (benefit)	**2,789**		(555)	(h)	(233)
Net income/(loss)	**$ 10,601**		$ 2,821		$ (743)
Total net revenue					
Treasury and CIO	**9,638**		6,072		(439)
Other Corporate	**7,756**		1,966		519
Total net revenue	**$ 17,394**		$ 8,038		$ 80
Net income/(loss)					
Treasury and CIO	**7,013**		4,206		(197)
Other Corporate	**3,588**	(e)	(1,385)	(e)	(546)
Total net income/ (loss)	**$ 10,601**		$ 2,821		$ (743)
Total assets (period-end)	**$1,323,967**		$1,348,437		$1,328,219
Loans (period-end)	**1,964**		1,924		2,181
Deposits[(b)]	**27,581**		21,826		14,203
Employees	**49,610**		47,530		44,196

(a) Included tax-equivalent adjustments, predominantly driven by tax-exempt income from municipal bonds, of $182 million, $211 million and $235 million for the years ended December 31, 2024, 2023 and 2022, respectively.
(b) Predominantly relates to the Firm's international consumer initiatives.
(c) Included the net gain related to Visa shares of $7.9 billion recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.
(d) Included a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.
(e) The first quarter of 2024 included an increase of $725 million to the FDIC special assessment reflecting the FDIC's revised estimate of Deposit Insurance Fund losses. The fourth quarter of 2023 included the $2.9 billion FDIC special assessment.
(f) Included the estimated bargain purchase gain of $2.8 billion for the year ended December 31, 2023 associated with the First Republic acquisition. Refer to Notes 6 and 34 for additional information.
(g) In the second quarter of 2023, substantially all of the expense associated with First Republic was reported in Corporate. Commencing in the third quarter of 2023, the expense was aligned to the appropriate LOBs.
(h) Income taxes associated with the First Republic acquisition were reflected in the estimated bargain purchase gain.

2024 compared with 2023

Net income was $10.6 billion, compared with $2.8 billion in the prior year.

Net revenue was $17.4 billion, compared with $8.0 billion in the prior year.

Net interest income was $9.8 billion, up 24%, driven by the impact of balance sheet actions, primarily reinvestments in the investment securities portfolio, partially offset by the net impact of rates.

Noninterest revenue was $7.6 billion, compared with $132 million in the prior year. Excluding the $7.9 billion net gain related to Visa shares recorded in the second quarter of 2024 and the prior-year $2.8 billion estimated bargain purchase gain associated with the First Republic acquisition, revenue was up $2.4 billion, predominantly driven by lower investment securities losses, primarily on sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio in Treasury and CIO.

Noninterest expense was $4.0 billion, down 29%, driven by:

- a lower FDIC special assessment,
- lower expense associated with the First Republic acquisition as the prior year expense in Corporate included individuals associated with First Republic who were not employees of the Firm until July 2023, and this expense was subsequently aligned to the appropriate LOBs starting in the third quarter of 2023, and
- lower legal expense,

partially offset by

- a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024, and
- higher costs associated with the Firm's international consumer initiatives.

The provision for credit losses was $10 million.

The provision in the prior year was $171 million, reflecting a net addition to the allowance for credit losses related to a single name exposure, which was subsequently charged off upon the restructuring of a loan.

Refer to Note 10 and Note 13 for additional information on the investment securities portfolio and the allowance for credit losses.

The current period income tax expense was driven by changes in the level and mix of income and expenses subject to U.S. federal and state and local taxes, including the impact of the net gain on Visa shares and the contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024, partially offset by benefits related to tax audit settlements.

Other Corporate includes the Firm's international consumer initiatives, which primarily consists of Chase U.K., Nutmeg, and an ownership stake in C6 Bank.

The deposits within Corporate relate to the Firm’s international consumer initiatives and have increased as a result of growth in client accounts, reflecting the impact of additional product offerings.

Treasury and CIO overview

Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's three reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury and CIO seeks to achieve the Firm's asset-liability management objectives generally by investing in high quality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also uses derivatives to meet the Firm's asset-liability management objectives. Refer to Note 5 for further information on derivatives. In addition, Treasury and CIO manages the Firm's cash position primarily through deposits at central banks and investments in short-term instruments. Refer to Liquidity Risk Management on pages 108–115 for further information on liquidity and funding risk. Refer to Market Risk Management on pages 141–149 for information on interest rate and foreign exchange risks.

The investment securities portfolio predominantly consists of U.S. and non-U.S. government securities, U.S. GSE and government agency and nonagency mortgage-backed securities, collateralized loan obligations, obligations of U.S. states and municipalities and other ABS. At December 31, 2024, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $678.3 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and, where not available, based primarily upon internal risk ratings). Refer to Note 10 for further information on the Firm's investment securities portfolio and internal risk ratings.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2024	2023	2022
Investment securities losses	**$ (1,020)**	$ (3,180)	$ (2,380)
Available-for-sale securities (average)	**$287,260**	$200,708	$239,924
Held-to-maturity securities (average)[(a)]	**321,384**	402,010	412,180
Investment securities portfolio (average)	**$608,644**	$ 602,718	$ 652,104
Available-for-sale securities (period-end)	**$403,796**	$ 199,354	$ 203,981
Held-to-maturity securities (period–end)[(a)]	**274,468**	369,848	425,305
Investment securities portfolio, net of allowance for credit losses (period–end)[(b)]	**$678,264**	$569,202	$629,286

(a) Effective January 1, 2023, the Firm adopted the portfolio layer method hedge accounting guidance. As permitted by the guidance, the Firm elected to transfer $7.1 billion of investment securities from HTM to AFS. During 2022, the Firm transferred $78.3 billion of investment securities from AFS to HTM for capital management purposes. Refer to Note 1 and Note 10 for additional information on the portfolio layer method hedge accounting guidance.

(b) As of December 31, 2024, 2023 and 2022, the allowance for credit losses on investment securities was $105 million, $94 million and $67 million, respectively.

Risk is an inherent part of JPMorganChase's business activities. When the Firm extends a consumer or wholesale loan, advises customers and clients on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its business, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors, and protecting the safety and soundness of the Firm.

The Firm believes that effective risk management requires, among other things:

- Acceptance of responsibility, including identification and escalation of risks by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management within each of the LOBs and Corporate; and
- A Firmwide risk governance and oversight structure.

The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent oversight by the Board of Directors (the "Board"). The impact of risk and control issues is carefully considered in the Firm's performance evaluation and incentive compensation processes.

Risk governance framework

The Firm's risk governance framework involves understanding drivers of risks, types of risks and impacts of risks.



Drivers of risks are factors that cause a risk to exist. Drivers of risks include the economic environment, regulatory or government policy, competitor or market evolution, business decisions, process or judgment error, deliberate wrongdoing, dysfunctional markets and natural disasters.

Types of risks are categories by which risks manifest themselves. The Firm's risks are generally categorized in the following four risk types:

- Strategic risk is the risk to earnings, capital, liquidity or reputation associated with poorly-designed or failed business plans or an inadequate response to changes in the operating environment.
- Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk and investment portfolio risk.
- Market risk is the risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.
- Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes or systems; human factors; or external events impacting the Firm's processes or systems. Operational risk includes cybersecurity, compliance, conduct, legal, and estimations and model risk.

Impacts of risks are consequences of risks, both quantitative and qualitative. There may be many consequences when risks manifest themselves, including quantitative impacts such as a reduction in earnings and capital, liquidity outflows, and fines or penalties, or qualitative impacts such as damage to the Firm's reputation, loss of clients and customers, and regulatory and enforcement actions.

The Firm's risk governance framework is managed on a Firmwide basis. The Firm has an Independent Risk Management ("IRM") function, which is comprised of Risk Management and Compliance. The Firm's Chief Executive Officer ("CEO") appoints, subject to approval by the Risk Committee of the Board of Directors (the "Board Risk Committee"), the Firm's Chief Risk Officer ("CRO") to lead the IRM function and maintain the risk governance framework of the Firm. The framework is subject to approval by the Board Risk Committee through its review and approval of the Risk Governance and Oversight Policy.

The Firm's CRO oversees and delegates authority to the Firmwide Risk Executives ("FREs"), the Chief Risk Officers of the LOBs and Corporate ("LOB CROs"), and the Firm's Chief Compliance Officer ("CCO"), who, in turn, establish Risk Management and Compliance organizations, develop the Firm's risk governance policies and standards, and define and oversee the implementation of the Firm's risk governance framework. The LOB CROs oversee risks that arise in their LOBs and Corporate, while FREs oversee risks that span across the LOBs and Corporate, as well as functions and regions. Each area of the Firm that gives rise to risk is expected to operate within the parameters identified by the IRM function, and within the risk and control standards established by its own management.

Three lines of defense

The Firm's "three lines of defense" are as follows:

The first line of defense consists of each LOB, Treasury and CIO, and certain Other Corporate initiatives, including their aligned Operations, Technology and Control Management. The first line of defense owns the risks, and identification of risks, associated with their respective activities and the design and execution of controls to manage those risks. Responsibilities also include adherence to applicable laws, rules and regulations and implementation of the risk governance framework established by IRM, which may include policies, standards, limits, thresholds and controls.

The second line of defense is the IRM function, which is separate from the first line of defense and is responsible for independently measuring risk, as well as assessing and challenging the risk management activities of the first line of defense. IRM is also responsible for the identification of risks within its organization, its own adherence to applicable laws, rules and regulations and for the development and implementation of policies and standards with respect to its own processes.

The third line of defense is Internal Audit, an independent function that provides objective assessment of the adequacy and effectiveness of Firmwide processes, controls, governance and risk management. The Internal Audit function is led by the General Auditor, who reports to the Audit Committee and administratively to the CEO.

In addition, there are other functions that contribute to the Firmwide control environment but are not considered part of a particular line of defense, including Corporate Finance, Human Resources and Legal. These other functions are responsible for the identification of risks within their respective organizations, adherence to applicable laws, rules and regulations and implementation of the risk governance framework established by IRM.

Risk identification and ownership

The LOBs and Corporate are responsible for the identification of risks within their respective organizations, as well as the design and execution of controls, including IRM-specified controls, to manage those risks. To support this activity, the Firm has a risk identification framework designed to facilitate the responsibility of each LOB and Corporate to identify material risks inherent to the Firm's businesses and operational activities, catalog them in a central repository and review material risks on a regular basis. The IRM function reviews and challenges the risks identified by each LOB and Corporate, maintains the central repository and provides the consolidated Firmwide results to the Firmwide Risk Committee ("FRC") and the Board Risk Committee.

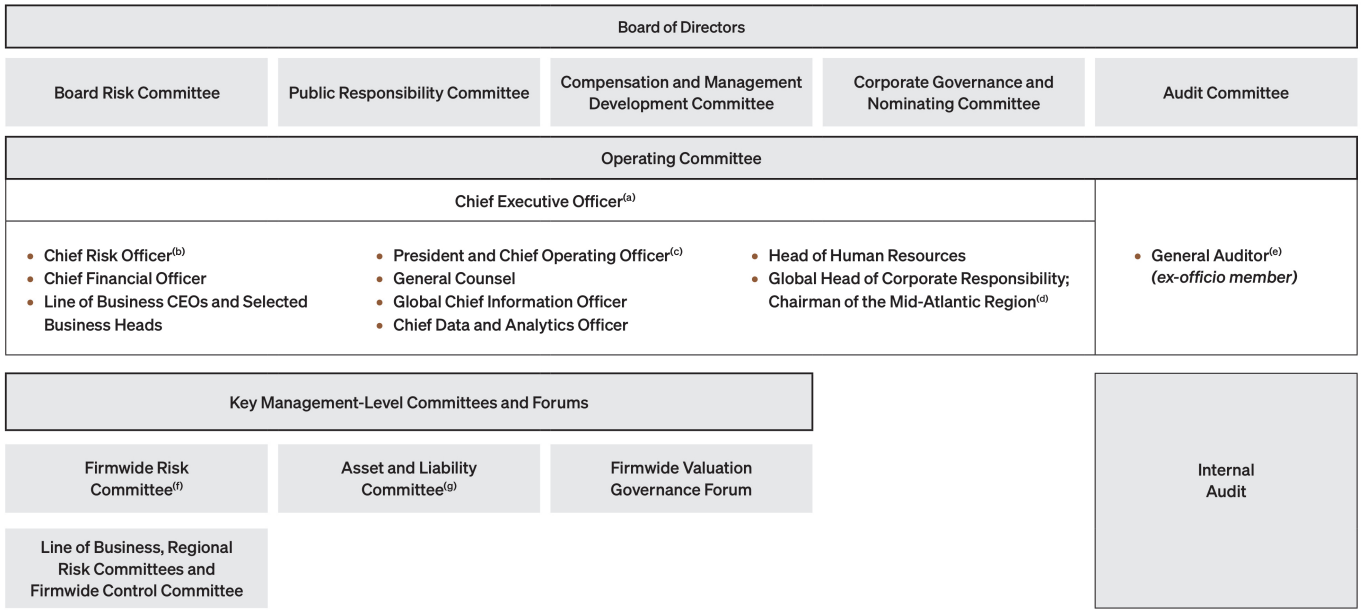
Risk appetite

The Firm's overall appetite for risk is governed by Risk Appetite frameworks for quantitative and qualitative risks. The Firm's risk appetite is periodically set and approved by senior management (including the CEO and CRO) and approved by the Board Risk Committee. Quantitative and qualitative risks are assessed to monitor and measure the Firm's capacity to take risk consistent with its stated risk appetite. Risk appetite results are reported to the Board Risk Committee.

Risk governance and oversight structure

The independent status of the IRM function is supported by a risk governance and oversight structure that provides channels for the escalation of risks and issues to senior management, the FRC and the Board of Directors, as appropriate.

The chart below illustrates the principal standing committees of the Board of Directors and key senior management-level committees in the Firm's risk governance and oversight structure. In addition, there are other committees, forums and channels of escalation that support the oversight of risk that are not shown in the chart below or described in this Form 10-K.



(a) The Firm's CEO is also the Chairman of the Board of Directors.
(b) The Firm's CRO reports to the Firm's CEO and the Board Risk Committee. The Firm's CRO may escalate directly to the Board of Directors (including its committees), as appropriate.
(c) Effective January 14, 2025, the co-CEO of the Commercial & Investment Bank became a Chief Operating Officer of the Firm. Refer to Recent events on page 57 for further information.
(d) Effective February 12, 2024, the Global Head of Corporate Responsibility and Chairman of the Mid-Atlantic Region became a member of the Operating Committee.
(e) The Firm's General Auditor reports to the Audit Committee and administratively to the Firm's CEO.
(f) The Firmwide Risk Committee escalates to the Board Risk Committee, as appropriate.
(g) The Asset and Liability Committee escalates to the Firm's CEO or the Board of Directors (including its committees), as appropriate.

The Firm's Operating Committee, which consists of the Firm's CEO, CRO, Chief Financial Officer ("CFO"), General Counsel, CEOs of the LOBs and other senior executives, is accountable to and may refer matters to the Firm's Board of Directors. The Operating Committee and certain other members of senior management are responsible for escalating to the Board the information necessary to facilitate the Board's exercise of its duties.

Board oversight

The Firm's Board of Directors actively oversees the business and affairs of the Firm. This includes monitoring the Firm's financial performance and condition and reviewing the strategic objectives and plans of the Firm. The Board carries out a significant portion of its oversight responsibilities through its principal standing committees, each of which consists solely of independent members of the Board. The Board Risk Committee is the principal committee that oversees risk matters. The Audit Committee oversees the control environment, and the Compensation & Management Development Committee oversees compensation and other management-related matters. Each committee of the Board oversees reputation risks, conduct risks, and environmental, social and governance ("ESG") matters within its scope of responsibility.

The JPMorgan Chase Bank, N.A. Board of Directors is responsible for the oversight of management of the bank, which it discharges both acting directly and through the principal standing committees of the Firm's Board of Directors. Risk and control oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the Board Risk Committee and the Audit Committee, respectively, and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee.

The Board Risk Committee assists the Board in its oversight of management's responsibility to implement a global risk management framework reasonably designed to identify, assess and manage the Firm's risks. The Board Risk Committee's responsibilities include approval of applicable primary risk policies and review of certain associated frameworks, analysis and reporting established by

management. Breaches in risk appetite and parameters, issues that may have a material adverse impact on the Firm, including capital and liquidity issues, and other significant risk-related matters are escalated to the Board Risk Committee, as appropriate.

The Audit Committee assists the Board in its oversight of management's responsibilities to ensure that there is an effective system of controls reasonably designed to safeguard the Firm's assets and income, ensure the integrity of the Firm's financial statements, and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations. It also assists the Board in its oversight of the qualifications, independence and performance of the Firm's independent registered public accounting firm, and of the performance of the Firm's Internal Audit function.

The Compensation & Management Development Committee ("CMDC") assists the Board in its oversight of the Firm's compensation principles and practices. The CMDC reviews and approves the Firm's compensation and qualified benefits programs. The Committee reviews the performance of Operating Committee members against their goals, and approves their compensation awards. In addition, the CEO's compensation award is subject to ratification by the independent directors of the Board. The CMDC also reviews the development of and succession for key executives. As part of the Board's role of reinforcing, demonstrating and communicating the "tone at the top," the CMDC oversees the Firm's culture, including reviewing updates from management regarding significant conduct issues and any related actions with respect to employees, including compensation actions.

The Public Responsibility Committee oversees and reviews the Firm's positions and practices on public responsibility matters such as community investment, fair lending, sustainability, consumer practices and other public policy issues that reflect the Firm's values and character and could impact the Firm's reputation among its stakeholders. The Committee also provides guidance on these matters to management and the Board, as appropriate.

The Corporate Governance & Nominating Committee exercises general oversight with respect to the governance of the Board of Directors. It reviews the qualifications of and recommends to the Board proposed nominees for election to the Board. The Committee evaluates and recommends to the Board corporate governance practices applicable to the Firm. It also reviews the framework for assessing the Board's performance and self-evaluation.

Management oversight

The Firm's senior management-level committees that are primarily responsible for key risk-related functions include:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level risk committee. It oversees the risks inherent in the Firm's business and provides a forum for discussion of risk-related and other topics and issues that are raised or escalated by its members and other committees.

The Firmwide Control Committee ("FCC") is an escalation committee for senior management to review and discuss the Firmwide compliance and operational risk environment, including identified issues, compliance and operational risk metrics and significant events that have been escalated.

Line of Business and Regional Risk Committees are responsible for overseeing the governance, limits and controls that have been established within the scope of their respective activities. These committees review the ways in which the particular LOB or the businesses operating in a particular region could be exposed to adverse outcomes, with a focus on identifying, accepting, escalating and/or requiring remediation of matters brought to these committees.

Line of Business and Corporate Function Control Committees oversee the risk and control environment of their respective business or function, inclusive of Operational Risk, Compliance and Conduct Risks. As part of that mandate, they are responsible for reviewing indicators of elevated or emerging risks and other data that may impact the level of compliance and operational risk in a business or function, addressing key compliance and operational risk issues, with an emphasis on processes with control concerns, and overseeing control remediation.

The Asset and Liability Committee ("ALCO") is responsible for overseeing the Firm's asset and liability management ("ALM"), including the activities and frameworks supporting management of the balance sheet, liquidity risk, interest rate risk and capital risk.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm.

Risk governance and oversight functions

The Firm monitors and measures its risk through risk governance and oversight functions. The scope of a particular function or business activity may include one or more drivers, types and/or impacts of risk. For example, Country Risk Management oversees country risk which may be a driver of risk or an aggregation of exposures that could give rise to multiple risk types such as credit or market risk.

The following sections discuss the risk governance and oversight functions that have been established to oversee the risks inherent in the Firm's business activities.

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STRATEGIC RISK MANAGEMENT

Strategic risk is the risk to earnings, capital, liquidity or reputation associated with poorly-designed or failed business plans or an inadequate response to changes in the operating environment.

Management and oversight

The Operating Committee, together with the senior leadership of each LOB and Corporate, are responsible for managing the Firm's most significant strategic risks. IRM engages regularly in strategic business discussions and decision-making, including participation in relevant business reviews and senior management meetings, risk and control committees and other relevant governance forums, and review of acquisitions and new business initiatives. The Board of Directors oversees management's strategic decisions, and the Board Risk Committee oversees IRM and the Firm's risk governance framework.

In the process of developing business plans and strategic initiatives, LOB and Corporate senior management identify the associated risks that are incorporated into the Firmwide Risk Identification framework and their impact on risk appetite.

In addition, IRM conducts a qualitative assessment of the LOB and Corporate strategic initiatives to assess their impact on the risk profile of the Firm.

The Firm's strategic planning process, which includes the development of the Firm's strategic plan and other strategic initiatives, is one component of managing the Firm's strategic risk. The strategic plan outlines the Firm's strategic framework and initiatives, and includes components such as budget, risk appetite, capital, earnings and asset-liability management objectives. Guided by the Firm's Business Principles, the Operating Committee and senior management teams in each LOB and Corporate review and update the strategic plan periodically, including evaluating the strategic framework and performance of strategic initiatives, assessing the operating environment, refining existing strategies and developing new strategies.

The Firm's strategic plan, together with IRM's assessment, are provided to the Board as part of its review and approval of the Firm's strategic plan, and the plan is also reflected in the Firm's budget.

The Firm's balance sheet strategy, which focuses on risk-adjusted returns, strong capital and robust liquidity, is also a component in the management of strategic risk. Refer to Capital Risk Management on pages 97–107 for further information on capital risk. Refer to Liquidity Risk Management on pages 108–115 for further information on liquidity risk. Refer to Reputation Risk Management on page 116 for further information on reputation risk.

Capital risk is the risk that the Firm has an insufficient level or composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions.

A strong capital position is essential to the Firm's business strategy and competitive position. Maintaining a strong balance sheet to manage through economic volatility is a strategic imperative of the Firm's Board of Directors, CEO and Operating Committee. The Firm's "fortress balance sheet" philosophy focuses on risk-adjusted returns, strong capital and robust liquidity. The Firm's capital risk management strategy focuses on maintaining long-term stability to enable the Firm to build and invest in market-leading businesses, including in highly stressed environments. Senior management considers the implications on the Firm's capital prior to making significant decisions that could impact future business activities. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to ensuring the Firm's capital strength.

Capital risk management

The Firm has a Capital Risk Management function whose primary objective is to provide independent oversight of capital risk across the Firm.

Capital Risk Management's responsibilities include:

- Defining, monitoring and reporting capital risk metrics;
- Establishing, calibrating and monitoring capital risk limits and indicators, including capital risk appetite;
- Developing processes to classify, monitor and report capital limit breaches;
- Performing assessments of the Firm's capital management activities, including changes made to the Contingency Capital Plan described below; and
- Conducting assessments of the Firm's regulatory capital framework intended to ensure compliance with applicable regulatory capital rules.

Capital management

Treasury and CIO is responsible for capital management.

The primary objectives of the Firm's capital management are to:

- Maintain sufficient capital in order to continue to build and invest in the Firm's businesses through normal economic cycles and in stressed environments;
- Retain flexibility to take advantage of future investment opportunities;
- Promote the Parent Company's ability to serve as a source of strength to its subsidiaries;
- Ensure the Firm operates above the minimum regulatory capital ratios as well as maintain "well-capitalized" status for the Firm and its principal insured depository institution ("IDI") subsidiary, JPMorgan Chase Bank, N.A., at all times under applicable regulatory capital requirements;
- Meet capital distribution objectives; and
- Maintain sufficient capital resources to operate throughout a resolution period in accordance with the Firm's preferred resolution strategy.

The Firm addresses these objectives through:

- Establishing internal minimum capital requirements and maintaining a strong capital governance framework. The internal minimum capital levels consider the Firm's regulatory capital requirements as well as an internal assessment of capital adequacy, in normal economic cycles and in stress events;
- Retaining flexibility in order to react to a range of potential events; and
- Regularly monitoring the Firm's capital position and following prescribed escalation protocols, both at the Firm and material legal entity levels.

Governance

Committees responsible for overseeing the Firm's capital management include the Capital Governance Committee, the Firmwide ALCO as well as regional ALCOs, and the CIO, Treasury and Corporate ("CTC") Risk Committee. In addition, the Board Risk Committee periodically reviews the Firm's capital risk tolerance. Refer to Firmwide Risk Management on pages 91–95 for additional discussion of the Firmwide ALCO and other risk-related committees.

Capital planning and stress testing

Comprehensive Capital Analysis and Review

The Federal Reserve requires the Firm, as a large Bank Holding Company ("BHC"), to submit at least annually a capital plan that has been reviewed and approved by the Board of Directors. The Federal Reserve uses Comprehensive Capital Analysis and Review ("CCAR") and other stress testing processes to assess whether large BHCs, such as the Firm, have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each BHC's unique risks to enable it to absorb losses under certain stress scenarios. Through CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes ("ICAAP"), as well as its plans to make capital distributions, such as dividend payments or stock repurchases. The Federal

Reserve uses results under the severely adverse scenario from its supervisory stress test to determine each firm's Stress Capital Buffer ("SCB") requirement for the coming year.

The Firm's current SCB requirement is 3.3% and will remain in effect until September 30, 2025. The Firm's Standardized CET1 capital ratio requirement, including regulatory buffers, was 12.3% as of December 31, 2024.

Refer to Capital actions on page 105 for information on actions taken by the Firm's Board of Directors.

Internal Capital Adequacy Assessment Process
Annually, the Firm prepares the ICAAP, which informs the Board of Directors of the ongoing assessment of the Firm's processes for managing the sources and uses of capital as well as compliance with supervisory expectations for capital planning and capital adequacy. The Firm's ICAAP integrates stress testing protocols with capital planning. The Firm's Audit Committee is responsible for reviewing and approving the capital planning framework.

Stress testing assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. In addition to CCAR and other periodic stress testing, management also considers tailored stress scenarios and sensitivity analyses, as necessary.

Contingency Capital Plan

The Firm's Contingency Capital Plan establishes the capital management framework for the Firm and specifies the principles underlying the Firm's approach towards capital management in normal economic conditions and in stressed environments. The Contingency Capital Plan defines how the Firm calibrates its targeted capital levels and meets minimum capital requirements, monitors the ongoing appropriateness of planned capital distributions, and sets out the capital contingency actions that are expected to be taken or considered at various levels of capital depletion during a period of stress.

Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the Firm as a consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar minimum capital requirements and standards for the Firm's principal IDI subsidiary, JPMorgan Chase Bank, N.A. The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time.

Basel III Overview
The capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. BHCs and banks, including the Firm and JPMorgan Chase Bank, N.A. The minimum amount of regulatory capital that must be held by BHCs and banks is determined by calculating RWA, which are on-balance sheet assets and off-balance sheet exposures, weighted according to risk. Under the rules currently in effect, two comprehensive approaches are prescribed for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced").

For each of these risk-based capital ratios, the capital adequacy of the Firm is evaluated against the lower of the Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements.

The current Basel III rules establish capital requirements for calculating credit risk RWA and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is generally calculated consistently between Basel III Standardized and Basel III Advanced. In addition to the RWA calculated under these approaches, the Firm may supplement such amounts to incorporate management judgment and feedback from its regulators.

As of December 31, 2024, the Firm's Basel III Standardized ratios risk-based ratios were more binding than the Basel III Advanced risk-based ratios.

Additionally, Basel III requires that Advanced Approaches banking organizations, including the Firm, calculate their SLRs.

Refer to page 104 for additional information on SLR.

Key Regulatory Developments

U.S. Basel III Finalization

In July 2023, the Federal Reserve, the OCC and the FDIC released a proposal to amend the risk-based capital framework, entitled "Regulatory capital rule: Amendments applicable to large banking organizations and to banking organizations with significant trading activity", which is referred to in this Form 10-K as the "U.S. Basel III proposal". Under this proposal, changes to the framework would include replacement of the Advanced approach with an expanded risk-based approach for the calculation of RWA. In addition, the stress capital buffer requirement would be applicable to both the expanded risk-based approach and the Standardized approach.

GSIB Surcharge and TLAC and Eligible LTD Requirements

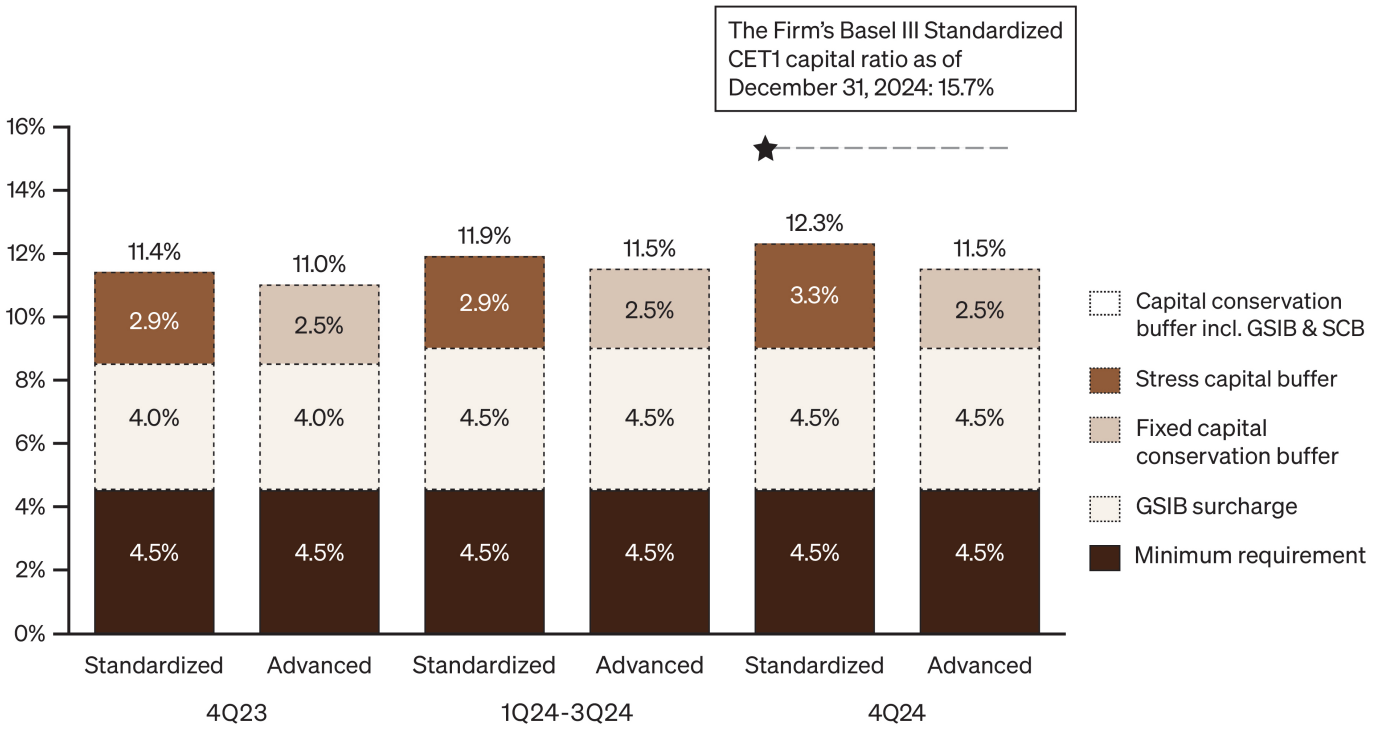
In July 2023, the Federal Reserve released a proposal to amend the calculation of the GSIB surcharge. Under the proposal, the annual GSIB surcharge would be based on an average of the quarterly surcharge calculations throughout the calendar year, with daily averaging required for certain measures. The proposal would also reduce surcharge increments from 50 bps to 10 bps and includes other technical amendments to the “Method 2” calculation. The proposed changes would revise risk-based capital requirements for the Firm and other U.S. GSIBs. Refer to Risk-based Capital Regulatory Requirements on page 100 for further information on the GSIB surcharge.

Additionally, in August 2023, the Federal Reserve, the FDIC and the OCC released a proposal to expand the eligible long-term debt ("eligible LTD") and clean holding company requirements under the existing total loss-absorbing capacity ("TLAC") rule to apply to non-GSIB banks with $100 billion or more in total consolidated assets. The proposal would also reduce the amount of LTD with remaining maturities of less than two years that count towards a U.S. GSIB's TLAC requirement and expand the existing capital deduction framework for LTD issued by GSIBs to include LTD issued by non-GSIB banks subject to the LTD requirements.

Finalization of the above proposals, including the required implementation dates, is uncertain. The Firm continues to monitor developments and potential impacts.

Risk-based Capital Regulatory Requirements

The following chart presents the Firm's Basel III CET1 capital ratio requirements under the Basel III rules currently in effect.



All banking institutions are currently required to have a minimum CET1 capital ratio of 4.5% of risk-weighted assets.

Certain banking organizations, including the Firm, are required to hold additional levels of capital to serve as a "capital conservation buffer". The capital conservation buffer incorporates a GSIB surcharge, a discretionary countercyclical capital buffer and a fixed capital conservation buffer of 2.5% for Advanced regulatory capital requirements, as well as a variable SCB requirement, floored at 2.5%, for Standardized regulatory capital requirements.

Under the Federal Reserve's GSIB rule, the Firm is required to assess its GSIB surcharge on an annual basis under two separately prescribed methods based on data for the previous fiscal year-end, and is subject to the higher of the two. "Method 1" reflects the GSIB surcharge as prescribed by the Basel Committee's assessment methodology, and is calculated across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. "Method 2" modifies the Method 1 requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor".

The following table presents the Firm's effective GSIB surcharge for the years ended December 31, 2024 and 2023. For 2025, the Firm's effective regulatory minimum GSIB surcharge calculated under both Method 1 and Method 2 remains unchanged at 2.5% and 4.5%, respectively.

	2024	2023
Method 1	2.5 %	2.5 %
Method 2	4.5 %	4.0 %

The U.S. federal regulatory capital standards include a framework for setting a discretionary countercyclical capital buffer taking into account the macro financial environment in which large, internationally active banks function. As of December 31, 2024, the U.S. countercyclical capital buffer remained at 0%. The Federal Reserve will continue to review the buffer at least annually. The buffer can be increased if the Federal Reserve, the FDIC and the OCC determine that systemic risks are meaningfully above normal and can be calibrated up to an additional 2.5% of RWA subject to a 12-month implementation period.

Failure to maintain regulatory capital equal to or in excess of the risk-based regulatory capital minimum plus the capital conservation buffer (inclusive of the GSIB surcharge) and any countercyclical buffer will result in limitations to the amount of capital that the Firm may distribute, such as through dividends and common share repurchases, as well as on discretionary bonus payments for certain executive officers.

Total Loss-Absorbing Capacity
The Federal Reserve's TLAC rule requires the U.S. GSIB top-tier holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible LTD. Refer to TLAC on page 106 for additional information.

Leverage-based Capital Regulatory Requirements
Supplementary leverage ratio
Banking organizations subject to the Basel III Advanced approach are currently required to have a minimum SLR of 3.0%. Certain banking organizations, including the Firm, are also required to hold an additional 2.0% leverage buffer. The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, as defined in regulatory capital rules. Refer to SLR on page 104 for additional information.

Failure to maintain an SLR equal to or greater than the regulatory requirement will result in limitations on the amount of capital that the Firm may distribute such as through dividends and common share repurchases, as well as on discretionary bonus payments for certain executive officers.

Other regulatory capital
In addition to meeting the capital ratio requirements of Basel III, the Firm and its principal IDI subsidiary, JPMorgan Chase Bank, N.A., must also maintain minimum capital and leverage ratios in order to be "well-capitalized" under the regulations issued by the Federal Reserve and the Prompt Corrective Action requirements of the FDIC Improvement Act, respectively. Refer to Note 27 for additional information.

Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 27. Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for further information on the Firm's current capital measures.

Selected capital and RWA data

The following tables present the Firm's risk-based capital metrics under both the Basel III Standardized and Advanced approaches and leverage-based capital metrics. Refer to Note 27 for JPMorgan Chase Bank, N.A.'s risk-based and leverage-based capital metrics. First Republic Bank was not subject to Advanced approach regulatory capital requirements. As a result, for certain exposures associated with the First Republic acquisition, Advanced RWA and any impact on Advanced Total capital is calculated under the Standardized approach as permitted by the transition provisions in the U.S. capital rules. Refer to Note 34 for additional information on the First Republic acquisition.

	Standardized			Advanced		
(in millions, except ratios)	**December 31, 2024**	December 31, 2023	Capital ratio requirements[b]	**December 31, 2024**	December 31, 2023	Capital ratio requirements[b]
Risk-based capital metrics:[a]						
CET1 capital	**$ 275,513**	$ 250,585		**$ 275,513**	$ 250,585	
Tier 1 capital	**294,881**	277,306		**294,881**	277,306	
Total capital	**325,589**	308,497		**311,898**[c]	295,417[c]	
Risk-weighted assets	**1,757,460**	1,671,995		**1,740,429**[c]	1,669,156[c]	
CET1 capital ratio	**15.7 %**	15.0 %	**12.3 %**	**15.8 %**	15.0 %	**11.5 %**
Tier 1 capital ratio	**16.8**	16.6	**13.8**	**16.9**	16.6	**13.0**
Total capital ratio	**18.5**	18.5	**15.8**	**17.9**	17.7	**15.0**

(a) The capital metrics reflect the CECL capital transition provisions. As of December 31, 2024, CET1 capital reflected the remaining $720 million CECL benefit and were fully phased in as of January 1, 2025; as of December 31, 2023, CET1 capital reflected a $1.4 billion benefit. Refer to Note 27 for additional information.
(b) Represents minimum requirements and regulatory buffers applicable to the Firm for the period ended December 31, 2024. For the period ended December 31, 2023, the Basel III Standardized CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were 11.4%, 12.9%, and 14.9%, respectively; the Basel III Advanced CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were 11.0%, 12.5%, and 14.5%, respectively. Refer to Note 27 for additional information.
(c) Includes the impacts of certain assets associated with First Republic to which the Standardized approach has been applied as permitted by the transition provisions in the U.S. capital rules.

Three months ended (in millions, except ratios)	**December 31, 2024**	December 31, 2023	Capital ratio requirements[c]
Leverage-based capital metrics:[a]			
Adjusted average assets[b]	**$ 4,070,499**	$ 3,831,200	
Tier 1 leverage ratio	**7.2 %**	7.2 %	**4.0 %**
Total leverage exposure	**$ 4,837,568**	$ 4,540,465	
SLR	**6.1 %**	6.1 %	**5.0 %**

(a) The capital metrics reflect the CECL capital transition provisions. Refer to Note 27 for additional information.
(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.
(c) Represents minimum requirements and regulatory buffers applicable to the Firm. Refer to Note 27 for additional information.

Capital components

The following table presents reconciliations of total stockholders' equity to Basel III CET1 capital, Tier 1 capital and Total capital as of December 31, 2024 and 2023.

(in millions)	December 31, 2024	December 31, 2023
Total stockholders' equity	**$ 344,758**	$ 327,878
Less: Preferred stock	20,050	27,404
Common stockholders' equity	**324,708**	300,474
Add:		
Certain deferred tax liabilities[(a)]	2,943	2,996
Other CET1 capital adjustments[(b)]	4,499	4,717
Less:		
Goodwill[(c)]	53,763	54,377
Other intangible assets	2,874	3,225
Standardized/Advanced CET1 capital	**275,513**	250,585
Add: Preferred stock	20,050	27,404
Less: Other Tier 1 adjustments	682	683
Standardized/Advanced Tier 1 capital	**$ 294,881**	$ 277,306
Long-term debt and other instruments qualifying as Tier 2 capital	$ 10,312	$ 11,779
Qualifying allowance for credit losses[(d)]	20,992	20,102
Other	(596)	(690)
Standardized Tier 2 capital	**$ 30,708**	$ 31,191
Standardized Total capital	**$ 325,589**	$ 308,497
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital[(e)(f)]	(13,691)	(13,080)
Advanced Tier 2 capital	**$ 17,017**	$ 18,111
Advanced Total capital	**$ 311,898**	$ 295,417

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating CET1 capital.

(b) As of December 31, 2024 and 2023, included a net benefit associated with cash flow hedges and debit valuation adjustments ("DVA") related to structured notes recorded in AOCI of $5.2 billion and $4.3 billion and the benefit from the CECL capital transition provisions of $720 million and $1.4 billion, respectively.

(c) Goodwill deducted from capital includes goodwill associated with equity method investments in nonconsolidated financial institutions based on regulatory requirements. Refer to page 140 for additional information on principal investment risk.

(d) Represents the allowance for credit losses eligible for inclusion in Tier 2 capital up to 1.25% of credit risk RWA, including the impact of the CECL capital transition provision with any excess deducted from RWA. Refer to Note 27 for additional information on the CECL capital transition.

(e) Represents an adjustment to qualifying allowance for credit losses for the excess of eligible credit reserves over expected credit losses up to 0.6% of credit risk RWA, including the impact of the CECL capital transition provision with any excess deducted from RWA.

(f) As of December 31, 2024 and 2023, included an incremental $541 million and $655 million allowance for credit losses, respectively, on certain assets associated with First Republic to which the Standardized approach has been applied, as permitted by the transition provisions in the U.S. capital rules.

Capital rollforward

The following table presents the changes in Basel III CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2024.

Year ended December 31, (in millions)	2024
Standardized/Advanced CET1 capital at December 31, 2023	$ 250,585
Net income applicable to common equity	57,212
Dividends declared on common stock	(13,786)
Net purchase of treasury stock	(17,801)
Changes in additional paid-in capital	783
Changes related to AOCI applicable to capital:	
Unrealized gains/(losses) on investment securities	(87)
Translation adjustments, net of hedges[(a)]	(858)
Fair value hedges	(87)
Defined benefit pension and other postretirement employee benefit ("OPEB") plans	(63)
Changes related to other CET1 capital adjustments[(b)]	(385)
Change in Standardized/Advanced CET1 capital	24,928
Standardized/Advanced CET1 capital at December 31, 2024	**$ 275,513**
Standardized/Advanced Tier 1 capital at December 31, 2023	$ 277,306
Change in CET1 capital[(b)]	24,928
Net redemptions of noncumulative perpetual preferred stock	(7,354)
Other	1
Change in Standardized/Advanced Tier 1 capital	17,575
Standardized/Advanced Tier 1 capital at December 31, 2024	**$ 294,881**
Standardized Tier 2 capital at December 31, 2023	$ 31,191
Change in long-term debt and other instruments qualifying as Tier 2	(1,467)
Change in qualifying allowance for credit losses[(b)]	890
Other	94
Change in Standardized Tier 2 capital	(483)
Standardized Tier 2 capital at December 31, 2024	**$ 30,708**
Standardized Total capital at December 31, 2024	**$325,589**
Advanced Tier 2 capital at December 31, 2023	$ 18,111
Change in long-term debt and other instruments qualifying as Tier 2	(1,467)
Change in qualifying allowance for credit losses[(b)(c)]	279
Other	94
Change in Advanced Tier 2 capital	(1,094)
Advanced Tier 2 capital at December 31, 2024	**$ 17,017**
Advanced Total capital at December 31, 2024	**$ 311,898**

(a) Includes foreign currency translation adjustments and the impact of related derivatives.

(b) Includes the impact of the CECL capital transition provisions and the cumulative effect of changes in accounting principles. Refer to Note 1 for additional information on changes in accounting principles and Note 27 for additional information on the CECL capital transition provisions.

(c) As of December 31, 2024 and 2023, included an incremental $541 million and $655 million allowance for credit losses, respectively, on certain assets associated with First Republic to which the Standardized approach has been applied, as permitted by the transition provisions in the U.S. capital rules.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced approaches for the year ended December 31, 2024. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Standardized			Advanced			
Year ended December 31, 2024 (in millions)	Credit risk RWA[c]	Market risk RWA	**Total RWA**	Credit risk RWA[c][d]	Market risk RWA	Operational risk RWA	**Total RWA**
December 31, 2023	$ 1,603,851	$ 68,144	**$ 1,671,995**	$ 1,155,261	$ 68,603	$ 445,292	**$ 1,669,156**
Model & data changes[a]	4,743	(366)	**4,377**	4,811	(366)	—	**4,445**
Movement in portfolio levels[b]	64,169	16,919	**81,088**	57,933	16,895	(8,000)	**66,828**
Changes in RWA	68,912	16,553	**85,465**	62,744	16,529	(8,000)	**71,273**
December 31, 2024	**$ 1,672,763**	**$ 84,697**	**$ 1,757,460**	**$ 1,218,005**	**$ 85,132**	**$ 437,292**	**$ 1,740,429**

(a) Model & data changes refer to material movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(b) Movement in portfolio levels (inclusive of rule changes) refers to: for Credit risk RWA, changes in book size, changes in composition and credit quality, market movements, and deductions for excess eligible allowances for credit losses not eligible for inclusion in Tier 2 capital; for Market risk RWA, changes in position and market movements; and for Operational risk RWA, updates to cumulative losses and macroeconomic model inputs.

(c) As of December 31, 2024 and 2023, the Basel III Standardized Credit risk RWA included wholesale and retail off balance-sheet RWA of $208.0 billion and $208.5 billion, respectively; and the Basel III Advanced Credit risk RWA included wholesale and retail off balance-sheet RWA of $192.1 billion and $188.5 billion, respectively.

(d) As of December 31, 2024 and 2023, Credit risk RWA reflected approximately $43.3 billion and $52.4 billion, respectively, of RWA calculated under the Standardized approach for certain assets associated with First Republic as permitted by the transition provisions in the U.S. capital rules.

Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for further information on Credit risk RWA, Market risk RWA and Operational risk RWA.

Supplementary leverage ratio

The following table presents the components of the Firm's SLR.

Three months ended (in millions, except ratio)	**December 31, 2024**	December 31, 2023
Tier 1 capital	**$ 294,881**	$ 277,306
Total average assets	4,125,167	3,885,632
Less: Regulatory capital adjustments[a]	54,668	54,432
Total adjusted average assets[b]	4,070,499	3,831,200
Add: Off-balance sheet exposures[c]	767,069	709,265
Total leverage exposure	**$ 4,837,568**	$4,540,465
SLR	**6.1 %**	6.1 %

(a) For purposes of calculating the SLR, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, other intangible assets and adjustments for the CECL capital transition provisions. Refer to Note 27 for additional information on the CECL capital transition.

(b) Adjusted average assets used for the calculation of Tier 1 leverage ratio.

(c) Off-balance sheet exposures are calculated as the average of the three month-end spot balances on applicable regulatory exposures during the reporting quarter. Refer to the Firm's Pillar 3 Regulatory Capital Disclosures reports for additional information.

Line of business and Corporate equity

Each LOB and Corporate is allocated capital by taking into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. ROE is measured and internal targets for expected returns are established as key measures of an LOB's performance.

The Firm's current equity allocation methodology incorporates Basel III Standardized RWA and the GSIB surcharge, both under rules currently in effect, as well as a simulation of capital depletion in a severe stress environment. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs and Corporate may change. As of January 1, 2025, changes to the Firm's capital allocations are primarily a result of updates to the Firm's current capital requirements and changes in RWA for each LOB under rules currently in effect. Any capital that the Firm has accumulated in excess of these current requirements, including the capital required to meet the potential increased requirements of the U.S. Basel III proposal, has been retained in Corporate in addition to its allocated balance.

The following table presents the capital allocated to each LOB and Corporate.

		December 31,	
(in billions)	**January 1, 2025**	2024	2023
Consumer & Community Banking	**$ 56.0**	$ 54.5	$ 55.5
Commercial & Investment Bank	**149.5**	132.0	138.0
Asset & Wealth Management	**16.0**	15.5	17.0
Corporate	**103.2**	122.7	90.0
Total common stockholders' equity	**$ 324.7**	$ 324.7	$ 300.5

Capital actions

Common stock dividends

The Firm's common stock dividends are planned as part of the Capital Management governance framework in line with the Firm's capital management objectives.

On December 9, 2024, the Firm announced that its Board of Directors had declared a quarterly common stock dividend of $1.25 per share, payable on January 31, 2025. The Firm's dividends are subject to approval by the Board of Directors on a quarterly basis.

Refer to Note 21 and Note 26 for information regarding dividend restrictions.

The following table shows the common dividend payout ratio based on net income applicable to common equity.

Year ended December 31,	**2024**	2023	2022
Common dividend payout ratio	**24 %**	25 %	33 %

Common stock

On June 28, 2024, the Firm announced that its Board of Directors had authorized a new $30 billion common share repurchase program, effective July 1, 2024. Through June 30, 2024, the Firm was authorized to purchase up to $30 billion of common shares under its previously-approved common share repurchase program that was announced on April 13, 2022.

The following table sets forth the Firm's repurchases of common stock for the years ended December 31, 2024, 2023 and 2022.

Year ended December 31, (in millions)	**2024**	2023	2022[(b)]
Total number of shares of common stock repurchased	**91.7**	69.5	23.1
Aggregate purchase price of common stock repurchases[(a)]	**$ 18,841**	$ 9,898	$ 3,122

(a) Excludes excise tax and commissions. As part of the Inflation Reduction Act of 2022, a 1% excise tax is imposed on net share repurchases commencing January 1, 2023.

(b) In the second half of 2022, the Firm temporarily suspended share repurchases, which it resumed in the first quarter of 2023 under its common share repurchase program.

The Board of Directors' authorization to repurchase common shares is utilized at management's discretion. The $30 billion common share repurchase program approved by the Board of Directors does not establish specific price targets or timetables. Management determines the amount and timing of common share repurchases based on various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); organic capital generation; current and proposed future capital requirements; and other investment opportunities. The amount of common shares that the Firm repurchases in any period may be substantially more or less than the amounts estimated or actually repurchased in prior periods, reflecting the dynamic nature of the decision-making process. The Firm's common share repurchases may be suspended by management at any time; and may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 plans, which are written trading plans that the Firm may enter into from time to time under Rule 10b5-1 of the Securities Exchange Act of 1934 and which allow the Firm to repurchase its common shares during periods when it may otherwise not be repurchasing common shares — for example, during internal trading blackout periods.

Refer to capital planning and stress testing on pages 97–98 for additional information.

Refer to Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on page 39 of this 2024 Form 10-K for additional information regarding repurchases of the Firm's equity securities.

Preferred stock

Preferred stock dividends were $1.3 billion, $1.5 billion, and $1.6 billion for the years ended December 31, 2024, 2023, and 2022, respectively.

During the year ended and subsequent to December 31, 2024, the Firm issued and redeemed certain series of non-cumulative preferred stock. Refer to Note 21 for additional information on the Firm's preferred stock, including the issuance and redemption of preferred stock.

Subordinated Debt

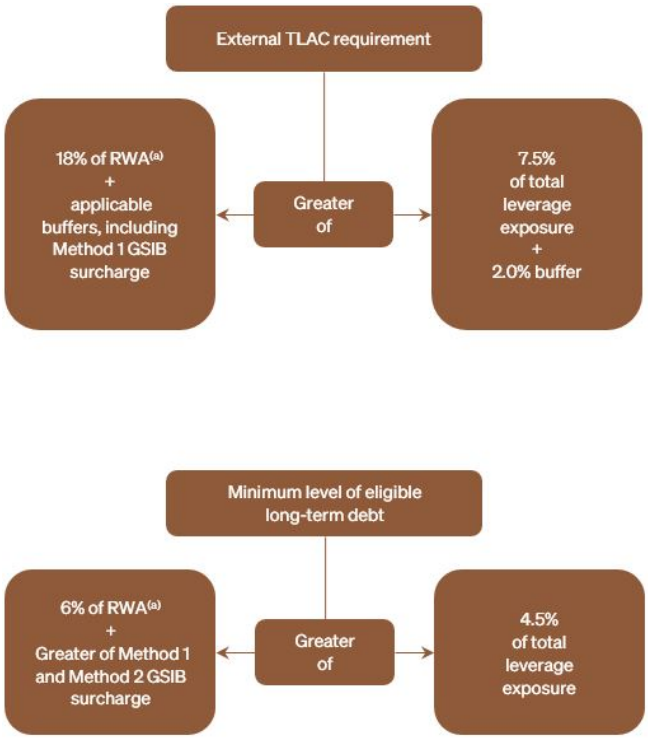
Refer to Long-term funding on page 114 and Note 20 for additional information on the Firm's subordinated debt.

Other capital requirements

Total Loss-Absorbing Capacity

The Federal Reserve's TLAC rule requires the U.S. GSIB top-tier holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible long-term debt.

The external TLAC requirements and the minimum level of eligible long-term debt requirements are shown below:



(a) RWA is the greater of Standardized and Advanced compared to their respective regulatory capital ratio requirements.

Failure to maintain TLAC equal to or in excess of the regulatory minimum plus applicable buffers will result in limitations on the amount of capital that the Firm may distribute, such as through dividends and common share repurchases, as well as on discretionary bonus payments for certain executive officers.

The following table presents the eligible external TLAC and eligible LTD amounts, as well as a representation of these amounts as a percentage of the Firm's total RWA and total leverage exposure applying the impact of the CECL capital transition provisions as of December 31, 2024 and 2023.

	December 31, 2024		December 31, 2023	
(in billions, except ratio)	**External TLAC**	**LTD**	External TLAC	LTD
Total eligible amount	**$ 546.6**	**$ 236.8**	$ 513.8	$ 222.6
% of RWA	**31.1 %**	**13.5 %**	30.7 %	13.3 %
Regulatory requirements	**23.0**	**10.5**	23.0	10.0
Surplus/(shortfall)	**$ 142.3**	**$ 52.3**	$ 129.2	$ 55.4
% of total leverage exposure	**11.3 %**	**4.9 %**	11.3 %	4.9 %
Regulatory requirements	**9.5**	**4.5**	9.5	4.5
Surplus/(shortfall)	**$ 87.0**	**$ 19.2**	$ 82.5	$ 18.3

Effective January 1, 2024, the Firm's regulatory requirement for its eligible LTD to RWA ratio increased by 50 bps to 10.5%, due to the increase in the Firm's GSIB Method 2 requirements. The Firm's regulatory requirement for its TLAC to RWA ratio remained at 23.0%. Refer to Risk-based Capital Regulatory Requirements on pages 100–101 for further information on the GSIB surcharge.

Refer to Liquidity Risk Management on pages 108–115 for further information on long-term debt issued by the Parent Company.

Refer to Part I, Item 1A: Risk Factors on pages 10-37 of this 2024 Form 10-K for information on the financial consequences to holders of the Firm's debt and equity securities in a resolution scenario.

U.S. broker-dealer regulatory capital

J.P. Morgan Securities

JPMorganChase's principal U.S. broker-dealer subsidiary is J.P. Morgan Securities. J.P. Morgan Securities is subject to the regulatory capital requirements of Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). J.P. Morgan Securities is also registered as a futures commission merchant and is subject to regulatory capital requirements, including those imposed by the SEC, the Commodity Futures Trading Commission ("CFTC"), the Financial Industry Regulatory Authority ("FINRA") and the National Futures Association ("NFA").

J.P. Morgan Securities has elected to compute its minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule.

The following table presents J.P. Morgan Securities' net capital.

December 31, 2024 (in millions)	Actual	Minimum
Net Capital	**$ 24,980**	**$ 5,999**

J.P. Morgan Securities is registered with the SEC as a security-based swap dealer and with the CFTC as a swap dealer. As a result of additional SEC and CFTC capital and financial reporting requirements for security-based swap dealers and swap dealers, J.P. Morgan Securities is subject to alternative minimum net capital requirements and required to hold "tentative net capital" in excess of $5.0 billion. J.P. Morgan Securities is also required to notify the SEC and CFTC in the event that its tentative net capital is less than $6.0 billion. Tentative net capital is net capital before deducting market and credit risk charges as defined by the Net Capital Rule. As of December 31, 2024, J.P. Morgan Securities maintained tentative net capital in excess of the minimum and notification requirements.

Non-U.S. subsidiary regulatory capital

J.P. Morgan Securities plc

J.P. Morgan Securities plc is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated in the U.K. by the Prudential Regulation Authority ("PRA") and the Financial Conduct Authority ("FCA"). J.P. Morgan Securities plc is subject to the Capital Requirements Regulation ("CRR"), as adopted and amended in the U.K., and the capital rules in the PRA Rulebook. These requirements collectively represent the U.K.'s implementation of the Basel III standards. The PRA announced that it intends to delay the U.K.'s implementation of the final Basel III standards until January 1, 2027, with a three-year transitional period for certain aspects.

The Bank of England requires that U.K. banks, including U.K. regulated subsidiaries of overseas groups, maintain minimum requirements for own funds and eligible liabilities ("MREL"). As of December 31, 2024, J.P. Morgan Securities plc was compliant with its MREL requirements.

The following table presents J.P. Morgan Securities plc's risk-based and leverage-based capital metrics.

December 31, 2024 (in millions, except ratios)	Actual	Regulatory Minimum ratios[(a)]
Total capital	**$ 53,120**	
CET1 capital ratio	**17.0 %**	**4.5 %**
Tier 1 capital ratio	**22.1**	**6.0**
Total capital ratio	**27.1**	**8.0**
Tier 1 leverage ratio	**7.1**	**3.3** [(b)]

(a) Represents minimum Pillar 1 requirements specified by the PRA. J.P. Morgan Securities plc's capital ratios as of December 31, 2024 exceeded the minimum requirements, including the additional capital requirements specified by the PRA.

(b) At least 75% of the Tier 1 leverage ratio minimum must be met with CET1 capital.

J.P. Morgan SE

JPMSE is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and has authority to engage in banking, investment banking and markets activities. JPMSE is regulated by the European Central Bank ("ECB"), the German Financial Supervisory Authority and the German Central Bank, as well as the local regulators in each of the countries in which it operates, and it is subject to EU capital requirements under Basel III. JPMSE is subject to the EU implementation of the final Basel III standards. Those standards became effective beginning on January 1, 2025, with the exception of market risk aspects for which the effective date is January 1, 2026.

JPMSE is required by the EU Single Resolution Board to maintain MREL. As of December 31, 2024, JPMSE was compliant with its MREL requirements.

The following table presents JPMSE's risk-based and leverage-based capital metrics.

December 31, 2024 (in millions, except ratios)	Actual	Regulatory Minimum ratios[(a)]
Total capital	**$ 43,298**	
CET1 capital ratio	**20.0 %**	**4.5 %**
Tier 1 capital ratio	**20.0**	**6.0**
Total capital ratio	**34.8**	**8.0**
Tier 1 leverage ratio	**6.1**	**3.0**

(a) Represents minimum Pillar 1 requirements specified by the EU CRR. J.P. Morgan SE's capital and leverage ratios as of December 31, 2024 exceeded the minimum requirements, including the additional capital requirements specified by EU regulators.

LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that the Firm will be unable to meet its cash and collateral needs as they arise or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets and liabilities.

Liquidity risk management

The Firm has a Liquidity Risk Management ("LRM") function whose primary objective is to provide independent oversight of liquidity risk across the Firm. Liquidity Risk Management's responsibilities include:

- Defining, monitoring and reporting liquidity risk metrics;
- Independently establishing and monitoring limits and indicators, including liquidity risk appetite;
- Developing a process to classify, monitor and report limit breaches;
- Performing an independent review of liquidity risk management processes to evaluate their adequacy and effectiveness;
- Monitoring and reporting internal Firmwide and legal entity liquidity stress tests, regulatory defined metrics, as well as liquidity positions, balance sheet variances and funding activities; and
- Approving or escalating for review new or updated liquidity stress assumptions.

Liquidity management

Treasury and CIO is responsible for liquidity management.

The primary objectives of the Firm's liquidity management are to:

- Ensure that the Firm's core businesses and material legal entities are able to operate in support of client needs and meet contractual and contingent financial obligations through normal economic cycles as well as during stress events, and
- Manage an optimal funding mix and availability of liquidity sources.

The Firm addresses these objectives through:

- Analyzing and understanding the liquidity characteristics of the assets and liabilities of the Firm, LOBs, legal entities, as well as currencies, taking into account legal, regulatory, and operational restrictions;
- Developing and maintaining internal liquidity stress testing assumptions;
- Defining and monitoring Firmwide and legal entity-specific liquidity strategies, policies, reporting and contingency funding plans;
- Managing liquidity within the Firm's approved limits and indicators, including liquidity risk appetite tolerances;
- Managing compliance with regulatory requirements related to funding and liquidity risk; and
- Setting FTP in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

As part of the Firm's overall liquidity management strategy, the Firm manages liquidity and funding using a centralized, global approach designed to:

- Optimize liquidity sources and uses;
- Monitor exposures;
- Identify constraints on the transfer of liquidity between the Firm's legal entities; and
- Maintain the appropriate amount of surplus liquidity at a Firmwide and legal entity level, where relevant.

Governance

Committees responsible for liquidity governance include the Firmwide ALCO, as well as regional ALCOs, the Treasurer Committee, and the CTC Risk Committee. In addition, the Board Risk Committee reviews and recommends to the Board of Directors, for approval, the Firm's liquidity risk tolerances, liquidity strategy, and liquidity policy. Refer to Firmwide Risk Management on pages 91–95 for further discussion of ALCO and other risk-related committees.

Internal stress testing

The Firm conducts internal liquidity stress testing to monitor liquidity positions at the Firm and its material legal entities under a variety of adverse scenarios, including scenarios analyzed as part of the Firm's resolution and recovery planning. Internal stress tests are produced on a daily basis, and other stress tests are performed in response to specific market events or concerns. Liquidity stress tests assume all of the Firm's contractual financial obligations are met and take into consideration:

- Varying levels of access to unsecured and secured funding markets;
- Estimated non-contractual and contingent cash outflows;
- Credit rating downgrades;
- Collateral haircuts; and
- Potential impediments to the availability and transferability of liquidity between jurisdictions and material legal entities such as regulatory, legal or other restrictions.

Liquidity outflows are modeled across a range of time horizons and currency dimensions and contemplate both market and idiosyncratic stresses.

Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position. The Parent Company acts as a source of funding for the Firm through equity and

long-term debt issuances, and its intermediate holding company, JPMorgan Chase Holdings LLC (the "IHC"), provides funding to support the ongoing operations of the Parent Company and its subsidiaries. The Firm manages liquidity at the Parent Company, the IHC, and operating subsidiaries at levels sufficient to comply with liquidity risk tolerances and minimum liquidity requirements, and to manage through periods of stress when access to normal funding sources may be disrupted.

Contingency funding plan

The Firm's Contingency Funding Plan ("CFP") sets out the strategies for addressing and managing liquidity resource needs during a liquidity stress event and incorporates liquidity risk limits, indicators and risk appetite tolerances. The CFP also identifies the alternative contingent funding and liquidity resources available to the Firm and its legal entities in a period of stress.

LCR and HQLA

The LCR rule requires that the Firm and JPMorgan Chase Bank, N.A. maintain an amount of eligible HQLA that is sufficient to meet their respective estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. Eligible HQLA, for purposes of calculating the LCR, is the amount of unencumbered HQLA that satisfy certain operational considerations as defined in the LCR rule. HQLA primarily consist of cash and certain high-quality liquid securities as defined in the LCR rule.

Under the LCR rule, the amount of eligible HQLA held by JPMorgan Chase Bank, N.A. that is in excess of its stand-alone 100% minimum LCR requirement, and that is not transferable to non-bank affiliates, must be excluded from the Firm's reported eligible HQLA.

Estimated net cash outflows are based on standardized stress outflow and inflow rates prescribed in the LCR rule, which are applied to the balances of the Firm's assets, sources of funds, and obligations. The LCR for both the Firm and JPMorgan Chase Bank, N.A. is required to be a minimum of 100%.

The following table summarizes the Firm and JPMorgan Chase Bank, N.A.'s average LCR for the three months ended December 31, 2024, September 30, 2024 and December 31, 2023 based on the Firm's interpretation of the LCR framework.

	Three months ended		
Average amount (in millions)	**December 31, 2024**	September 30, 2024	December 31, 2023
JPMorgan Chase & Co.:			
HQLA			
Eligible cash[(a)]	**$ 396,123**	$ 412,389	$ 485,263
Eligible securities[(b)(c)]	**464,877**	453,899	313,365
Total HQLA[(d)]	**$ 861,000**	$ 866,288	$ 798,628
Net cash outflows	**$ 763,648**	$ 762,072	$ 704,857
LCR	**113 %**	114 %	113 %
Net excess eligible HQLA[(d)]	**$ 97,352**	$ 104,216	$ 93,771
JPMorgan Chase Bank, N.A.:			
LCR	**124 %**	121 %	129 %
Net excess eligible HQLA	**$ 193,682**	$ 168,137	$ 215,190

(a) Represents cash on deposit at central banks, primarily the Federal Reserve Banks.
(b) Eligible HQLA securities may be reported in securities borrowed or purchased under resale agreements, trading assets, or investment securities on the Firm's Consolidated balance sheets. For purposes of calculating the LCR, HQLA securities are included at fair value, which may differ from the accounting treatment under U.S. GAAP.
(c) Predominantly U.S. Treasuries, U.S. GSE and government agency MBS, and sovereign bonds net of regulatory haircuts under the LCR rule.
(d) Excludes average excess eligible HQLA at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.

JPMorgan Chase Bank, N.A.'s average LCR increased during the three months ended December 31, 2024, compared with the three months ended September 30, 2024, driven by activities in CIB Markets, partially offset by lower market values of HQLA-eligible investment securities and funding maturities.

JPMorgan Chase Bank, N.A.'s average LCR for the three months ended December 31, 2024 decreased compared with the three months ended December 31, 2023, driven by dividend payments to the Parent Company and lending activity, largely offset by higher market values of HQLA-eligible investment securities, a reduction in unencumbered non-HQLA AFS securities, activities in CIB Markets, and long-term debt issuances.

Each of the Firm and JPMorgan Chase Bank, N.A.'s average LCR may fluctuate from period to period due to changes in their respective eligible HQLA and estimated net cash outflows as a result of ongoing business activity and from the impacts of Federal Reserve actions as well as other factors. Refer to the Firm's U.S. LCR Disclosure reports, which are available on the Firm's website, for a further discussion of the Firm's LCR.

Liquidity sources

In addition to the assets reported in the Firm's eligible HQLA discussed above, the Firm had unencumbered marketable securities, such as equity and debt securities, that the Firm believes would be available to raise liquidity. This includes excess eligible HQLA securities at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates. The fair value of these securities was approximately $594 billion and $649 billion as of December 31, 2024 and 2023, respectively, although the amount of liquidity that could be raised at any particular time would be dependent on prevailing market conditions. The decrease compared to December 31, 2023, was driven by reductions in unencumbered AFS securities in Treasury and CIO, excess eligible HQLA securities at JPMorgan Chase Bank, N.A., and unencumbered CIB trading assets.

The Firm had approximately $1.4 trillion of available cash and securities as of both December 31, 2024 and 2023. For each respective period, the amount was comprised of eligible end-of-period HQLA, excluding the impact of regulatory haircuts, of approximately $834 billion and $798 billion, and unencumbered marketable securities with a fair value of approximately $594 billion and $649 billion.

The Firm also had available borrowing capacity at the Federal Home Loan Banks ("FHLBs") and the discount window at the Federal Reserve Banks as a result of collateral pledged by the Firm to such banks of approximately $413 billion and $340 billion as of December 31, 2024 and 2023, respectively. This borrowing capacity excludes the benefit of cash and securities reported in the Firm's eligible HQLA or other unencumbered securities that are currently pledged at the Federal Reserve Banks discount window and other central banks. Available borrowing capacity increased from December 31, 2023 primarily due to a higher amount of commercial loans and credit card receivables pledged at the Federal Reserve Banks. Although available, the Firm does not view this borrowing capacity at the Federal Reserve Banks discount window and the other central banks as a primary source of liquidity.

NSFR

The net stable funding ratio ("NSFR") is a liquidity requirement for large banking organizations that is intended to measure the adequacy of "available" stable funding that is sufficient to meet their "required" amounts of stable funding over a one-year horizon.

For the three months ended December 31, 2024, both the Firm and JPMorgan Chase Bank, N.A. were compliant with the 100% minimum NSFR requirement, based on the Firm's interpretation of the final NSFR rule. Refer to the Firm's U.S. NSFR Disclosure report on the Firm's website for additional information.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations, which includes both short- and long-term cash requirements.

The Firm funds its global balance sheet through diverse sources of funding including deposits, secured and unsecured funding in the capital markets and stockholders' equity. Deposits are the primary funding source for JPMorgan Chase Bank, N.A. Additionally, JPMorgan Chase Bank, N.A. may access funding through short- or long-term secured borrowings, the issuance of unsecured long-term debt, or from borrowings from the IHC. The Firm's non-bank subsidiaries are primarily funded from long-term unsecured borrowings and short-term secured borrowings which are primarily securities loaned or sold under repurchase agreements. Excess funding is invested by Treasury and CIO in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics.

Refer to Note 28 for additional information on off–balance sheet obligations.

Deposits

The table below summarizes, by LOB and Corporate, the period-end and average deposit balances as of and for the years ended December 31, 2024 and 2023.

As of or for the year ended December 31,			Average	
(in millions)	**2024**	2023	**2024**	2023
Consumer & Community Banking[(a)]	**$ 1,056,652**	$ 1,094,738	**$ 1,064,215**	$ 1,126,552
Commercial & Investment Bank[(a)]	**1,073,512**	1,050,892	**1,061,488**	996,295
Asset & Wealth Management[(a)]	**248,287**	233,232	**235,146**	216,178
Corporate	**27,581**	21,826	**25,793**	20,042
Total Firm	**$ 2,406,032**	$ 2,400,688	**$ 2,386,642**	$ 2,359,067

(a) In the fourth quarter of 2023, CCB transferred certain deposits associated with First Republic to AWM and CIB.

The Firm believes that deposits provide a stable source of funding and reduce the Firm's reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer deposits and wholesale operating deposits, which are both considered to be stable sources of liquidity. Wholesale operating deposits are generally considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.

The Firm believes that average deposit balances are generally more representative of deposit trends than period-end deposit balances. However, during periods of market disruption, average deposit trends may be impacted.

The following discussion excludes the impact of the transfer of certain First Republic deposits in the fourth quarter of 2023 from CCB to the other LOBs as the transfers had no net impact on Firmwide deposits.

Average deposits increased for the year ended December 31, 2024 compared to the year ended December 31, 2023, reflecting:

- an increase in CIB due to net inflows predominantly in Payments and net issuances of structured notes as a result of client demand in Markets, partially offset by deposit attrition, which included actions taken to reduce certain deposits,
- the timing impact of First Republic,
- an increase in AWM as a result of growth in balances in new and existing client accounts, reflecting the impact of higher-yielding product offerings, largely offset by continued migration into other investments, and
- a decline in CCB primarily driven by a decrease in balances in existing accounts due to increased customer spending, largely offset by new accounts.

Period-end deposits increased from December 31, 2023, reflecting:

- an increase in CIB due to net inflows predominantly in Payments, largely offset by net maturities of structured notes in Markets,
- an increase in AWM as a result of growth in balances in new and existing client accounts, reflecting the impact of higher-yielding product offerings, largely offset by continued migration into other investments, and
- a decline in CCB primarily driven by a decrease in balances in existing accounts due to increased customer spending and migration into higher-yielding investments, predominantly offset by new accounts.

Refer to the Firm's Consolidated Balance Sheets Analysis and the Business Segment & Corporate Results on pages 63–65 and pages 70–90, respectively, for further information on deposit and liability balance trends, as well as Executive Overview

on pages 54–58 and Note 34 for additional information on the First Republic acquisition. Refer to Note 3 for further information on structured notes.

Certain deposits are covered by insurance protection that provides additional funding stability and results in a benefit to the LCR. Deposit insurance protection may be available to depositors in the countries in which the deposits are placed. For example, the FDIC provides deposit insurance protection for deposits placed in a U.S. depository institution. At December 31, 2024 and 2023[(a)], the Firmwide estimated uninsured deposits were $1,414.0 billion and $1,347.8 billion, respectively, primarily reflecting wholesale operating deposits.

Total uninsured deposits include time deposits. The table below presents an estimate of uninsured U.S. and non-U.S. time deposits, and their remaining maturities. The Firm's estimates of its uninsured U.S. time deposits are based on data that the Firm calculates periodically under applicable FDIC regulations. For purposes of this presentation, all non-U.S. time deposits are deemed to be uninsured.

	December 31, 2024		December 31, 2023	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Three months or less	**$ 119,333**	**$ 77,253**	$98,606 [(a)]	$ 77,466
Over three months but within 6 months	**11,040**	**12,229**	17,736	5,358
Over six months but within 12 months	**7,056**	**1,542**	10,294	4,820
Over 12 months	**823**	**1,924**	710	2,543
Total	**$138,252**	**$ 92,948**	$127,346 [(a)]	$ 90,187

(a) Prior-period amounts have been revised to include cash collateral for certain derivatives to align with a change in the methodology for calculating uninsured U.S. time deposits.

The table below shows the loan and deposit balances, the loans-to-deposits ratios, and deposits as a percentage of total liabilities, as of December 31, 2024 and 2023.

As of December 31, (in billions except ratios)	**2024**	2023
Deposits	**$ 2,406.0**	$ 2,400.7
Deposits as a % of total liabilities	**66 %**	68 %
Loans	**$ 1,348.0**	$ 1,323.7
Loans-to-deposits ratio	**56 %**	55 %

The following table provides a summary of the average balances and average interest rates of JPMorganChase's deposits for the years ended December 31, 2024, 2023, and 2022.

Year ended December 31,	Average balances			Average interest rates		
(in millions, except interest rates)	**2024**	2023	2022	**2024**	2023	2022
U.S. offices						
Noninterest-bearing	**$ 611,734**	$ 635,791	$ 691,206	**NA**	NA	NA
Interest-bearing						
Demand[(a)]	**282,533**	279,725	324,512	**3.90 %**	3.50 %	0.92 %
Savings[(b)]	**800,964**	864,558	971,788	**1.39**	1.10	0.28
Time	**223,503**	145,827	62,022	**4.93**	4.74	2.07
Total interest-bearing deposits	**1,307,000**	1,290,110	1,358,322	**2.54**	2.03	0.52
Total deposits in U.S. offices	**1,918,734**	1,925,901	2,049,528	**1.73**	1.36	0.34
Non-U.S. offices						
Noninterest-bearing	**26,858**	24,747	28,043	**NA**	NA	NA
Interest-bearing						
Demand	**346,179**	321,976	324,740	**3.13**	2.71	0.57
Time	**94,871**	86,443	65,604	**5.86**	5.82	1.85
Total interest-bearing deposits	**441,050**	408,419	390,344	**3.72**	3.37	0.78
Total deposits in non-U.S. offices	**467,908**	433,166	418,387	**3.50**	3.18	0.73
Total deposits	**$ 2,386,642**	$ 2,359,067	$ 2,467,915	**2.08 %**	1.70 %	0.41 %

(a) Includes Negotiable Order of Withdrawal accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts.

Refer to Note 17 for additional information on deposits.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2024 and 2023, and average balances for the years ended December 31, 2024 and 2023. Refer to the Consolidated Balance Sheets Analysis on pages 63–65 and Note 11 for additional information.

Sources of funds (excluding deposits)

As of or for the year ended December 31,			Average	
(in millions)	**2024**	2023	**2024**	2023
Commercial paper	**$ 14,932**	$ 14,737	**$ 11,398**	$ 12,675
Other borrowed funds	**13,018**	8,200	**12,040**	9,712
Federal funds purchased	**567**	787	**1,547**	1,754
Total short-term unsecured funding	**$ 28,517**	$ 23,724	**$ 24,985**	$ 24,141
Securities sold under agreements to repurchase[(a)]	**$ 291,500**	$ 212,804	**$ 357,144**	$ 249,661
Securities loaned[(a)]	**4,768**	2,944	**5,129**	4,671
Other borrowed funds	**24,943**	21,775	**25,504**	22,010
Obligations of Firm-administered multi-seller conduits[(b)]	**18,228**	17,781	**18,620**	14,918
Total short-term secured funding	**$ 339,439**	$ 255,304	**$ 406,397**	$ 291,260
Senior notes	**$ 203,639**	$ 191,202	**$ 199,908**	$ 181,803
Subordinated debt	**16,060**	19,708	**18,614**	20,374
Structured notes[(c)]	**98,792**	86,056	**93,483**	76,574
Total long-term unsecured funding	**$ 318,491**	$ 296,966	**$ 312,005**	$ 278,751
Credit card securitization[(b)]	**$ 5,312**	$ 2,998	**$ 5,138**	$ 1,634
FHLB advances	**29,257**	41,246	**35,040** [(g)]	28,865
Purchase Money Note[(d)]	**49,207**	$ 48,989	**$ 49,090**	$ 32,829
Other long-term secured funding[(e)]	**4,463**	4,624	**4,676**	4,513
Total long-term secured funding	**$ 88,239**	$ 97,857	**$ 93,944**	$ 67,841
Preferred stock[(f)]	**$ 20,050**	$ 27,404	**$ 24,054**	$ 27,404
Common stockholders' equity[(f)]	**$ 324,708**	$ 300,474	**$ 312,370**	$ 282,056

(a) Primarily consists of short-term securities loaned or sold under agreements to repurchase.
(b) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(c) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.
(d) Reflects the Purchase Money Note associated with the First Republic acquisition on May 1, 2023. Refer to Note 34 for additional information.
(e) Includes long-term structured notes that are secured.
(f) Refer to Capital Risk Management on pages 97–107, Consolidated statements of changes in stockholders' equity on page 175, Note 21 and Note 22 for additional information on preferred stock and common stockholders' equity.
(g) Includes the timing impact of First Republic. Refer to the Executive Overview on pages 54–58 and Note 34 for additional information.

Short-term funding

The Firm's primary source of short-term secured funding is securities sold under agreements to repurchase. These instruments are secured predominantly by high-quality securities collateral, including government-issued debt and U.S. GSE and government agency MBS. Securities sold under agreements to repurchase increased at December 31, 2024, compared with December 31, 2023, driven by Markets, reflecting higher client-driven market-making activities and higher secured financing of trading assets.

The increase in secured other borrowed funds at December 31, 2024 from December 31, 2023, as well as the increase for the average year ended December 31, 2024, compared to the prior year period, were both due to higher financing requirements in Markets, partially offset by FHLB maturities in Treasury and CIO.

The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to investment and financing activities of clients, the Firm's demand for financing, the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios), and other market and portfolio factors.

The Firm's primary sources of short-term unsecured funding consist of issuances of wholesale commercial paper and other borrowed funds.

The decrease in average commercial paper for the year ended December 31, 2024 compared to the prior year period was due to lower issuances primarily as a result of short-term liquidity management.

The increase in unsecured other borrowed funds at December 31, 2024 from December 31, 2023, was predominantly driven by net issuances of structured notes in Markets.

Long-term funding

Long-term funding provides an additional source of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven primarily by expected client activity, liquidity considerations and regulatory requirements, including TLAC. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

Unsecured funding and issuance

The significant majority of the Firm's total outstanding long-term debt has been issued by the Parent Company to provide flexibility in support of the funding needs of both bank and non-bank subsidiaries. The Parent Company advances substantially all net funding proceeds to its subsidiary, the IHC. The IHC does not issue debt to external counterparties. The increase in structured notes at December 31, 2024 from December 31, 2023, and for the average year ended December 31, 2024, compared to the prior year period, was primarily driven by net issuances of structured notes in Markets due to client demand.

The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2024 and 2023. Refer to Note 20 for additional information on the IHC and long-term debt.

Long-term unsecured funding

Year ended December 31,	**2024**	2023	**2024**	2023
(Notional in millions)	Parent Company		Subsidiaries	
Issuance				
Senior notes issued in the U.S. market	**$ 37,000**	$ 14,256	**$ —**	$ 3,750
Senior notes issued in non-U.S. markets	**4,079**	2,141	**—**	—
Total senior notes	**41,079**	16,397	**—**	3,750
Structured notes[(a)]	**3,944**	3,013	**54,993**	35,281
Total long-term unsecured funding – issuance	**$ 45,023**	$ 19,410	**$ 54,993**	$ 39,031
Maturities/redemptions				
Senior notes	**$ 25,765**	$ 21,483	**$ 65**	$ 67
Subordinated debt	**3,097**	2,090	**250**	—
Structured notes	**892**	1,532	**47,425**	28,777
Total long-term unsecured funding – maturities/redemptions	**$ 29,754**	$ 25,105	**$ 47,740**	$ 28,844

(a) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.

Secured funding and issuance

The Firm can also raise secured long-term funding through securitization of consumer credit card loans and FHLB advances. The following table summarizes the securitization issuance, the FHLB advances and their respective maturities or redemptions, as applicable for the years ended December 31, 2024 and 2023.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	**2024**	2023	**2024**	2023
Credit card securitization	**$ 2,348**	$ 1,998	**$ —**	$ 1,000
FHLB advances	**6,000**	39,775 [(c)]	**18,050**	9,485
Purchase Money Note[(a)]	**—**	50,000	**—**	$ —
Other long-term secured funding[(b)]	**1,578**	991	**1,049**	432
Total long-term secured funding	**$ 9,926**	$ 92,764	**$ 19,099**	$ 10,917

(a) Reflects the Purchase Money Note associated with the First Republic acquisition. Refer to Note 34 for additional information.
(b) Includes long-term structured notes that are secured.
(c) Includes FHLB advances associated with the First Republic acquisition on May 1, 2023. Refer to Note 34 for additional information.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. Refer to Note 14 for a further description of client-driven loan securitizations.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors, which the Firm believes are incorporated in its liquidity risk and stress testing metrics. The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. Refer to Notes 5 and 14 for additional information.

The credit ratings of the Parent Company and certain of its principal subsidiaries as of December 31, 2024 were as follows:

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A.			J.P. Morgan Securities LLC J.P. Morgan Securities plc J.P. Morgan SE[a]		
December 31, 2024	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service[a]	A1	P-1	Positive	Aa2	P-1	Developing	Aa3	P-1	Positive
Standard & Poor's[b]	A	A-1	Stable	AA-	A-1+	Stable	AA-	A-1+	Stable
Fitch Ratings	AA-	F1+	Stable	AA	F1+	Stable	AA	F1+	Stable

(a) On November 11, 2024, Moody's (i) affirmed the credit ratings of the Parent Company, JPMorgan Chase Bank, N.A. and the other subsidiaries listed above; (ii) revised its outlook for the Parent Company, J.P. Morgan Securities LLC and J.P. Morgan Securities plc from stable to positive; (iii) revised its outlook for JPMorgan Chase Bank, N.A. from negative to developing, reflecting its view with respect to possible support from the U.S. government; and (iv) assessed its outlook for J.P. Morgan SE as negative with an "(m)" modifier, reflecting a negative outlook for long-term bank deposits and a positive outlook for the long-term issuer rating.

(b) The credit ratings of the Parent Company, JPMorgan Chase Bank, N.A. and the other subsidiaries presented in the table reflect ratings upgrades by Standard & Poor's on November 15, 2024. Standard & Poor's also revised its outlook for the Parent Company and such subsidiaries from positive to stable.

JPMorganChase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital and liquidity ratios, strong credit quality and risk management controls, and diverse funding sources. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

REPUTATION RISK MANAGEMENT

Reputation risk is the risk that an action or inaction may negatively impact perception of the Firm's integrity and reduce confidence in the Firm's competence by various stakeholders, including clients, counterparties, customers, communities, investors, regulators, or employees.

The types of events that may result in reputation risk are wide-ranging and can be introduced by the Firm's employees, business strategies and activities, clients, customers and counterparties with which the Firm does business. These events could contribute to financial losses, litigation, regulatory enforcement actions, fines, penalties or other sanctions, as well as other harm to the Firm.

Organization and management

Reputation Risk Management is an independent risk management function that establishes the governance framework for managing reputation risk across the Firm's LOBs and Corporate. Reputation risk is inherently challenging to identify, manage, and quantify.

The Firm's reputation risk management function includes the following activities:

- Maintaining a Firmwide Reputation Risk Governance policy and a standard consistent with the reputation risk framework
- Providing oversight of the governance framework through processes and infrastructure to support consistent identification, escalation and monitoring of reputation risk issues Firmwide

Governance and oversight

The Reputation Risk Governance policy establishes the principles for managing reputation risk for the Firm. It is the responsibility of each LOB and Corporate, and the Firm's employees, to consider the reputation of the Firm when deciding whether to offer a new product, engage in a transaction or client relationship, enter a new jurisdiction, initiate a business process or consider any other activity. Environmental impacts and social concerns are important considerations in assessing the Firm's reputation risk, and are a component of the Firm's reputation risk governance.

Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk, and investment portfolio risk.

Credit risk management

Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer. The Firm provides credit to a variety of clients and customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its home lending, credit card, auto, and business banking businesses. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), and securities financing activities. The Firm is also exposed to credit risk through its investment securities portfolio and cash placed with banks.

Credit Risk Management monitors and measures credit risk throughout the Firm, and defines credit risk policies, procedures and limits. The Firm's credit risk management governance includes the following activities:

- Maintaining a credit risk policy framework
- Monitoring and measuring credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry and geographic concentration limits, as appropriate, and setting guidelines for credit review and analysis
- Assigning and maintaining credit approval authorities in connection with the approval of credit exposure
- Monitoring and independent assessment of criticized exposures and delinquent loans, and
- Estimating credit losses and supporting appropriate credit risk-based capital management

Risk identification and measurement

To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and the methodology and estimates described in Note 13 and Note 10, the Firm estimates credit losses for its exposures. The allowance for loan losses reflects estimated credit losses related to the consumer and wholesale held-for-investment loan portfolios, the allowance for lending-related commitments reflects estimated credit losses related to the Firm's lending-related commitments and the allowance for investment securities reflects estimated credit losses related to the investment securities portfolio. Refer to Note 13, Note 10 and Critical Accounting Estimates used by the Firm on pages 161–164 for further information.

In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing that considers alternative economic scenarios as described below.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The stress testing process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios and the underlying parameters are defined centrally, articulated in terms of macroeconomic factors and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country- specific stress scenarios, as appropriate. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on individual counterparties.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process for extending credit so that credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the LOBs.

Consumer credit risk is monitored for delinquency and other trends, including any concentrations at the portfolio level, as certain of these trends can be addressed through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted economic performance and trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry, and individual client and counterparty level with established concentration limits that are reviewed and revised periodically as deemed appropriate by management. Industry and counterparty limits, as measured in terms of exposure and economic risk appetite, are subject to stress-based loss constraints.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval processes
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements, and
- Collateral and other risk-reduction techniques

In addition to Credit Risk Management, an independent Credit Review function is responsible for:

- Independently assessing risk grades assigned to exposures in the Firm's wholesale credit portfolio and the timeliness of risk grade changes initiated by responsible business units; and
- Evaluating the effectiveness of the credit management processes of the LOBs and Corporate, including the adequacy of credit analyses and risk grading/loss given default ("LGD") rationales, proper monitoring and management of credit exposures, and compliance with applicable grading policies and underwriting guidelines.

Refer to Note 12 for further discussion of consumer and wholesale loans.

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management. Detailed portfolio reporting of industry, clients, counterparties and customers, product and geography are prepared, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors.

CREDIT PORTFOLIO

Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer.

In the following tables, total loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. The following tables do not include loans which the Firm accounts for at fair value and classifies as trading assets; refer to Notes 2 and 3 for further information regarding these loans. Refer to Notes 12, 28, and 5 for additional information on the Firm's loans, lending-related commitments and derivative receivables, including the Firm's related accounting policies.

Refer to Note 10 for information regarding the credit risk inherent in the Firm's investment securities portfolio; and refer to Note 11 for information regarding credit risk inherent in the securities financing portfolio. Refer to Consumer Credit Portfolio on pages 120–125 and Note 12 for further discussions of the consumer credit environment, consumer loans and nonperforming exposure. Refer to Wholesale Credit Portfolio on pages 126–136 and Note 12 for further discussions of the wholesale credit environment and wholesale loans.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[c]	
	2024	2023	**2024**	2023
Loans retained	**$1,299,590**	$1,280,870	**$ 7,175**	$ 5,989
Loans held-for-sale	**7,048**	3,985	**160**	184
Loans at fair value	**41,350**	38,851	**1,502**	744
Total loans	**1,347,988**	1,323,706	**8,837**	6,917
Derivative receivables	**60,967**	54,864	**145**	364
Receivables from customers[a]	**51,929**	47,625	**—**	—
Total credit-related assets	**1,460,884**	1,426,195	**8,982**	7,281
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**284**	274
Other	**NA**	NA	**34**	42
Total assets acquired in loan satisfactions	**NA**	NA	**318**	316
Lending-related commitments	**1,577,622**	1,497,847	**737**	464
Total credit portfolio	**$3,038,506**	$2,924,042	**$10,037**	$ 8,061
Credit derivatives and credit-related notes used in credit portfolio management activities[b]	**$ (41,367)**	$ (37,779)	**$ —**	$ —
Liquid securities and other cash collateral held against derivatives	**(28,160)**	(22,461)	**NA**	NA

(a) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM; these are reported within accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives and credit-related notes used to manage credit exposures.

(c) Excludes mortgage loans past due and insured by U.S. government agencies, which are primarily 90 or more days past due. These loans have been excluded based upon the government guarantee. At December 31, 2024 and 2023, mortgage loans 90 or more days past due and insured by U.S. government agencies were $121 million and $182 million, respectively. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

The following table provides information on Firmwide nonaccrual loans to total loans.

December 31, (in millions, except ratios)	**2024**	2023
Total nonaccrual loans	**$ 8,837**	$ 6,917
Total loans	**1,347,988**	1,323,706
Firmwide nonaccrual loans to total loans outstanding	**0.66 %**	0.52 %

The following table provides information about the Firm's net charge-offs and recoveries.

December 31, (in millions, except ratios)	**2024**	2023
Net charge-offs	**$ 8,638**	$ 6,209
Average retained loans	**1,271,344**	1,202,348
Net charge-off rates	**0.68 %**	0.52 %

CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of loans and lending-related commitments for residential real estate, credit card, scored auto and business banking. The consumer credit portfolio also includes loans at fair value, predominantly in residential real estate. The Firm's focus is on serving primarily the prime segment of the consumer credit market. Originated mortgage loans are retained in the residential real estate portfolio, securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on the balance sheet. Refer to Note 12 for further information on the consumer loan portfolio. Refer to Note 28 for further information on lending-related commitments.

The following tables present consumer credit-related information with respect to the scored credit portfolio held in CCB, AWM, CIB and Corporate.

Consumer credit portfolio

December 31, (in millions)	Credit exposure		Nonaccrual loans[i]	
	2024	2023	**2024**	2023
Consumer, excluding credit card				
Residential real estate[a]	**$ 309,513**	$ 326,409	**$ 2,984**	$ 3,466
Auto and other[b][c]	**66,821**	70,866	**249**	177
Total loans - retained	**376,334**	397,275	**3,233**	3,643
Loans held-for-sale	**945**	487	**155**	95
Loans at fair value[d]	**15,531**	12,331	**538**	465
Total consumer, excluding credit card loans	**392,810**	410,093	**3,926**	4,203
Lending-related commitments[e]	**44,844**	45,403		
Total consumer exposure, excluding credit card	**437,654**	455,496		
Credit card				
Loans retained[f]	**232,860**	211,123	**NA**	NA
Total credit card loans	**232,860**	211,123	**NA**	NA
Lending-related commitments[e][g]	**1,001,311**	915,658		
Total credit card exposure	**1,234,171**	1,126,781		
Total consumer credit portfolio	**$ 1,671,825**	$ 1,582,277	**$ 3,926**	$ 4,203
Credit-related notes used in credit portfolio management activities[h]	**$ (479)**	$ (790)		

	Year ended December 31,					
	Net charge-offs/ (recoveries)		Average loans - retained		Net charge-off/(recovery) rate[j]	
(in millions, except ratios)	**2024**	2023	**2024**	2023	**2024**	2023
Consumer, excluding credit card						
Residential real estate	**$ (101)**	$ (52)	**$ 316,042**	$ 296,515	**(0.03)%**	(0.02)%
Auto and other	**775**	684	**67,959**	67,546	**1.14**	1.01
Total consumer, excluding credit card - retained	**674**	632	**384,001**	364,061	**0.18**	0.17
Credit card - retained	**7,142**	4,698	**214,033**	191,412	**3.34**	2.45
Total consumer - retained	**$ 7,816**	$ 5,330	**$ 598,034**	$ 555,473	**1.31 %**	0.96 %

(a) Includes scored mortgage and home equity loans held in CCB and AWM.
(b) At December 31, 2024 and 2023, excluded operating lease assets of $12.8 billion and $10.4 billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets. Refer to Note 18 for further information.
(c) Includes scored auto and business banking loans, and overdrafts.
(d) Includes scored mortgage loans held in CCB and CIB, and other consumer unsecured loans in CIB.
(e) Credit card, home equity and certain business banking lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. Refer to Note 28 for further information.
(f) Includes billed interest and fees.
(g) Also includes commercial card lending-related commitments primarily in CIB.
(h) Represents the notional amount of protection obtained through the issuance of credit-related notes that reference certain pools of residential real estate and auto loans in the retained consumer portfolio.
(i) Excludes mortgage loans past due and insured by U.S. government agencies, which are primarily 90 or more days past due. These loans have been excluded based upon the government guarantee. At December 31, 2024 and 2023, mortgage loans 90 or more days past due and insured by U.S. government agencies were $121 million and $182 million, respectively. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance.
(j) Average consumer loans held-for-sale and loans at fair value were $17.2 billion and $12.9 billion for the years ended December 31, 2024 and 2023, respectively. These amounts were excluded when calculating net charge-off/(recovery) rates.

Maturities and sensitivity to changes in interest rates

The table below sets forth loan maturities by scheduled repayments, by class of loan and the distribution between fixed and floating interest rates based on the stated terms of the loan agreements. The Firm estimated the principal repayment amounts for both the residential real estate and auto and other loan classes by calculating the weighted-average loan balance and interest rates for loan pools based on remaining loan term. Refer to Note 12 for further information on loan classes.

December 31, 2024 (in millions)	Within 1 year[a]	1-5 years	5-15 years	After 15 years	Total
Consumer, excluding credit card					
Residential real estate	**$ 21,442**	**$ 26,712**	**$109,608**	**$ 166,715**	**$324,477**
Auto and other	**19,404** [b]	**43,701**	**5,224**	**4**	**68,333**
Total consumer, excluding credit card loans	**$ 40,846**	**$ 70,413**	**$ 114,832**	**$ 166,719**	**$392,810**
Total credit card loans	**$ 231,799**	**$ 1,048**	**$ 13**	**$ —**	**$232,860**
Total consumer loans	**$272,645**	**$ 71,461**	**$ 114,845**	**$ 166,719**	**$625,670**
Loans due after one year at fixed interest rates					
Residential real estate		**$ 19,639**	**$ 57,351**	**$ 77,865**	
Auto and other		**43,565**	**2,957**	**4**	
Credit card		**1,048**	**13**	**—**	
Loans due after one year at variable interest rates					
Residential real estate		**$ 7,073**	**$ 52,257**	**$ 88,850**	
Auto and other		**136**	**2,267**	**—**	
Total consumer loans		**$ 71,461**	**$ 114,845**	**$ 166,719**	

(a) Includes loans held-for-sale and loans at fair value.
(b) Includes overdrafts.

Consumer, excluding credit card

Portfolio analysis

Loans decreased from December 31, 2023 driven by residential real estate loans and scored auto loans.

The following discussions provide information concerning individual loan products. Refer to Note 12 for further information about this portfolio, including information about delinquencies, loan modifications and other credit quality indicators.

Residential real estate: The residential real estate portfolio, including loans held-for-sale and loans at fair value, predominantly consists of prime mortgage loans and home equity lines of credit.

Retained loans decreased compared to December 31, 2023, predominantly driven by paydowns and loan sales, net of originations. Retained nonaccrual loans decreased compared to December 31, 2023, predominantly driven by loan sales. Net recoveries were higher for the year ended December 31, 2024 compared to the prior year, driven by loan sales.

Loans held-for-sale and nonaccrual loans held-for-sale increased from December 31, 2023, predominantly driven by transfers of certain retained loans in anticipation of securitization and loan sales, respectively.

Loans at fair value increased from December 31, 2023, predominantly driven by higher Home Lending loans, as originations outpaced warehouse loan sales. Nonaccrual loans at fair value increased compared to December 31, 2023, driven by CIB.

At December 31, 2024 and 2023, the carrying values of retained interest-only residential mortgage loans were $88.9 billion and $90.6 billion, respectively. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. The credit performance of this portfolio is comparable to the performance of the broader prime mortgage portfolio.

The carrying value of retained home equity lines of credit outstanding was $14.5 billion at December 31, 2024, including $3.8 billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified, and $3.6 billion of interest-only balloon HELOCs, which primarily mature after 2030. The Firm manages the risk of HELOCs during their revolving period by reducing or canceling the undrawn line in accordance with the contract or to the extent otherwise permitted by law, including when there has been a demonstrable decline in the creditworthiness of the borrower or significant decrease in the value of the underlying property.

The following table provides a summary of the Firm's residential mortgage portfolio insured and/or guaranteed by U.S. government agencies, predominantly loans held-for-sale and loans at fair value. The Firm monitors its exposure to certain potential unrecoverable claim payments related to government-insured loans and considers this exposure in estimating the allowance for loan losses.

(in millions)	December 31, 2024	December 31, 2023
Current	**$ 462**	$ 446
30-89 days past due	**72**	102
90 or more days past due	**121**	182
Total government guaranteed loans	**$ 655**	$ 730

Geographic composition and current estimated loan-to-value ratio of residential real estate loans

At December 31, 2024, $217.7 billion, or 70% of the total retained residential real estate loan portfolio, was concentrated in California, New York, Florida, Texas and Massachusetts, compared to $228.4 billion, or 70% at December 31, 2023.

Average current estimated loan-to-value ("LTV") ratios have improved, reflecting an increase in home prices.

Refer to Note 12 for information on the geographic composition and current estimated LTVs of the Firm's residential real estate loans.

Auto and other: The auto and other loan portfolio, including loans at fair value, generally consists of prime-quality scored auto and business banking loans, other consumer unsecured loans, and overdrafts. The portfolio decreased when compared to December 31, 2023, predominantly due to loan securitizations. Net charge-offs increased compared to the prior year, predominantly due to net charge-offs of scored auto loans of $445 million compared to $357 million for the year ended December 31, 2023, reflecting a decline in used vehicle valuations. Refer to Note 14 for further information on securitization activity.

Nonperforming assets

The following table presents information as of December 31, 2024 and 2023, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[(a)]

December 31, (in millions)	2024	2023
Nonaccrual loans		
Residential real estate	**$ 3,665**	$ 4,015
Auto and other	**261**	188
Total nonaccrual loans	**3,926**	4,203
Assets acquired in loan satisfactions		
Real estate owned	**78**	120
Other	**34**	42
Total assets acquired in loan satisfactions	**112**	162
Total nonperforming assets	**$ 4,038**	$ 4,365

(a) Excludes mortgage loans past due and insured by U.S. government agencies, which are primarily 90 or more days past due. These loans have been excluded based upon the government guarantee. At December 31, 2024 and 2023, mortgage loans 90 or more days past due and insured by U.S. government agencies were $121 million and $182 million, respectively.

Nonaccrual loans

The following table presents changes in consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2024 and 2023.

Nonaccrual loan activity

Year ended December 31, (in millions)	2024	2023
Beginning balance	**$ 4,203**	$ 4,325
Additions:	**3,225**	2,894
Reductions:		
Principal payments and other	**894**	1,030
Sales	**803**	276
Charge-offs	**665**	472
Returned to performing status	**963**	1,052
Foreclosures and other liquidations	**177**	186
Total reductions	**3,502**	3,016
Net changes	**(277)**	(122)
Ending balance	**$ 3,926**	$ 4,203

Refer to Note 12 for further information about the consumer credit portfolio, including information about delinquencies, other credit quality indicators and loans that were in the process of active or suspended foreclosure.

Credit card

Total credit card loans increased from December 31, 2023 reflecting growth from new accounts and revolving balances. The December 31, 2024 30+ and 90+ day delinquency rates of 2.17% and 1.14%, respectively, increased compared to the December 31, 2023 30+ and 90+ day delinquency rates of 2.14% and 1.05%, respectively, in line with the Firm's expectations. Net charge-offs increased for the year ended December 31, 2024 compared to the prior year reflecting the seasoning of vintages originated in recent years, credit normalization and balance growth.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm's allowance for loan losses includes the estimated uncollectible portion of accrued and billed interest and fee income.

Geographic and FICO composition of credit card loans

At December 31, 2024, $109.0 billion, or 47% of the total retained credit card loan portfolio, was concentrated in California, Texas, New York, Florida and Illinois, compared to $98.1 billion, or 46%, at December 31, 2023.

Refer to Note 12 for further information about this portfolio, including information about delinquencies, geographic and FICO composition.

WHOLESALE CREDIT PORTFOLIO

In its wholesale businesses, the Firm is exposed to credit risk primarily through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services (such as cash management and clearing activities), securities financing activities and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans that it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure, inclusive of collateral where applicable, and of industry, product and client concentrations. Refer to the industry discussion on pages 128–131 for further information.

The Firm's wholesale credit portfolio includes exposure held in CIB, AWM and Corporate, and risk-rated exposure held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.

As of December 31, 2024, loans increased $19.8 billion, driven by higher loans in CIB and higher securities-based lending in AWM. Lending-related commitments decreased $5.3 billion, with decreases in AWM and CCB, largely offset by higher commitments in CIB.

As of December 31, 2024, nonperforming exposure increased by $2.3 billion, predominantly driven by Real Estate, concentrated in Office, Healthcare and Consumer & Retail, in each case resulting from downgrades.

For the year ended December 31, 2024, wholesale net charge-offs were $822 million, largely driven by Real Estate, concentrated in Office, and client-specific charge-offs across multiple industries including Consumer & Retail and Individuals.

Wholesale credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming	
	2024	2023	**2024**	2023
Loans retained	**$ 690,396**	$ 672,472	**$ 3,942**	$ 2,346
Loans held-for-sale	**6,103**	3,498	**5**	89
Loans at fair value	**25,819**	26,520	**964**	279
Loans	**722,318**	702,490	**4,911**	2,714
Derivative receivables	**60,967**	54,864	**145**	364
Receivables from customers[a]	**51,929**	47,625	**—**	—
Total wholesale credit-related assets	**835,214**	804,979	**5,056**	3,078
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**206**	154
Other	**NA**	NA	**—**	—
Total assets acquired in loan satisfactions	**NA**	NA	**206**	154
Lending-related commitments	**531,467**	536,786	**737**	464
Total wholesale credit portfolio	**$1,366,681**	$1,341,765	**$ 5,999**	$ 3,696
Credit derivatives and credit-related notes used in credit portfolio management activities[b]	**$ (40,888)**	$ (36,989)	**$ —**	$ —
Liquid securities and other cash collateral held against derivatives	**(28,160)**	(22,461)	**NA**	NA

(a) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM; these are reported within accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives and credit-related notes used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Refer to Credit derivatives on page 136 and Note 5 for additional information.

Wholesale credit exposure – maturity and ratings profile

The following tables present the maturity and internal risk ratings profiles of the wholesale credit portfolio as of December 31, 2024 and 2023. The Firm generally considers internal ratings with qualitative characteristics equivalent to BBB-/Baa3 or higher as investment grade, and takes into consideration collateral and structural support when determining the internal risk rating for each credit facility. Refer to Note 12 for further information on internal risk ratings.

	Maturity profile[d]				Ratings profile			
December 31, 2024 (in millions, except ratios)	1 year or less	After 1 year through 5 years	After 5 years	Total	Investment-grade	Noninvestment-grade	Total	Total % of IG
Loans retained	**$ 225,982**	**$ 289,199**	**$ 175,215**	**$ 690,396**	**$ 471,670**	**$ 218,726**	**$ 690,396**	**68 %**
Derivative receivables				**60,967**			**60,967**	
Less: Liquid securities and other cash collateral held against derivatives				**(28,160)**			**(28,160)**	
Total derivative receivables, net of collateral	**11,515**	**7,418**	**13,874**	**32,807**	**24,707**	**8,100**	**32,807**	**75**
Lending-related commitments	**121,283**	**384,529**	**25,655**	**531,467**	**352,082**	**179,385**	**531,467**	**66**
Subtotal	**358,780**	**681,146**	**214,744**	**1,254,670**	**848,459**	**406,211**	**1,254,670**	**68**
Loans held-for-sale and loans at fair value[a]				**31,922**			**31,922**	
Receivables from customers				**51,929**			**51,929**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$1,338,521**			**$ 1,338,521**	
Credit derivatives and credit-related notes used in credit portfolio management activities[b][c]	**$ (5,442)**	**$ (33,751)**	**$ (1,695)**	**$ (40,888)**	**$ (31,691)**	**$ (9,197)**	**$ (40,888)**	**78 %**

	Maturity profile[d]				Ratings profile			
December 31, 2023 (in millions, except ratios)	1 year or less	After 1 year through 5 years	After 5 years	Total	Investment-grade	Noninvestment-grade	Total	Total % of IG
Loans retained	$ 211,104	$ 280,821	$ 180,547	$ 672,472	$ 458,838	$ 213,634	$ 672,472	68 %
Derivative receivables				54,864			54,864	
Less: Liquid securities and other cash collateral held against derivatives				(22,461)			(22,461)	
Total derivative receivables, net of collateral	8,007	8,970	15,426	32,403	24,919	7,484	32,403	77
Lending-related commitments	143,337	368,646	24,803	536,786	341,611	195,175	536,786	64
Subtotal	362,448	658,437	220,776	1,241,661	825,368	416,293	1,241,661	66
Loans held-for-sale and loans at fair value[a]				30,018			30,018	
Receivables from customers				47,625			47,625	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$1,319,304			$ 1,319,304	
Credit derivatives and credit-related notes used in credit portfolio management activities[b][c]	$ (3,311)	$ (28,353)	$ (5,325)	$ (36,989)	$ (28,869)	$ (8,120)	$ (36,989)	78 %

(a) Loans held-for-sale are primarily related to syndicated loans and loans transferred from the retained portfolio.
(b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection used in credit portfolio management activities are executed with investment-grade counterparties. In addition, the Firm obtains credit protection against certain loans in the retained loan portfolio through the issuance of credit-related notes.
(d) The maturity profile of retained loans, lending-related commitments and derivative receivables is generally based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2024, may become payable prior to maturity based on their cash flow profile or changes in market conditions.

Wholesale credit exposure – industry exposures

The Firm focuses on the management and diversification of its industry exposures, and pays particular attention to industries with actual or potential credit concerns.

Exposures that are deemed to be criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. Total criticized exposure, excluding loans held-for-sale and loans at fair value, was $44.7 billion and $41.4 billion at December 31, 2024 and 2023, representing approximately 3.5% and 3.3% of total wholesale credit exposure, respectively; of the $44.7 billion, $39.9 billion was performing. The increase in criticized exposure was driven by Real Estate resulting from downgrades, primarily in Multifamily and Office, and new commitments in Technology and Media, partially offset by Consumer & Retail resulting from net portfolio activity and upgrades.

The table below summarizes by industry the Firm's exposures as of December 31, 2024 and 2023. The industry of risk category is generally based on the client or counterparty's primary business activity. Refer to Note 4 for additional information on industry concentrations.

Wholesale credit exposure – industries[(a)]

As of or for the year ended **December 31, 2024** (in millions)	Credit exposure[(f)(g)]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative and credit-related notes[(h)]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	**$ 207,050**	**$ 143,803**	**$ 50,865**	**$ 10,858**	**$ 1,524**	**$ 913**	**$ 345**	**$ (584)**	**$ —**
Individuals and Individual Entities[(b)]	**144,145**	**118,650**	**24,831**	**217**	**447**	**831**	**122**	**—**	**—**
Asset Managers	**135,541**	**101,150**	**34,148**	**206**	**37**	**375**	**2**	**—**	**(9,194)**
Consumer & Retail	**129,815**	**62,800**	**60,141**	**6,055**	**819**	**252**	**123**	**(4,320)**	**—**
Technology, Media & Telecommunications	**84,716**	**45,021**	**28,629**	**10,592**	**474**	**79**	**94**	**(4,800)**	**—**
Industrials	**72,530**	**37,572**	**30,912**	**3,807**	**239**	**185**	**91**	**(2,312)**	**—**
Healthcare	**64,224**	**44,135**	**17,062**	**2,219**	**808**	**245**	**56**	**(3,286)**	**(34)**
Banks & Finance Companies	**61,287**	**36,884**	**24,119**	**257**	**27**	**36**	**—**	**(702)**	**(729)**
Utilities	**35,871**	**24,205**	**10,256**	**1,273**	**137**	**1**	**—**	**(2,700)**	**—**
State & Municipal Govt[(c)]	**35,039**	**33,303**	**1,711**	**9**	**16**	**90**	**—**	**(2)**	**(1)**
Automotive	**34,336**	**22,015**	**11,353**	**931**	**37**	**121**	**1**	**(997)**	**—**
Oil & Gas	**31,724**	**19,053**	**12,479**	**188**	**4**	**9**	**(3)**	**(1,711)**	**(2)**
Insurance	**24,267**	**17,847**	**6,198**	**222**	**—**	**2**	**—**	**(1,077)**	**(9,184)**
Chemicals & Plastics	**20,782**	**11,013**	**8,152**	**1,521**	**96**	**31**	**14**	**(1,164)**	**—**
Transportation	**17,019**	**9,462**	**7,135**	**391**	**31**	**17**	**(20)**	**(658)**	**—**
Metals & Mining	**15,860**	**7,373**	**7,860**	**590**	**37**	**9**	**—**	**(246)**	**(2)**
Central Govt	**13,862**	**13,580**	**157**	**125**	**—**	**4**	**—**	**(1,490)**	**(2,051)**
Securities Firms	**9,443**	**5,424**	**4,014**	**5**	**—**	**—**	**—**	**(13)**	**(2,635)**
Financial Markets Infrastructure	**4,446**	**4,201**	**245**	**—**	**—**	**—**	**—**	**(1)**	**—**
All other[(d)]	**140,873**	**117,986**	**22,398**	**398**	**91**	**10**	**(3)**	**(14,825)**	**(4,328)**
Subtotal	**$ 1,282,830**	**$ 875,477**	**$ 362,665**	**$ 39,864**	**$ 4,824**	**$ 3,210**	**$ 822**	**$ (40,888)**	**$ (28,160)**
Loans held-for-sale and loans at fair value	**31,922**								
Receivables from customers	**51,929**								
Total[(e)]	**$ 1,366,681**								

As of or for the year ended December 31, 2023 (in millions)	Credit exposure[f][g]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative and credit-related notes[h]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 208,261	$ 148,866	$ 50,190	$ 8,558	$ 647	$ 717	$ 275	$ (574)	$ —
Individuals and Individual Entities[b]	145,849	110,673	34,261	334	581	861	10	—	—
Asset Managers	129,574	83,857	45,623	90	4	201	1	—	(7,209)
Consumer & Retail	127,086	60,168	58,606	7,863	449	318	161	(4,204)	—
Technology, Media & Telecommunications	77,296	40,468	27,094	9,388	346	36	81	(4,287)	—
Industrials	75,092	40,951	30,586	3,419	136	213	31	(2,949)	—
Healthcare	65,025	43,163	18,396	3,005	461	130	17	(3,070)	—
Banks & Finance Companies	57,177	33,881	22,744	545	7	9	277	(511)	(412)
Utilities	36,061	25,242	9,929	765	125	1	(3)	(2,373)	—
State & Municipal Govt[c]	35,986	33,561	2,390	27	8	31	—	(4)	—
Automotive	33,977	23,152	10,060	640	125	59	—	(653)	—
Oil & Gas	34,475	18,276	16,076	111	12	45	11	(1,927)	(5)
Insurance	20,501	14,503	5,700	298	—	2	—	(961)	(6,898)
Chemicals & Plastics	20,773	11,353	8,352	916	152	106	2	(1,045)	—
Transportation	16,060	8,865	5,943	1,196	56	23	(26)	(574)	—
Metals & Mining	15,508	8,403	6,514	536	55	12	44	(229)	—
Central Govt	17,704	17,264	312	127	1	—	—	(3,490)	(2,085)
Securities Firms	8,689	4,570	4,118	1	—	—	—	(14)	(2,765)
Financial Markets Infrastructure	4,251	4,052	199	—	—	—	—	—	—
All other[d]	134,777	115,711	18,618	439	9	21	(2)	(10,124)	(3,087)
Subtotal	$ 1,264,122	$ 846,979	$ 375,711	$ 38,258	$ 3,174	$ 2,785	$ 879	$ (36,989)	$ (22,461)
Loans held-for-sale and loans at fair value	30,018								
Receivables from customers	47,625								
Total[e]	$ 1,341,765								

(a) The industry rankings presented in the table as of December 31, 2023, are based on the industry rankings of the corresponding exposures at December 31, 2024, not actual rankings of such exposures at December 31, 2023.
(b) Individuals and Individual Entities predominantly consists of Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB, and includes exposure to personal investment companies and personal and testamentary trusts.
(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2024 and 2023, noted above, the Firm held: $6.1 billion and $5.9 billion, respectively, of trading assets; $17.9 billion and $21.4 billion, respectively, of AFS securities; and $9.3 billion and $9.9 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(d) All other includes: SPEs and Private education and civic organizations, representing approximately 94% and 6%, respectively, at both December 31, 2024 and 2023.
(e) Excludes cash placed with banks of $459.2 billion and $614.1 billion, at December 31, 2024 and 2023, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(f) Credit exposure is net of risk participations and excludes the benefit of credit derivatives and credit-related notes used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.
(g) Credit exposure includes held-for-sale and fair value option elected lending-related commitments.
(h) Represents the net notional amounts of protection purchased and sold through credit derivatives and credit-related notes used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

Presented below is additional detail on certain of the Firm's industry exposures.

Real Estate

Real Estate exposure was $207.1 billion as of December 31, 2024. Criticized exposure increased by $3.2 billion from $9.2 billion at December 31, 2023 to $12.4 billion at December 31, 2024, predominantly driven by downgrades, primarily in Multifamily and Office.

	December 31, 2024				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Multifamily[a]	**$ 124,074**	**$ 7**	**$ 124,081**	**77 %**	**92 %**
Industrial	**19,092**	**17**	**19,109**	**65**	**72**
Other Income Producing Properties[b]	**16,411**	**158**	**16,569**	**50**	**63**
Office	**16,331**	**29**	**16,360**	**47**	**81**
Services and Non Income Producing	**14,047**	**57**	**14,104**	**62**	**46**
Retail	**12,230**	**23**	**12,253**	**77**	**75**
Lodging	**4,555**	**19**	**4,574**	**31**	**53**
Total Real Estate Exposure[c]	**$ 206,740**	**$ 310**	**$ 207,050**	**69 %**	**82 %**

	December 31, 2023				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Multifamily[a]	$ 121,946	$ 21	$ 121,967	79 %	90 %
Industrial	20,254	18	20,272	70	72
Other Income Producing Properties[b]	15,542	208	15,750	55	63
Office	16,462	32	16,494	51	81
Services and Non Income Producing	16,145	74	16,219	62	46
Retail	12,763	48	12,811	75	73
Lodging	4,729	19	4,748	30	48
Total Real Estate Exposure	$ 207,841	$ 420	$ 208,261	71 %	80 %

(a) Total Multifamily exposure is approximately 99% performing. Multifamily exposure is largely in California.
(b) Other Income Producing Properties consists of clients with diversified property types or other property types outside of categories listed in the table above.
(c) Real Estate exposure is approximately 84% secured; unsecured exposure is largely investment-grade primarily to Real Estate Investment Trusts ("REITs") and Real Estate Operating Companies ("REOCs") whose underlying assets are generally diversified.
(d) Represents drawn exposure as a percentage of credit exposure.

Consumer & Retail

Consumer & Retail exposure was $129.8 billion as of December 31, 2024. Criticized exposure decreased by $1.4 billion from $8.3 billion at December 31, 2023 to $6.9 billion at December 31, 2024, driven by net portfolio activity and upgrades, largely offset by downgrades.

	December 31, 2024				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Food and Beverage	**$ 34,774**	**$ 683**	**$ 35,457**	**61 %**	**34 %**
Retail	**34,917**	**261**	**35,178**	**51**	**31**
Business and Consumer Services[a]	**34,534**	**412**	**34,946**	**42**	**41**
Consumer Hard Goods	**13,796**	**208**	**14,004**	**43**	**35**
Leisure[b]	**10,186**	**44**	**10,230**	**26**	**43**
Total Consumer & Retail[c]	**$ 128,207**	**$ 1,608**	**$ 129,815**	**48 %**	**36 %**

	December 31, 2023				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Food and Beverage	$ 32,256	$ 930	$ 33,186	57 %	36 %
Retail	36,042	334	36,376	51	30
Business and Consumer Services[a]	34,822	392	35,214	42	42
Consumer Hard Goods	13,169	197	13,366	43	33
Leisure[b]	8,784	160	8,944	25	47
Total Consumer & Retail	$ 125,073	$ 2,013	$ 127,086	47 %	36 %

(a) Retail consists of Home Improvement & Specialty Retailers, Restaurants, Discount & Drug Stores, Specialty Apparel, Department Stores and Supermarkets.
(b) Leisure consists of Arts & Culture, Travel Services, Gaming and Sports & Recreation. As of December 31, 2024, approximately 90% of the noninvestment-grade Leisure portfolio is secured.
(c) Consumer & Retail exposure is approximately 57% secured; unsecured exposure is approximately 80% investment-grade.
(d) Represents drawn exposure as a percent of credit exposure.

Oil & Gas

Oil & Gas exposure was $31.7 billion as of December 31, 2024. Criticized exposure was $192 million and $123 million at December 31, 2024 and 2023, respectively.

	December 31, 2024				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Exploration & Production ("E&P") and Oil field Services	**$ 14,265**	**$ 848**	**$ 15,113**	**55 %**	**27 %**
Other Oil & Gas[a]	**16,306**	**305**	**16,611**	**65**	**19**
Total Oil & Gas[b]	**$ 30,571**	**$ 1,153**	**$ 31,724**	**60 %**	**23 %**

	December 31, 2023				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Exploration & Production ("E&P") and Oil field Services	$ 18,121	$ 536	$ 18,657	51 %	26 %
Other Oil & Gas[a]	15,649	169	15,818	55	22
Total Oil & Gas	$ 33,770	$ 705	$ 34,475	53 %	25 %

(a) Other Oil & Gas includes Integrated Oil & Gas companies, Midstream/Oil Pipeline companies and refineries.
(b) Oil & Gas exposure is approximately 33% secured, and includes reserve-based lending to the Exploration & Production sub-sector; unsecured exposure is approximately 69% investment-grade.
(c) Represents drawn exposure as a percent of credit exposure.

Loans

In its wholesale businesses, the Firm provides loans to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals. Refer to Note 12 for a further discussion on loans, including information about delinquencies, loan modifications and other credit quality indicators.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2024 and 2023. Since December 31, 2023, nonaccrual loan exposure increased by $2.2 billion, predominantly driven by Real Estate, concentrated in Office, Healthcare and Consumer & Retail, in each case resulting from downgrades.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	2024	2023
Beginning balance	**$ 2,714**	$ 2,395
Additions	**5,841**	3,543
Reductions:		
Paydowns and other	**2,387**	1,336
Gross charge-offs	**780**	965
Returned to performing status	**392**	616
Sales	**85**	307
Total reductions	**3,644**	3,224
Net changes	**2,197**	319
Ending balance	**$ 4,911**	$ 2,714

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2024 and 2023. The amounts in the table below do not include gains or losses from sales of nonaccrual loans recognized in noninterest revenue.

Wholesale net charge-offs/(recoveries)

Year ended December 31, (in millions, except ratios)	2024	2023
Loans		
Average loans retained	**$ 673,310**	$ 646,875
Gross charge-offs	**1,022**	1,011
Gross recoveries collected	**(200)**	(132)
Net charge-offs/(recoveries)	**822**	879
Net charge-off/(recovery) rate	**0.12 %**	0.14 %

Maturities and sensitivity to changes in interest rates

The table below sets forth wholesale loan maturities and the distribution between fixed and floating interest rates based on the stated terms of the loan agreements by loan class. Refer to Note 12 for further information on loan classes.

December 31, 2024 (in millions, except ratios)	1 year or less[b]	After 1 year through 5 years	After 5 years through 15 years	After 15 years	Total
Wholesale loans:					
Secured by real estate	**$ 12,474**	**$ 57,125**	**$ 57,967**	**$ 42,597**	**$ 170,163**
Commercial and industrial	**55,731**	**109,839**	**8,587**	**94**	**174,251**
Other	**182,722**	**150,346**	**36,281**	**8,555**	**377,904**
Total wholesale loans	**$250,927**	**$ 317,310**	**$ 102,835**	**$ 51,246**	**$ 722,318**
Loans due after one year at fixed interest rates					
Secured by real estate		**$ 13,119**	**$ 17,943**	**$ 935**	
Commercial and industrial		**3,964**	**1,231**	**7**	
Other		**26,929**	**15,542**	**5,824**	
Loans due after one year at variable interest rates[a]					
Secured by real estate		**$ 44,006**	**$ 40,024**	**$ 41,662**	
Commercial and industrial		**105,875**	**7,356**	**87**	
Other		**123,417**	**20,739**	**2,731**	
Total wholesale loans		**$ 317,310**	**$ 102,835**	**$ 51,246**	

(a) Includes loans that have an initial fixed interest rate that resets to a variable rate as the variable rate will be the prevailing rate over the life of the loan.
(b) Includes loans held-for-sale, demand loans and overdrafts.

The following table presents net charge-offs/recoveries, average retained loans and net charge-off/recovery rate by loan class for the years ended December 31, 2024 and 2023.

	Year ended December 31,							
	Secured by real estate		Commercial and industrial		Other		Total	
(in millions, except ratios)	**2024**	2023	**2024**	2023	**2024**	2023	**2024**	2023
Net charge-offs/(recoveries)	**$ 313**	$ 178	**$ 381**	$ 370	**$ 128**	$ 331	**$ 822**	$ 879
Average retained loans	**162,653**	151,214	**169,363**	170,503	**341,294**	325,158	**673,310**	646,875
Net charge-off/(recovery) rate	**0.19 %**	0.12 %	**0.22 %**	0.22 %	**0.04 %**	0.10 %	**0.12 %**	0.14 %

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to address the financing needs of its clients. The contractual amounts of these financial instruments represent the maximum possible credit risk should the clients draw down on these commitments or when the Firm fulfills its obligations under these guarantees, and the clients subsequently fail to perform according to the terms of these contracts. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn upon or a default occurring. As a result, the Firm does not believe that the total contractual amount of these wholesale lending-related commitments is representative of the Firm's expected future credit exposure or funding requirements. Refer to Note 28 for further information on wholesale lending-related commitments.

Receivables from customers

Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (including cash on deposit, and primarily liquid and readily marketable debt or equity securities). To manage its credit risk, the Firm establishes margin requirements and monitors the required margin levels on an ongoing basis, and requires clients to deposit additional cash or other collateral, or to reduce positions, when appropriate. Credit risk arising from lending activities subject to collateral maintenance requirements is generally mitigated by factors such as the short-term nature of the activity, the fair value of collateral held and the Firm's right to call for, and the borrower's obligation to provide, additional margin when the fair value of the collateral declines. Because of these mitigating factors, these receivables generally do not require an allowance for credit losses. However, if in management's judgment, an allowance for credit losses is required, the Firm estimates expected credit losses based on the value of the collateral and probability of borrower default. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

Refer to Note 13 for further information on the Firm's accounting policies for the allowance for credit losses.

Derivative contracts

Derivatives enable clients and counterparties to manage risk, including credit risk and risks arising from fluctuations in interest rates, foreign exchange and equities and commodities prices. The Firm makes markets in derivatives in order to meet these needs and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. The Firm also uses derivative instruments to manage its own credit risk and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For over-the-counter ("OTC") derivatives, the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options, and cleared over-the-counter ("OTC-cleared") derivatives, the Firm can also be exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative contracts through the use of legally enforceable master netting arrangements and collateral agreements. The percentage of the Firm's OTC derivative transactions subject to collateral agreements — excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity and centrally cleared trades that are settled daily — was approximately 86% and 87% at December 31, 2024 and 2023, respectively. Refer to Note 5 for additional information on the Firm's use of collateral agreements and for a further discussion of derivative contracts, counterparties and settlement types.

The fair value of derivative receivables reported on the Consolidated balance sheets was $61.0 billion and $54.9 billion at December 31, 2024 and 2023, respectively. The increase was primarily as a result of market movements. Derivative receivables represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and the related cash collateral held by the Firm.

In addition, the Firm holds liquid securities and other cash collateral that may be used as security when the fair value of the client's exposure is in the Firm's favor. For these purposes, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule.

In management's view, the appropriate measure of current credit risk should also take into consideration other collateral, which generally represents securities that do not qualify as high quality liquid assets under the LCR rule. The benefits of these additional collateral amounts for each counterparty are subject to a legally enforceable master netting agreement and limited to the net amount of the derivative receivables for each counterparty.

The Firm also holds additional collateral (primarily cash, G7 government securities, other liquid government agency and guaranteed securities, and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the receivables balances and is not included in the tables below, it is available as security against potential exposure that could arise should the fair value of the client's derivative contracts move in the Firm's favor. Refer to Note 5 for additional information on the Firm's use of collateral agreements for derivative transactions.

The following tables summarize the net derivative receivables and the internal ratings profile for the periods presented.

Derivative receivables

December 31, (in millions)		2024		2023
Total, net of cash collateral	**$**	**60,967**	$	54,864
Liquid securities and other cash collateral held against derivative receivables		**(28,160)**		(22,461)
Total, net of liquid securities and other cash collateral	**$**	**32,807**	$	32,403
Other collateral held against derivative receivables		**(1,021)**		(993)
Total, net of collateral	**$**	**31,786**	$	31,410

Ratings profile of derivative receivables

		2024			2023	
December 31, (in millions, except ratios)		Exposure net of collateral	% of exposure net of collateral		Exposure net of collateral	% of exposure net of collateral
Investment-grade	**$**	**23,783**	**75 %**	$	24,004	76 %
Noninvestment-grade		**8,003**	**25**		7,406	24
Total	**$**	**31,786**	**100 %**	$	31,410	100 %

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture this variability, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak represents a conservative measure of potential derivative exposure, including the benefit of collateral, to a counterparty calculated in a manner that is broadly equivalent to a 97.5% confidence level over the life of the transaction. Peak is the primary measure used by the Firm for setting credit limits for derivative contracts, senior management reporting and derivatives exposure management.

DRE exposure is a measure that expresses the risk of derivative exposure, including the benefit of collateral, on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak.

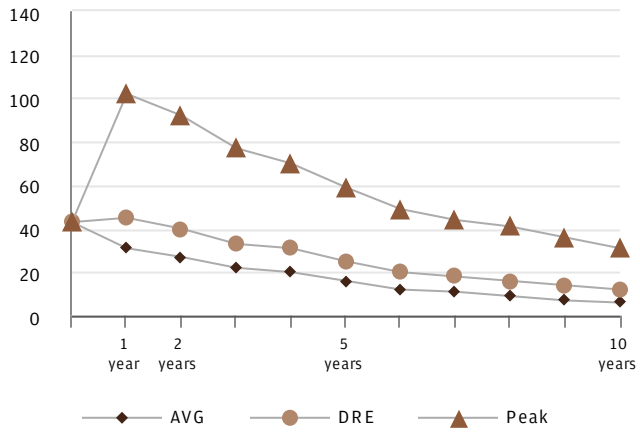
Finally, AVG is a measure of the expected fair value of the Firm's derivative exposures, including the benefit of collateral, at future time periods. AVG over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit risk capital and CVA, as further described below.

The fair value of the Firm's derivative receivables incorporates CVA to reflect the credit quality of counterparties. CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process for derivatives exposures takes into consideration the potential impact of wrong-way risk, which is broadly defined as the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with a particular counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative contracts, as well as interest rate, foreign exchange, equity and commodity derivative contracts.

The below graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the Peak, DRE and AVG metrics. The three measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures

December 31, 2024
(in billions)



Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user to manage the Firm's own credit risk associated with various exposures.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and lending-related commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management activities"). Information on credit portfolio management activities is provided in the table below.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities.

Credit derivatives and credit-related notes used in credit portfolio management activities

	Notional amount of protection purchased and sold[a]	
December 31, (in millions)	**2024**	2023
Credit derivatives and credit-related notes used to manage:		
Loans and lending-related commitments	**$ 25,216**	$ 24,157
Derivative receivables	**15,672**	12,832
Credit derivatives and credit-related notes used in credit portfolio management activities	**$ 40,888**	$ 36,989

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of credit default swaps ("CDS") as a hedge against the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm. Refer to Credit derivatives in Note 5 for further information on credit derivatives and derivatives used in credit portfolio management activities.

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The Firm's allowance for credit losses generally consists of:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated) and is presented separately on the Consolidated balance sheets,
- the allowance for lending-related commitments, which is reflected in accounts payable and other liabilities on the Consolidated balance sheets, and
- the allowance for credit losses on investment securities, which is reflected in investment securities on the Consolidated balance sheets.

Discussion of changes in the allowance

The allowance for credit losses as of December 31, 2024 was $26.9 billion, reflecting a net addition of $2.1 billion from December 31, 2023.

The net addition to the allowance for credit losses included:

- $2.1 billion in **consumer**, reflecting:
  - a $2.2 billion net addition in Card Services, predominantly driven by loan growth, reflecting higher revolving balances, including the seasoning of vintages originated in recent years,

  partially offset by

  - a $125 million net reduction in Home Lending in the first quarter of 2024, and
- a net reduction of $30 million in **wholesale**, reflecting:
  - changes in certain macroeconomic variables, an update to loss assumptions on certain loans in Markets, and a reduction due to charge-offs largely from collateral-dependent loans,

  predominantly offset by

  - net downgrade activity, primarily in Real Estate, and the impact of incorporating the First Republic portfolio into the Firm's modeled credit loss estimates in the second quarter of 2024.

The Firm's qualitative adjustments continued to include additional weight placed on the adverse scenarios to reflect ongoing uncertainties and downside risks related to the geopolitical and macroeconomic environment.

The Firm's allowance for credit losses is estimated using a weighted average of five internally developed macroeconomic scenarios. The adverse scenarios incorporate more punitive macroeconomic factors than the central case assumptions provided in the table below, resulting in:

- a weighted average U.S. unemployment rate peaking at 5.5% in the fourth quarter of 2025, and
- a weighted average U.S. real GDP level that is 1.9% lower than the central case at the end of the second quarter of 2026.

The following table presents the Firm's central case assumptions for the periods presented:

	Central case assumptions at December 31, 2024		
	2Q25	**4Q25**	**2Q26**
U.S. unemployment rate[(a)]	**4.5 %**	**4.3 %**	**4.3 %**
YoY growth in U.S. real GDP[(b)]	**2.0 %**	**1.9 %**	**1.8 %**

	Central case assumptions at December 31, 2023		
	2Q24	4Q24	2Q25
U.S. unemployment rate[(a)]	4.1 %	4.4 %	4.1 %
YoY growth in U.S. real GDP[(b)]	1.8 %	0.7 %	1.0 %

(a) Reflects quarterly average of forecasted U.S. unemployment rate.

(b) The year over year growth in U.S. real GDP in the forecast horizon of the central scenario is calculated as the percentage change in U.S. real GDP levels from the prior year.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.

Refer to Consumer Credit Portfolio on pages 120–125, Wholesale Credit Portfolio on pages 126–136 and Note 12 for additional information on the consumer and wholesale credit portfolios.

Refer to Critical Accounting Estimates Used by the Firm on pages 161–164 for further information on the allowance for credit losses and related management judgments.

Allowance for credit losses and related information

Year ended December 31, (in millions, except ratios)	2024 Consumer, excluding credit card	2024 Credit card	2024 Wholesale	2024 Total	2023 Consumer, excluding credit card	2023 Credit card	2023 Wholesale	2023 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 1,856**	**$ 12,450**	**$ 8,114**	**$ 22,420**	$ 2,040	$ 11,200	$ 6,486	$ 19,726
Cumulative effect of a change in accounting principle[a]	**NA**	**NA**	**NA**	**NA**	(489)	(100)	2	(587)
Gross charge-offs	**1,299**	**8,198**	**1,022**	**10,519**	1,151	5,491	1,011	7,653
Gross recoveries collected	**(625)**	**(1,056)**	**(200)**	**(1,881)**	(519)	(793)	(132)	(1,444)
Net charge-offs	**674**	**7,142**	**822**	**8,638**	632	4,698	879	6,209
Provision for loan losses	**624**	**9,292**	**578**	**10,494**	936	6,048	2,484	9,468
Other	**1**	**—**	**68**	**69**	1	—	21	22
Ending balance at December 31,	**$ 1,807**	**$ 14,600**	**$ 7,938**	**$ 24,345**	$ 1,856	$ 12,450	$ 8,114	$ 22,420
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 75**	**$ —**	**$ 1,899**	**$ 1,974**	$ 76	$ —	$ 2,306	$ 2,382
Provision for lending-related commitments	**7**	**—**	**121**	**128**	(1)	—	(407)	(408)
Other	**—**	**—**	**(1)**	**(1)**	—	—	—	—
Ending balance at December 31,	**$ 82**	**$ —**	**$ 2,019**	**$ 2,101**	$ 75	$ —	$ 1,899	$ 1,974
Impairment methodology								
Asset-specific[b]	**$ (728)**	**$ —**	**$ 526**	**$ (202)**	$ (876)	$ —	$ 392	$ (484)
Portfolio-based	**2,535**	**14,600**	**7,412**	**24,547**	2,732	12,450	7,722	22,904
Total allowance for loan losses	**$ 1,807**	**$ 14,600**	**$ 7,938**	**$ 24,345**	$ 1,856	$ 12,450	$ 8,114	$ 22,420
Impairment methodology								
Asset-specific	**$ —**	**$ —**	**$ 109**	**$ 109**	$ —	$ —	$ 89	$ 89
Portfolio-based	**82**	**—**	**1,910**	**1,992**	75	—	1,810	1,885
Total allowance for lending-related commitments	**$ 82**	**$ —**	**$ 2,019**	**$ 2,101**	$ 75	$ —	$ 1,899	$ 1,974
Total allowance for investment securities	**NA**	**NA**	**NA**	**$ 152**	NA	NA	NA	$ 128
Total allowance for credit losses[c]	**$ 1,889**	**$ 14,600**	**$ 9,957**	**$ 26,598**	$ 1,931	$ 12,450	$ 10,013	$ 24,522
Memo:								
Retained loans, end of period	**$376,334**	**$232,860**	**$690,396**	**$1,299,590**	$397,275	$ 211,123	$ 672,472	$1,280,870
Retained loans, average	**384,001**	**214,033**	**673,310**	**1,271,344**	364,061	191,412	646,875	1,202,348
Credit ratios								
Allowance for loan losses to retained loans	**0.48 %**	**6.27 %**	**1.15 %**	**1.87 %**	0.47 %	5.90 %	1.21 %	1.75 %
Allowance for loan losses to retained nonaccrual loans[d]	**56**	**NA**	**201**	**339**	51	NA	346	374
Allowance for loan losses to retained nonaccrual loans excluding credit card	**56**	**NA**	**201**	**136**	51	NA	346	166
Net charge-off rates	**0.18**	**3.34**	**0.12**	**0.68**	0.17	2.45	0.14	0.52

(a) Represents the impact to the allowance for loan losses upon the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance. Refer to Note 1 for further information.
(b) Includes collateral-dependent loans, including those for which foreclosure is deemed probable, and nonaccrual risk-rated loans.
(c) At December 31, 2024 and 2023, in addition to the allowance for credit losses in the table above, the Firm also had an allowance for credit losses of $268 million and $243 million, respectively, associated with certain accounts receivable in CIB.
(d) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Allocation of allowance for loan losses

The table below presents a breakdown of the allowance for loan losses by loan class. Refer to Note 12 for further information on loan classes.

December 31, (in millions, except ratios)	2024		2023	
	Allowance for loan losses	Percent of retained loans to total retained loans	Allowance for loan losses	Percent of retained loans to total retained loans
Residential real estate	**$ 666**	**24 %**	$ 817	25 %
Auto and other	**1,141**	**5**	1,039	6
Consumer, excluding credit card	**1,807**	**29**	1,856	31
Credit card	**14,600**	**18**	12,450	16
Total consumer	**16,407**	**47**	14,306	47
Secured by real estate	**2,978**	**12**	2,997	13
Commercial and industrial	**3,350**	**13**	3,519	13
Other	**1,610**	**28**	1,598	27
Total wholesale	**7,938**	**53**	8,114	53
Total	**$ 24,345**	**100 %**	$ 22,420	100 %

INVESTMENT PORTFOLIO RISK MANAGEMENT

Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio or from principal investments. The investment securities portfolio is predominantly held by Treasury and CIO in connection with the Firm's balance sheet and asset-liability management objectives. Principal investments are predominantly privately-held financial instruments and are managed in the LOBs and Corporate. Investments are typically intended to be held over extended periods and, accordingly, the Firm has no expectation for short-term realized gains with respect to these investments.

Investment securities risk

Investment securities risk includes the exposure associated with a default in the payment of principal and interest. This risk is mitigated given that the investment securities portfolio held by Treasury and CIO predominantly consists of high-quality securities. At December 31, 2024, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $678.3 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings). Refer to Corporate results on pages 88–90 and Note 10 for further information on the investment securities portfolio and internal risk ratings. Refer to Liquidity Risk Management on pages 108–115 for further information on related liquidity risk. Refer to Market Risk Management on pages 141–149 for further information on the market risk inherent in the portfolio.

Governance and oversight

Investment securities risks are governed by the Firm's Risk Appetite framework, and reviewed at the CTC Risk Committee with regular updates provided to the Board Risk Committee.

The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of investment securities in accordance with relevant policies. Approved levels for investment securities are established for each risk category, including capital and credit risks.

Principal investment risk

Principal investments are typically privately-held financial instruments representing ownership interests or other forms of junior capital. In general, principal investments include tax-oriented investments and investments made to enhance or accelerate the Firm's business strategies and exclude those that are consolidated on the Firm's balance sheets. These investments are made by dedicated investing businesses or as part of a broader business strategy. The Firm's principal investments are managed by the LOBs and Corporate and are reflected within their respective financial results. The Firm's investments will continue to evolve based on market circumstances and in line with its strategic initiatives.

The table below presents the aggregate carrying values of the principal investment portfolios as of December 31, 2024 and 2023.

(in billions)	December 31, 2024	December 31, 2023
Tax-oriented investments, primarily in alternative energy and affordable housing[(a)]	**$ 33.3**	$ 28.8
Private equity, various debt and equity instruments, and real assets	**9.1**	10.5
Total carrying value	**$ 42.4**	$ 39.3

(a) Effective January 1, 2024, the Firm adopted updates to the Accounting for Investments in Tax Credit Structures guidance. Refer to Notes 1, 6, 14 and 25 for additional information.

Governance and oversight

The Firm's approach to managing principal investment risk is consistent with the Firm's risk governance structure. The Firm has established a Firmwide risk policy framework for all principal investing activities that includes approval by executives who are independent from the investing businesses, as appropriate.

The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of investments in accordance with relevant policies. As part of the risk governance structure, approved levels for investments are established and monitored for each relevant business or segment in order to manage the overall size of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

Market risk is the risk associated with the effect of changes in market factors such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.

Market Risk Management

Market Risk Management monitors market risks throughout the Firm and defines market risk policies and procedures.

Market Risk Management seeks to facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk Management is responsible for the following functions:

- Maintaining a market risk policy framework
- Independently measuring and monitoring LOB, Corporate, and Firmwide market risk
- Defining, approving and monitoring limits
- Performing stress testing and qualitative risk assessments

Risk measurement

Measures used to capture market risk

There is no single measure to capture market risk and therefore Market Risk Management uses various metrics, both statistical and nonstatistical, to assess risk including:

- Value-at-risk
- Stress testing
- Profit and loss drawdowns
- Earnings-at-risk
- Economic Value Sensitivity
- Other sensitivity-based measures

Risk monitoring and control

Market risk exposure is managed primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, Market Risk Management takes into consideration factors such as market volatility, product liquidity, accommodation of client business, and management judgment. Market Risk Management maintains different levels of limits. Firm level limits include VaR and stress limits. Similarly, LOB and Corporate limits include VaR and stress limits and may be supplemented by certain nonstatistical risk measures such as profit and loss drawdowns. Limits may also be set within the LOBs and Corporate, as well as at the legal entity level.

Market Risk Management sets limits and regularly reviews and updates them as appropriate. Senior management is responsible for reviewing and approving certain of these risk limits on an ongoing basis. Limits that have not been reviewed within specified time periods by Market Risk Management are reported to senior management. The LOBs and Corporate are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner to limit approvers, which include Market Risk Management and senior management. In the event of a breach, Market Risk Management consults with senior members of appropriate groups within the Firm to determine the suitable course of action required to return the applicable positions to compliance, which may include a reduction in risk in order to remedy the breach or granting a temporary increase in limits to accommodate an expected increase in client activity and/or market volatility. Firm, Corporate or LOB-level limit breaches are escalated as appropriate.

Models used to measure market risk are inherently imprecise and are limited in their ability to measure certain risks or to predict losses. This imprecision may be heightened when sudden or severe shifts in market conditions occur. For additional discussion on model uncertainty refer to Estimations and Model Risk Management on page 160.

Market Risk Management periodically reviews the Firm's existing market risk measures to identify opportunities for enhancement, and to the extent appropriate, will calibrate those measures accordingly over time.

The following table summarizes the predominant business activities and related market risks, as well as positions which give rise to market risk and certain measures used to capture those risks, for each LOB and Corporate.

In addition to the predominant business activities, each LOB and Corporate may engage in principal investing activities. To the extent principal investments are deemed market risk sensitive, they are reflected in relevant risk measures and captured in the table below. Refer to Investment Portfolio Risk Management on page 140 for additional discussion on principal investments.

LOBs and Corporate	Predominant business activities	Related market risks	Positions included in Risk Management VaR	Positions included in earnings-at-risk	Positions included in other sensitivity-based measures
CCB	• Originates and services mortgage loans • Originates loans and takes deposits	• Risk from changes in the probability of newly originated mortgage commitments closing • Interest rate risk and prepayment risk	• Mortgage commitments, classified as derivatives • Warehouse loans that are fair value option elected, classified as loans – debt instruments • MSRs • Hedges of mortgage commitments, warehouse loans and MSRs, classified as derivatives • Interest-only and mortgage-backed securities, classified as trading assets debt instruments, and related hedges, classified as derivatives • Fair value option elected liabilities[(b)]	• Retained and held-for-sale loan portfolios • Deposits	• Fair value option elected liabilities DVA[(b)]
CIB[(a)]	• Makes markets and services clients across fixed income, foreign exchange, equities and commodities • Originates loans and takes deposits	• Risk of loss from adverse movements in market prices and implied volatilities across interest rate, foreign exchange, credit, commodity and equity instruments • Basis and correlation risk from changes in the way asset values move relative to one another • Interest rate risk and prepayment risk	• Trading assets/liabilities – debt and marketable equity instruments, and derivatives, including hedges of the retained loan portfolio • Certain securities purchased, loaned or sold under resale agreements and securities borrowed • Fair value option elected liabilities[(b)] • Certain fair value option elected loans • Derivative CVA and associated hedges • Marketable equity investments	• Retained and held-for-sale loan portfolios • Deposits	• Privately held equity and other investments measured at fair value; and certain real estate-related fair value option elected loans • Derivatives FVA and fair value option elected liabilities DVA[(b)] • Credit risk component of CVA and associated hedges for counterparties with credit spreads that have widened to elevated levels
AWM	• Provides initial capital investments in products such as mutual funds and capital invested alongside third-party investors • Originates loans and takes deposits	• Risk from adverse movements in market factors (e.g., market prices, rates and credit spreads) • Interest rate risk and prepayment risk	• Debt securities held in advance of distribution to clients, classified as trading assets - debt instruments • Trading assets/liabilities - derivatives that hedge the retained loan portfolio	• Retained and held-for-sale loan portfolios • Deposits	• Initial seed capital investments and related hedges, classified as derivatives • Certain deferred compensation and related hedges, classified as derivatives • Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AWM (i.e., co-investments), as well as in third-party funds
Corporate	• Manages the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks	• Structural interest rate risk from the Firm's traditional banking activities • Structural non-USD foreign exchange risks	• Derivative positions measured through noninterest revenue in earnings • Marketable equity investments	• Deposits with banks and financing activities • Investment securities portfolio and related interest rate hedges • Cash flow hedges on retained loan portfolios in the LOBs • Long-term and short-term funding and related interest rate hedges • Deposits • Foreign exchange hedges of non-U.S. dollar capital investments	• Privately held equity and other investments measured at fair value • Foreign exchange exposure related to Firm-issued non-USD long-term debt ("LTD") and related hedges

(a) Effective in the second quarter of 2024, the Firm reorganized its reportable business segments by combining the former Corporate & Investment Bank and Commercial Banking business segments to form one reportable segment, the Commercial & Investment Bank ("CIB"). Refer to Business Segment & Corporate Results on pages 70–90 for additional information.
(b) Reflects structured notes in Risk Management VaR and the DVA on structured notes in other sensitivity-based measures.

Value-at-risk

JPMorganChase utilizes value-at-risk ("VaR"), a statistical risk measure, to estimate the potential loss from adverse market moves in the current market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a daily measure of risk that is closely aligned to risk management decisions made by the LOBs and Corporate and, along with other market risk measures, provides the appropriate information needed to respond to risk events.

The Firm's Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. Risk Management VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks and monitoring limits across businesses. VaR results are reported as appropriate to various groups including senior management, the Board Risk Committee and regulators.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual risk factors and/or product types. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio, as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

As VaR is based on historical data, it is an imperfect measure of market risk exposure and potential future losses. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions.

For certain products, specific risk parameters are not captured in VaR due to the lack of liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm therefore considers other nonstatistical measures such as stress testing, in addition to VaR, to capture and manage its market risk positions.

As VaR model calculations require daily data and a consistent source for valuation, the daily market data used may be different than the independent third-party data collected for VCG price testing in its monthly valuation process. For example, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the data sources may differ. Refer to Valuation process in Note 2 for further information on the Firm's valuation process.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and measurements, and other factors. Such changes may affect historical comparisons of VaR results. Refer to Estimations and Model Risk Management on page 160 for information regarding model reviews and approvals.

The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III capital rules. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail-loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III capital rules, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

Refer to JPMorganChase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for additional information on Regulatory VaR and the other components of market risk regulatory capital for the Firm (e.g., VaR-based measure, stressed VaR-based measure and the respective backtesting).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level. VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.

Total VaR

As of or for the year ended December 31,	2024			2023		
(in millions)	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type[a]						
Fixed income	**$ 34**	**$ 26**	**$ 53**	$ 49	$ 31	$ 71
Foreign exchange	**15**	**7**	**23**	12	6	26
Equities	**8**	**4**	**15**	7	3	11
Commodities and other	**8**	**6**	**13**	11	6	19
Diversification benefit to CIB trading VaR [b]	**(32)**	**NM**	**NM**	(42)	NM	NM
CIB trading VaR	**33**	**27**	**42**	37	24	55
Credit Portfolio VaR[c]	**22**	**18**	**28**	14	8	26
Diversification benefit to CIB VaR[b]	**(16)**	**NM**	**NM**	(11)	NM	NM
CIB VaR	**39**	**27**	**52**	40	23	58
CCB VaR	**3**	**1**	**6**	7	1	15
AWM VaR[d]	**9**	**5**	**10**	1	—	10
Corporate VaR[d][e]	**23**	**7**	**102**	12	9	17
Diversification benefit to other VaR[b]	**(10)**	**NM**	**NM**	(6)	NM	NM
Other VaR	**25**	**10**	**101**	14	9	22
Diversification benefit to CIB and other VaR[b]	**(17)**	**NM**	**NM**	(11)	NM	NM
Total VaR	**$ 47**	**$ 30**	**$ 91**	$ 43	$ 26	$ 57

(a) The impact of the business segment reorganization in the second quarter of 2024 was not material to Total CIB VaR. Prior periods have not been revised. Refer to Business Segment & Corporate Results on pages 70–90 for additional information.

(b) Diversification benefit represents the difference between the portfolio VaR and the sum of its individual components. This reflects the non-additive nature of VaR due to imperfect correlation across LOBs, Corporate, and risk types. For maximum and minimum VaR, diversification benefit is not meaningful as the maximum and minimum VaR for each portfolio may have occurred on different trading days than the components.

(c) Includes the derivative CVA, hedges of the CVA and credit protection purchased against certain retained loans and lending-related commitments, which are reported in principal transactions revenue. This VaR does not include the retained loan portfolio, which is not reported at fair value. In line with the Firm's internal model governance, the credit risk component of CVA related to certain counterparties was removed from Credit Portfolio VaR due to the widening of the credit spreads for those counterparties to elevated levels. The related hedges were also removed to maintain consistency. This exposure is now reflected in other sensitivity-based measures.

(d) In the second quarter of 2024, the presentation of Corporate and other LOB VaR was updated to disaggregate AWM VaR due to the increase associated with credit protection purchased against certain retained loans and lending-related commitments. The VaR does not include the retained loan portfolio, which is not reported at fair value.

(e) Includes a legacy private equity position which is publicly traded, as well as Visa C shares which the Firm disposed of in the second and third quarters of 2024. The impact of Visa C shares resulted in elevated average and maximum Corporate VaR, Other VaR and Total VaR. Refer to Executive Overview on pages 54–58 for additional information.

2024 compared with 2023

Average Total VaR increased by $4 million for the year ended December 31, 2024 when compared with the prior year. The increase was predominantly driven by the impact of the Firm's receipt of Visa C shares on Corporate VaR and increases associated with credit protection purchased against certain retained loans and lending-related commitments within Credit Portfolio VaR and AWM VaR, largely offset by market volatility rolling out of the one-year historical look-back period impacting the Fixed income risk type.

The following graph presents daily Risk Management VaR for the four trailing quarters. The increase in VaR and subsequent decline observed in the second quarter of 2024 was primarily driven by changes in Visa C share exposure in the Firm's Corporate VaR.



VaR backtesting

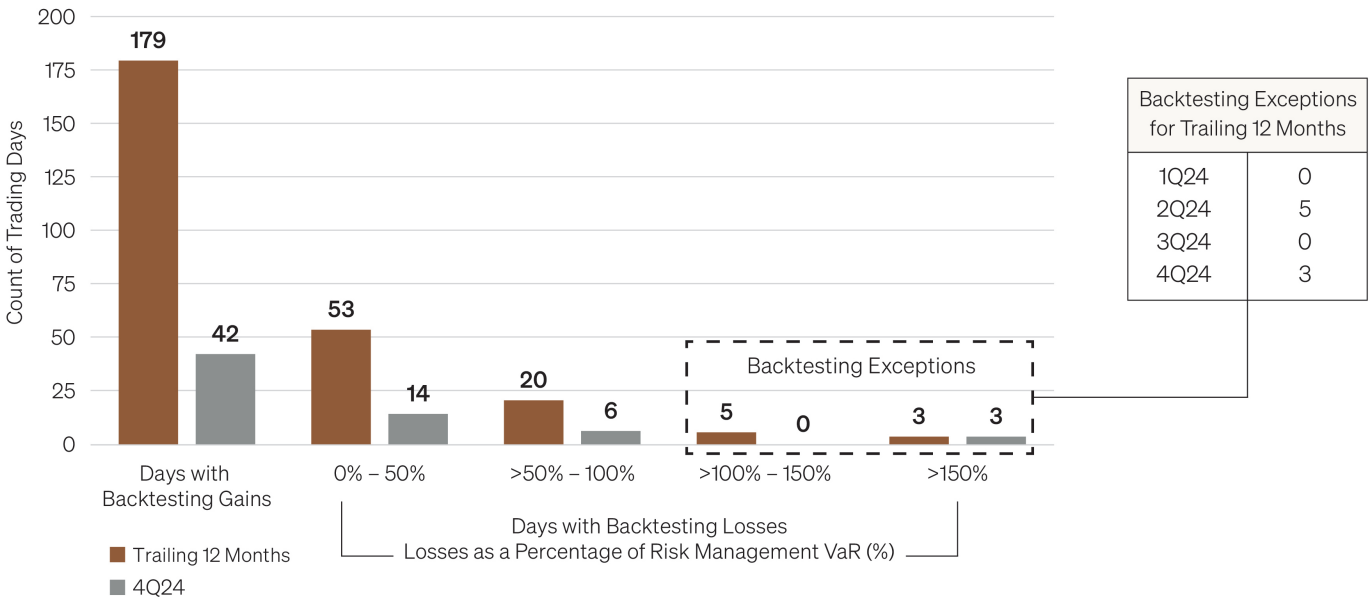
The Firm performs daily VaR model backtesting, which compares the daily Risk Management VaR results with the daily gains and losses that are utilized for VaR backtesting purposes. The gains and losses depicted in the chart below do not reflect the Firm's reported revenue as they exclude certain components of total net revenue, such as those associated with the execution of new transactions (i.e., intraday client-driven trading and intraday risk management activities), fees, commissions, other valuation adjustments and net interest income. These excluded components of total net revenue may more than offset the backtesting gain or loss on a particular day. The definition of backtesting gains and losses above is consistent with the requirements for backtesting under Basel III capital rules.

A backtesting exception occurs when the daily backtesting loss exceeds the daily Risk Management VaR for the prior day. Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR backtesting exceptions five times every 100 trading days on average. The number of VaR backtesting exceptions observed can differ from the statistically expected number of backtesting exceptions if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.

For the 12 months ended December 31, 2024, the Firm posted backtesting gains on 179 of the 260 days, and observed eight VaR backtesting exceptions, of which three were in the three months ended December 31, 2024. Firmwide backtesting loss days can differ from the loss days for which Fixed Income Markets and Equity Markets posted losses, as disclosed in CIB Markets revenue, as the population of positions which comprise each metric are different and due to the exclusion of certain components of total net revenue in backtesting gains and losses as described above.

The following chart presents the distribution of Firmwide daily backtesting gains and losses for the trailing 12 months and three months ended December 31, 2024. The daily backtesting losses are displayed as a percentage of the corresponding daily Risk Management VaR. The count of days with backtesting losses are shown in aggregate, in fifty percentage point intervals. Backtesting exceptions are displayed within the intervals that are greater than one hundred percent. The results in the chart below differ from the results of backtesting disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to the Firm's covered positions.

Distribution of Daily Backtesting Gains and Losses



Backtesting Exceptions for Trailing 12 Months	
1Q24	0
2Q24	5
3Q24	0
4Q24	3

Other risk measures

Stress testing

Along with VaR, stress testing is an important tool used to assess risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior, stress testing reflects the risk of loss from hypothetical changes in the value of market risk sensitive positions applied simultaneously. Stress testing measures the Firm's vulnerability to losses under a range of stressed but possible economic and market scenarios. The results are used to understand the exposures responsible for those potential losses and are measured against limits.

The Firm's stress framework covers market risk sensitive positions in the LOBs and Corporate. The framework is used to calculate multiple magnitudes of potential stress for both market rallies and market sell-offs, assuming significant changes in market factors such as credit spreads, equity prices, interest rates, currency rates and commodity prices, and combines them in multiple ways to capture an array of hypothetical economic and market scenarios.

The Firm generates a number of scenarios that focus on tail events in specific asset classes and geographies, including how the event may impact multiple market factors simultaneously. Scenarios also incorporate specific idiosyncratic risks and stress basis risk between different products. The flexibility in the stress framework allows the Firm to construct new scenarios that can test the outcomes against possible future stress events. Stress testing results are reported periodically to senior management of the Firm, as appropriate.

Stress methodologies are governed by the overall stress framework, under the oversight of Market Risk Management. The Firmwide Market Risk Stress Methodology Committee reviews and approves changes to stress testing methodology and scenarios across the Firm. Significant changes to the framework are escalated to senior management, as appropriate. In addition, stress methodology and the models to calculate the stress results are subject to the Firm's Estimations and Model Risk Management Policy

The Firm's stress testing framework is utilized in calculating the Firm's CCAR and other stress test results, which are reported periodically to the Board of Directors. In addition, stress testing results are incorporated into the Firm's Risk Appetite framework, and are reported periodically to the Board Risk Committee.

Profit and loss drawdowns

Profit and loss drawdowns are used to highlight trading losses above certain levels of risk tolerance. A profit and loss drawdown is a decline in revenue from its year-to-date peak level.

Structural interest rate risk management

The effect of interest rate exposure on the Firm's reported net income is important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities which are included in VaR, but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits, issuing debt, as well as the investment securities portfolio, and associated derivative instruments. Refer to the table on page 142 for a summary by LOB and Corporate identifying positions included in earnings-at-risk.

Governance

The CTC Risk Committee establishes the Firm's interest rate risk management policy and related limits, which are subject to approval by the Board Risk Committee. Treasury and CIO, working in partnership with the LOBs, calculates the Firm's structural interest rate risk profile and reviews it with senior management, including the CTC Risk Committee. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits for structural interest rate risk, including limits related to Earnings-at-Risk and Economic Value Sensitivity. The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.

Key risk drivers and risk management process

Structural interest rate risk can arise due to a variety of factors, including:

- Differences in timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are maturing or repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, Firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through funds transfer pricing, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment

experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products.

Earnings-at-Risk

One way that the Firm evaluates its structural interest rate risk is through earnings-at-risk. Earnings-at-risk estimates the Firm's interest rate exposure for a given interest rate scenario. It is presented as a sensitivity to a baseline, which includes net interest income and certain interest rate sensitive fees. The baseline uses market interest rates and, in the case of deposits, pricing assumptions. The Firm conducts simulations of changes to this baseline for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). These simulations primarily include retained and held-for-sale loans, deposits, deposits with banks and financing activities, investment securities, long-term debt, related interest rate hedges, and funds transfer pricing of other positions in risk management VaR and other sensitivity-based measures as described on page 142. Beginning in the fourth quarter of 2024, these simulations also include hedges of non-U.S. dollar foreign exchange exposures arising from capital investments. Refer to non-U.S. dollar foreign exchange risk on page 149 for more information.

Earnings-at-risk scenarios estimate the potential change to a baseline over the following 12 months utilizing multiple assumptions. These scenarios include a parallel shift involving changes to both short-term and long-term rates by an equal amount; a steeper yield curve involving holding short-term rates constant and increasing long-term rates; and a flatter yield curve involving increasing short-term rates and holding long-term rates constant or holding short-term rates constant and decreasing long-term rates. These scenarios consider many different factors, including:

- The impact on exposures as a result of instantaneous changes in interest rates from baseline rates.
- Forecasted balance sheet, as well as modeled prepayment and reinvestment behavior, but excluding assumptions about actions that could be taken by the Firm or its clients and customers in response to instantaneous rate changes. Mortgage prepayment assumptions are based on the interest rates used in the scenarios compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. Deposit forecasts are a key assumption in the Firm's earnings-at-risk. The baseline reflects certain assumptions relating to the Federal Reserve's balance sheet policy (e.g., quantitative tightening and usage at the Reverse Repurchase Facility) that require management judgment. The amount of deposits that the Firm holds at any given time may be influenced by Federal Reserve actions, as well as broader monetary conditions and competition for deposits.
- The pricing sensitivity of deposits, known as deposit betas, represent the amount by which deposit rates paid could change upon a given change in market interest rates. Actual deposit rates paid may differ from the modeled assumptions, primarily due to customer behavior and competition for deposits.

The Firm performs sensitivity analyses of the assumptions used in earnings-at-risk scenarios, including with respect to deposit betas and forecasts of deposit balances, both of which are especially significant in the case of consumer deposits. The results of these sensitivity analyses are reported to the CTC Risk Committee and the Board Risk Committee.

The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors. In the second quarter of 2024, the Firm updated certain deposit rates paid assumptions which take into account observed pricing and client and customer behavior during the most recent economic cycle. These updated deposit rates paid assumptions impacted the U.S. dollar scenarios, resulting in an increase in positive sensitivity in higher interest rate scenarios, and an increase in negative sensitivity in lower interest rate scenarios.

The Firm's earnings-at-risk sensitivities are measures of the Firm's interest rate exposure. The Firm's actual net interest income for the rate changes presented may differ as the earnings-at-risk scenarios are modelled as instantaneous changes and exclude any actions that could be taken by the Firm or its clients or customers in response to rate changes. Other significant assumptions in the earnings-at-risk scenarios, including mortgage prepayments and deposit rates paid, may also differ from actual results. The Firm's forecast for net interest income is included in the Firm's outlook on page 57.

The Firm's sensitivities are presented in the table below.

December 31, (in billions)	2024[a]	2023[b]
Parallel shift:		
+100 bps shift in rates	**$ 2.3**	$ 3.1
-100 bps shift in rates	**(2.5)**	(2.8)
+200 bps shift in rates	**4.6**	6.2
-200 bps shift in rates	**(4.9)**	(6.1)
Steeper yield curve:		
+100 bps shift in long-term rates	**1.0**	0.6
-100 bps shift in short-term rates	**(1.4)**	(2.2)
Flatter yield curve:		
+100 bps shift in short-term rates	**1.2**	2.5
-100 bps shift in long-term rates	**(1.1)**	(0.6)

(a) Reflects the simultaneous shift of U.S. dollar and non-U.S. dollar rates, and the inclusion of the hedges of non-U.S. dollar capital investments. This inclusion had no impact on total sensitivities but increased U.S. dollar and decreased non-U.S. dollar sensitivities. Subsequent to this change, non-U.S. dollar sensitivities were insignificant.

(b) At December 31, 2023, represents the total of the Firm's U.S. dollar and non-U.S. dollar sensitivities as previously reported.

The change in the Firm's sensitivities as of December 31, 2024, compared to December 31, 2023, were primarily driven by Treasury and CIO balance sheet actions where the Firm added duration through investment securities activity, cash flow hedges of retained loans and fair value hedges of Firm debt. The impact on the sensitivities of the Treasury and CIO balance sheet actions were largely offset by the impact of deposits, primarily from the second quarter of 2024 update of the deposit rates paid assumptions for certain consumer and wholesale deposit products. Additionally, the results as of December 31, 2024 reflected the update to include hedges of the Firm's non-U.S. dollar capital investments. Although total results were not impacted, these hedges increase U.S. dollar sensitivities and decrease non-U.S. dollar sensitivities. In the absence of these updates the Firm's sensitivities as of December 31, 2024, would have been different by the amounts reported in the following table:

	Amounts by which reported sensitivities would have been different	
December 31, 2024 (in billions)	Impact from update in the second quarter of 2024	Impact from update in the fourth quarter of 2024
U.S. dollar:		
Parallel shift:		
+100 bps shift in rates	$ (1.0)	$ (0.6)
-100 bps shift in rates	0.9	0.6
+200 bps shift in rates	(1.9)	(1.3)
-200 bps shift in rates	1.5	1.3
Steeper yield curve:		
+100 bps shift in long-term rates	—	—
-100 bps shift in short-term rates	0.9	0.6
Flatter yield curve:		
+100 bps shift in short-term rates	(1.0)	(0.6)
-100 bps shift in long-term rates	—	—
Non-U.S. dollar:		
Parallel shift:		
+100 bps shift in rates	—	0.6
-100 bps shift in rates	—	(0.6)

Economic Value Sensitivity

In addition to earnings-at-risk, which is measured as a sensitivity to a baseline of earnings over the next 12 months, the Firm also measures Economic Value Sensitivity ("EVS"). EVS stress tests the longer-term economic value of equity by measuring the sensitivity of the Firm's current balance sheet, primarily retained loans, deposits, debt and investment securities as well as related hedges, under various interest rate scenarios. The Firm's pricing and cash flow assumptions associated with deposits, as well as prepayment assumptions for loans and securities, are significant factors in the EVS measure. In accordance with the CTC interest rate risk management policy, the Firm has established limits on EVS as a percentage of TCE.

Certain assumptions used in the EVS measure may differ from those required in the fair value measurement note to the Consolidated Financial Statements. For example, certain assets and liabilities with no stated maturity, such as credit card receivables and deposits, have longer assumed durations in the EVS measure. Additional information on long-term debt and held to maturity investment securities is disclosed on page 201 in Note 2.

Non-U.S. dollar foreign exchange risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and non-U.S. dollar-denominated debt issuance. Treasury and CIO, working in partnership with the LOBs, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives. Refer to Business Segment & Corporate Results on page 71 for additional information.

Other sensitivity-based measures

The Firm quantifies the market risk of certain debt and equity and credit and funding-related exposures by assessing the potential impact on net revenue, other comprehensive income ("OCI") and noninterest expense due to changes in relevant market variables. Refer to the predominant business activities that give rise to market risk on page 142 for additional information on the positions captured in other sensitivity-based measures.

The table below represents the potential impact to net revenue, OCI or noninterest expense for market risk sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported net of the positions being hedged. The sensitivities disclosed in the table below may not be representative of the actual gain or loss that would have been realized at December 31, 2024 and 2023, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future changes in these sensitivities.

Gain/(loss) (in millions)				
Activity	**Description**	**Sensitivity measure**	**December 31, 2024**	December 31, 2023
Debt and equity[a]				
Asset Management activities	Consists of seed capital and related hedges; fund co-investments[c]; and certain deferred compensation and related hedges[d]	10% decline in market value	**$ (53)**	$ (61)
Other debt and equity	Consists of certain real estate-related fair value option elected loans, privately held equity and other investments held at fair value[c]	10% decline in market value	**(1,030)**	(1,044)
Credit- and funding-related exposures				
Non-USD LTD cross-currency basis	Represents the basis risk on derivatives used to hedge the foreign exchange risk on the non-USD LTD[e]	1 basis point parallel tightening of cross currency basis	**(10)**	(12)
Non-USD LTD hedges foreign currency ("FX") exposure	Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges[e]	10% depreciation of currency	**28**	16
Derivatives – funding spread risk	Impact of changes in the spread related to derivatives FVA[c]	1 basis point parallel increase in spread	**(2)**	(3)
CVA - counterparty credit risk[b]	Credit risk component of CVA and associated hedges	10% credit spread widening	**—**	—
Fair value option elected liabilities - funding spread risk	Impact of changes in the spread related to fair value option elected liabilities DVA[e]	1 basis point parallel increase in spread	**47**	46

(a) Excludes equity securities without readily determinable fair values that are measured under the measurement alternative. Refer to Note 2 for additional information.
(b) In line with the Firm's internal model governance, the credit risk component of CVA related to certain counterparties was removed from Credit Portfolio VaR due to the widening of the credit spreads for those counterparties to elevated levels. The related hedges were also removed to maintain consistency. This exposure is now reflected in the table above.
(c) Impact recognized through net revenue.
(d) Impact recognized through noninterest expense.
(e) Impact recognized through OCI.

COUNTRY RISK MANAGEMENT

The Firm, through its LOBs and Corporate, may be exposed to country risk resulting from financial, economic, political or other significant developments which adversely affect the value of the Firm's exposures related to a particular country or set of countries. The Country Risk Management group actively monitors the various portfolios which may be impacted by these developments and measures the extent to which the Firm's exposures are diversified given the Firm's strategy and risk tolerance relative to a country.

Organization and management

Country Risk Management is an independent risk management function that assesses and monitors exposure to country risk across the Firm.

The Firm's country risk management function includes the following activities:

- Maintaining policies, procedures and standards consistent with a comprehensive country risk framework
- Assigning sovereign ratings, assessing country risks and establishing risk tolerance relative to a country
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing and approving country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools, such as signaling models and ratings indicators, for early identification of potential country risk concerns
- Providing country risk scenario analysis

Sources and measurement

The Firm is exposed to country risk through its lending and deposits, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country.

Under the Firm's internal country risk management approach, attribution of exposure to an individual country is based on the country where the largest proportion of the assets of the counterparty, issuer, obligor or guarantor are located or where the largest proportion of its revenue is derived, which may be different than the domicile (i.e. legal residence) or country of incorporation.

Individual country exposures reflect an aggregation of the Firm's risk to an immediate default, with zero recovery, of the counterparties, issuers, obligors or guarantors attributed to that country. Activities which result in contingent or indirect exposure to a country are not included in the country exposure measure (for example, providing clearing services or secondary exposure to collateral on securities financing receivables).

Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain non-linear or index products, or where the nature of the counterparty, issuer, obligor or guarantor is not suitable for attribution to an individual country. The use of different measurement approaches or assumptions could affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Deposits with banks are measured as the cash balances placed with central banks, commercial banks, and other financial institutions
- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and eligible cash and marketable securities collateral received
- Securities financing exposures are measured at their receivable balance, net of eligible collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the eligible collateral received
- Credit derivatives exposure is measured at the net notional amount of protection purchased or sold for the same underlying reference entity, inclusive of the fair value of the derivative receivable or payable, reflecting the manner in which the Firm manages these exposures

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements.

Stress testing

Stress testing is an important component of the Firm's country risk management framework, which aims to estimate and limit losses arising from a country crisis by measuring the impact of adverse asset price movements to a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically designs and runs tailored stress scenarios to test vulnerabilities to individual countries or sets of countries in response to specific or potential market events, sector performance concerns, sovereign actions and geopolitical risks. These tailored stress results are used to inform potential risk reduction across the Firm, as necessary.

Risk reporting

Country exposure and stress are measured and reported regularly, and used by Country Risk Management to identify trends and monitor high usages and breaches against limits.

For country risk management purposes, the Firm may report exposure to jurisdictions that are not fully autonomous, including dependent territories and Special Administrative Regions ("SAR") such as Hong Kong SAR, separately from the independent sovereign states with which they are associated.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2024, and their comparative exposures as of December 31, 2023. The top 20 country exposures represent the Firm's largest total exposures by individual country. Country exposures may fluctuate from period to period due to a variety of factors, including client activity, market flows and liquidity management activities undertaken by the Firm.

The increase in exposure to Germany when compared to December 31, 2023, was driven by an increase in cash placed with the central bank of Germany, predominantly due to client-driven market-making activities and higher client deposits.

The increase in exposure to Japan when compared to December 31, 2023, was driven by an increase in cash placed with the central bank of Japan as a result of client-driven market-making activities.

The Firm continues to monitor its exposure to Russia, which corresponds to cash placed with the central bank, but which excludes deposits placed on behalf of clients at the Deposit Insurance Agency of Russia. The Firm currently believes that its remaining exposure to Russia is not material. Refer to Note 30 on pages 310–311 for information concerning Russian litigation.

Top 20 country exposures (excluding the U.S.)[(a)]

	2024					2023[(f)]
December 31, (in billions)	Deposits with banks[(b)]	Lending[(c)]	Trading and investing[(d)]	Other[(e)]	Total exposure	Total exposure
Germany	**$ 89.7**	**$ 12.6**	**$ 0.9**	**$0.7**	**$ 103.9**	$ 84.8
United Kingdom	**24.6**	**22.4**	**27.7**	**1.4**	**76.1**	77.1
Japan	**55.1**	**3.1**	**4.5**	**0.4**	**63.1**	36.0
France	**0.6**	**12.3**	**4.2**	**0.9**	**18.0**	10.1
Canada	**1.6**	**10.6**	**2.7**	**0.2**	**15.1**	16.0
Brazil	**3.5**	**4.2**	**7.0**	**—**	**14.7**	16.7
Australia	**5.0**	**7.4**	**1.9**	**—**	**14.3**	18.3
Switzerland	**4.7**	**4.2**	**1.4**	**3.3**	**13.6**	10.9
Mainland China	**3.1**	**6.2**	**4.1**	**—**	**13.4**	14.0
India	**1.1**	**5.2**	**4.1**	**0.9**	**11.3**	9.7
Italy	**0.1**	**8.2**	**1.8**	**0.3**	**10.4**	6.0
South Korea	**0.6**	**2.9**	**6.3**	**0.5**	**10.3**	7.8
Saudi Arabia	**0.8**	**5.7**	**2.9**	**—**	**9.4**	7.7
Singapore	**1.5**	**2.0**	**3.5**	**0.4**	**7.4**	9.8
Mexico	**1.3**	**4.4**	**1.5**	**—**	**7.2**	8.2
Spain	**0.2**	**4.6**	**1.2**	**0.1**	**6.1**	6.3
Netherlands	**—**	**6.6**	**(0.9)**	**0.2**	**5.9**	5.6
Belgium	**4.0**	**1.3**	**0.1**	**—**	**5.4**	8.0
Malaysia	**2.1**	**0.2**	**1.0**	**0.3**	**3.6**	4.2
Luxembourg	**0.9**	**1.7**	**1.0**	**—**	**3.6**	4.0

(a) Country exposures presented in the table reflect 89% and 88% of total Firmwide non-U.S. exposure, where exposure is attributed to an individual country based on the Firm's internal country risk management approach, at December 31, 2024 and 2023, respectively.
(b) Predominantly represents cash placed with central banks.
(c) Includes loans and accrued interest receivable, lending-related commitments (net of eligible collateral and the allowance for credit losses). Excludes intra-day and operating exposures, such as those from settlement and clearing activities.
(d) Includes market-making positions and hedging, investment securities, and counterparty exposure on derivative and securities financings net of eligible collateral. Market-making positions and hedging includes exposure from single reference entity ("single-name"), index and other multiple reference entity transactions for which one or more of the underlying reference entities is in a country listed in the above table.
(e) Includes physical commodities inventory and clearing house guarantee funds.
(f) The country rankings presented in the table as of December 31, 2023, are based on the country rankings of the corresponding exposures at December 31, 2024, not actual rankings of such exposures at December 31, 2023.

CLIMATE RISK MANAGEMENT

Climate risk refers to the potential threats posed by climate change to the Firm and its clients, customers, operations and business strategy. Climate change is viewed as a driver of risk that may impact existing types of risks managed by the Firm. Climate risk is categorized into physical risk and transition risk.

Physical risk involves economic costs and financial losses due to a changing climate. Acute physical risk drivers include the increased frequency or severity of climate and weather events, such as floods, wildfires and tropical cyclones. Chronic physical risk drivers include more gradual shifts in the climate, such as sea level rise, persistent changes in precipitation levels and increases in average ambient temperatures.

Transition risk involves the financial and economic consequences of society's shift toward a lower-carbon economy. Transition risk drivers include possible changes in public policy, adoption of new technologies and shifts in consumer preferences. Transition risks may also be influenced by changes in the physical climate.

Organization and management

The Firm has a Climate Risk Management function that is responsible for establishing and maintaining the Firmwide framework and strategy for managing climate risks that may impact the Firm.

Other responsibilities of Climate Risk Management include:

- Setting policies, standards, procedures and processes to support identification, escalation, monitoring and management of climate risk across the Firm
- Developing metrics, scenarios and stress testing mechanisms designed to assess the range of potential climate-related financial and economic impacts to the Firm
- Establishing a Firmwide climate risk data strategy and the supporting climate risk technology infrastructure

The LOBs and Corporate are responsible for the identification, assessment and management of climate risks present in their business activities and for the adherence to applicable climate-related laws, rules and regulations.

Governance and oversight

The Firm's framework and strategy for managing climate risk is integrated into the Firm's risk governance structure. This framework allows for the escalation of significant climate risk-related issues to LOB Risk Committees. The Board Risk Committee also receives information on significant climate risks and climate-related initiatives, as appropriate.

Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes or systems; human factors; or external events impacting the Firm's processes or systems. Operational Risk includes compliance, conduct, legal, and estimations and model risk. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business disruptions (including those caused by extraordinary events beyond the Firm's control), cyber attacks, inappropriate employee behavior, failure to comply with applicable laws, rules and regulations or failure of vendors or other third party providers to perform in accordance with their agreements. Operational Risk Management attempts to manage operational risk at appropriate levels in light of the Firm's financial position, the characteristics of its businesses, and the markets and regulatory environments in which it operates.

Operational Risk Management Framework

The Firm's Compliance, Conduct, and Operational Risk ("CCOR") Management Framework is designed to enable the Firm to govern, identify, measure, monitor and test, manage and report on the Firm's operational risk.

Operational Risk Governance

The LOBs and Corporate are responsible for the management of operational risk. The Control Management Organization, which consists of control managers within each LOB and Corporate, is responsible for the day-to-day execution of the CCOR Framework.

The Firm's Global Chief Compliance Officer ("CCO") and FRE for Operational Risk and Qualitative Risk Appetite is responsible for defining the CCOR Management Framework and establishing the minimum standards for its execution. The LOB and Corporate aligned CCOR Lead Officers report to the Global CCO and FRE for Operational Risk and Qualitative Risk Appetite and are independent of the respective businesses or functions they oversee. The CCOR Management Framework is included in the Risk Governance and Oversight Policy that is reviewed and approved by the Board Risk Committee periodically.

Operational Risk Identification

The Firm utilizes a structured risk and control self-assessment process that is executed by the LOBs and Corporate. As part of this process, the LOBs and Corporate evaluate the effectiveness of their respective control environment to assess circumstances in which controls have failed, and to determine where remediation efforts may be required. The Firm's Operational Risk and Compliance organization ("Operational Risk and Compliance") provides oversight of and challenge to these evaluations and may also perform independent assessments of significant operational risk events and areas of concentrated or emerging risk.

Operational Risk Measurement

Operational Risk and Compliance performs an independent assessment of the operational risks inherent within the LOBs and Corporate, which includes evaluating the effectiveness of the control environments and reporting the results to senior management.

In addition, Operational Risk and Compliance assesses operational risks through quantitative means, including operational risk-based capital and estimation of operational risk losses under both baseline and stressed conditions.

The primary component of the operational risk-based capital estimate is the Loss Distribution Approach ("LDA") statistical model, which simulates the projected frequency and severity of operational risk losses based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

As required under the Basel III capital framework, the Firm's operational risk capital methodology, which uses the Advanced Measurement Approach ("AMA"), incorporates internal and external losses as well as management's view of tail risk captured through operational risk scenario analysis, and evaluation of key business environment and internal control metrics. The Firm does not reflect the impact of insurance in its AMA estimate of operational risk capital.

The Firm considers the impact of stressed economic conditions on operational risk losses and develops a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR and other stress testing processes.

Refer to Capital Risk Management on pages 97–107 for information related to operational risk RWA, and CCAR.

Operational Risk Monitoring and Testing

The results of risk assessments performed by Operational Risk and Compliance are used in connection with their independent monitoring and testing compliance of the LOBs and Corporate with

laws, rules and regulations. Through monitoring and testing, Operational Risk and Compliance independently identify areas of heightened operational risk and tests the effectiveness of controls within the LOBs and Corporate.

Management of Operational Risk
The operational risk areas or issues identified through monitoring and testing are escalated to the LOBs and Corporate to be remediated through action plans, as needed, to mitigate operational risk. Operational Risk and Compliance may advise the LOBs and Corporate in the development and implementation of action plans.

Operational Risk Reporting
All employees of the Firm are expected to escalate risks appropriately. Risks identified by Operational Risk and Compliance are escalated to the appropriate LOB and Corporate Control Committees, as needed. Operational Risk and Compliance has established standards designed to ensure that consistent operational risk reporting and operational risk reports are produced on a Firmwide basis as well as by the LOBs and Corporate. Reporting includes the evaluation of key risk and performance indicators against established thresholds as well as the assessment of different types of operational risk against stated risk appetite. The standards establish escalation protocols to senior management and to the Board of Directors.

Insurance

One of the ways in which operational risk may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance from commercial insurers and maintains a wholly-owned captive insurer, Park Assurance Company. Insurance may also be required by third parties with whom the Firm does business.

Subcategories and examples of operational risks

Operational risk can manifest itself in various ways. Operational risk subcategories include Compliance risk, Conduct risk, Legal risk, and Estimations and Model risk. Refer to pages 157, 158, 159 and 160, respectively for more information on Compliance, Conduct, Legal, and Estimations and Model risk. Details on other select examples of operational risks such as business and technology resiliency, payment fraud and third-party outsourcing, as well as cybersecurity, are provided below.

Firmwide resiliency risk
Disruptions of the Firm's business and operations can occur due to forces beyond the Firm's control such as the spread of infectious diseases or pandemics, severe weather, natural disasters, the effects of climate change, power or telecommunications loss, failure of a third party to provide expected services, cyberattacks, civil or political unrest or terrorism. The Firm's resiliency framework is intended to enable the Firm to prepare for and adapt to changing conditions and withstand and recover from, and address adverse effects on its operations caused by, disruptions that may impact critical business functions and supporting assets, including its staff, technology, data and facilities, as well as those of third-party service providers. The framework includes governance, awareness training, planning and testing of recovery strategies, as well as strategic and tactical initiatives to identify, assess, and manage resiliency risks. The framework operates in accordance with the Firm's overall approach to Operational Risk Management, including alignment with technology, cybersecurity, data, physical security, crisis management, real estate and outsourcing programs.

Payment fraud risk
Payment fraud risk is the risk of external and internal parties unlawfully obtaining personal monetary benefit through misdirected or otherwise improper payment. The Firm employs various controls for managing payment fraud risk as well as providing employee and client education and awareness trainings.

Third-party outsourcing risk
The Firm's Third-Party Oversight ("TPO") and Inter-affiliates Oversight ("IAO") frameworks assist the LOBs and Corporate in selecting, documenting, onboarding, monitoring and managing their supplier relationships including services provided by affiliates. The objectives of the TPO framework are to hold suppliers and other third parties to an appropriate standard of operational performance and to mitigate key risks, including data loss and business disruptions. The Corporate Third-Party Oversight group is responsible for Firmwide training, monitoring, reporting and standards with respect to third-party outsourcing risks.

Cybersecurity risk
Cybersecurity risk is the risk of harm or loss resulting from misuse or abuse of technology or the unauthorized disclosure of data.

Overview

Cybersecurity risk is an important and continuously evolving focus for the Firm. Significant resources are devoted to protecting and enhancing the security of computer systems, software, networks, storage devices, and other technology. The Firm's security efforts are designed to protect against, among other things, cybersecurity attacks that can result in unauthorized access to confidential information, the destruction of data, disruptions to or degradations of service, the sabotaging of systems or other damage.

The Firm has experienced, and expects that it will continue to experience, a higher volume and complexity of cyber attacks against the backdrop of heightened geopolitical tensions. The Firm has implemented measures and controls reasonably designed to address this evolving environment, including enhanced threat monitoring. In addition, the Firm continues to review and enhance its capabilities to address associated risks, such as those relating to the management of administrative access to systems.

Third parties with which the Firm does business, that facilitate the Firm's business activities (e.g., vendors, supply chain, exchanges, clearing houses, central depositories, and financial intermediaries) or that the Firm has acquired are also sources of cybersecurity risk to the Firm. Third party incidents such as system breakdowns or failures, misconduct by the employees of such parties, or cyber attacks, including ransomware and supply-chain compromises, could have a material adverse effect on the Firm, including in circumstances in which an affected third party is unable to deliver a product or service to the Firm or where the incident delivers compromised software to the Firm or results in lost or compromised information of the Firm or its clients or customers.

Clients and customers are also sources of cybersecurity risk to the Firm and its information assets, particularly when their activities and systems are beyond the Firm's own security and control systems. The Firm engages in periodic discussions with its clients, customers and other external parties concerning cybersecurity risks including opportunities to improve cybersecurity.

Risks from cybersecurity threats, including any previous cybersecurity events, have not materially affected the Firm or its business strategy, results of operations or financial condition. Notwithstanding the comprehensive approach that the Firm takes to address cybersecurity risk, the Firm may not be successful in preventing or mitigating a future cybersecurity incident that could have a material adverse effect on the Firm or its business strategy, results of operations or financial condition.

Organization and management

The Global Chief Information Security Officer ("CISO") reports to the Global Chief Information Officer, and is a member of key cybersecurity governance forums. The CISO leads the Global Cybersecurity and Technology Controls organization, which is responsible for identifying technology and cybersecurity risks and for implementing and maintaining controls to manage cybersecurity threats. The CISO and the members of senior management within Global Technology and the Cybersecurity and Technology Controls organizations all have relevant expertise and experience in cybersecurity and information technology risk management, including relevant experience at the Firm, at other financial services companies or in other highly-regulated industries.

The CISO is responsible for the Firm's Information Security Program, which is designed to prevent, detect and respond to cyber attacks in order to help safeguard the confidentiality, integrity and availability of the Firm's infrastructure, resources and information. The program includes managing the Firm's global cybersecurity operations centers, providing training, conducting cybersecurity event simulation exercises, implementing the Firm's policies and standards relating to technology risk and cybersecurity management, and enhancing, as needed, the Firm's cybersecurity capabilities.

The Firm's Information Security Program includes the following functions:

Cyber Operations, which is responsible for implementing and maintaining controls designed to detect and defend the Firm against cyber attacks, and includes a dedicated function for incident response and ongoing monitoring for cybersecurity threats and vulnerabilities, including those among the Firm's third-party suppliers.

Technology Governance, Risk & Controls, which is responsible for operationalizing technology risk and control frameworks, analyzing regulatory developments that may impact the Firm, and developing control catalogs and assessments of controls, as well as overseeing governance and reporting of technology and cybersecurity risk.

Security Awareness, which provides awareness and training that reinforces information risk and security management practices and compliance with the Firm's policies, standards and practices. The training is mandatory for all employees globally on a periodic basis, and it is supplemented by Firmwide testing initiatives, including periodic phishing tests. The Firm also provides specialized security training to

employees in specific roles, such as application developers. The Firm's Global Privacy Program requires all employees to take periodic training on data privacy that focuses on confidentiality and security, as well as responding to unauthorized access to or use of information.

Technology Resiliency, which establishes control requirements for planning and testing the prioritized recovery of technology services in the event of degradation or outage, including incident response planning, data backup and retention, and recovery readiness in support of the Firmwide Business Resiliency Program and operational risk management practices.

The Firm has a cybersecurity incident response plan designed to enable the Firm to respond to attempted cybersecurity incidents, coordinate as appropriate with law enforcement and other government agencies, notify clients and customers, as applicable, and recover from such incidents. In addition, the Firm actively partners with appropriate government and law enforcement agencies and peer industry forums, participating in discussions and simulations to assist in understanding the full spectrum of cybersecurity risks and in enhancing defenses and improving resiliency in the Firm's operating environment.

Governance and oversight

The governance structure for the Global Cybersecurity and Technology Controls organization is designed to appropriately identify, escalate and mitigate cybersecurity risks. Cybersecurity risk management and its governance and oversight are integrated into the Firm's operational risk management framework, including through the escalation of key risk and control issues to management and the development of risk mitigation plans for heightened risk and control issues. IRM independently assesses and challenges the activities and risk management practices of the Global Cybersecurity and Technology Controls organization related to the identification, assessment, measurement and mitigation of cybersecurity risk. As needed, the Firm engages third-party assessors or auditing firms with industry-recognized expertise on cybersecurity matters to review specific aspects of the Firm's cybersecurity risk management framework, processes and controls.

The governance and oversight for cybersecurity risk management includes governance forums that inform management of key areas of concern regarding the prevention, detection, mitigation and remediation of cybersecurity risks.

The Cybersecurity and Technology Controls Operating Committee ("CTOC") is the principal management committee that oversees the Firm's assessment and management of cybersecurity risk, including oversight of the implementation and maintenance of appropriate controls in support of the Firm's Information Security Program. The membership of the CTOC includes senior representatives from the Global Cybersecurity and Technology Controls organization and relevant corporate functions, including IRM and Internal Audit.

The CTOC escalates key operational risk and control issues, as appropriate, to the Global Technology Operating Committee ("GTOC") or its business control committee or to the appropriate LOB and Corporate Control Committees. The GTOC is responsible for the governance of the Firmwide Global Technology organization, including oversight of Firmwide technology strategies, the delivery of technology and technology operations, the effective use of information technology resources, and monitoring and resolving key operational risk and control matters arising in the Global Technology organization.

As part of its oversight of management's implementation and maintenance of the Firm's risk management framework, the Firm's Board of Directors receives periodic updates from the CIO, the CISO and senior members of the CTOC concerning cybersecurity matters. These updates generally include information regarding cybersecurity and technology developments, the Firm's Information Security Program and recommended changes to that program, cybersecurity policies and practices, and ongoing initiatives to improve information security, as well as any significant cybersecurity incidents and the Firm's efforts to address those incidents. The Audit Committee and the Risk Committee assist the Board in this oversight.

Compliance risk, a subcategory of operational risk, is the risk of failing to comply with laws, rules, regulations or codes of conduct and standards of self-regulatory organizations.

Overview

Each of the LOBs and Corporate hold primary ownership of and accountability for managing their compliance risk. The Firm's Operational Risk and Compliance Organization ("Operational Risk and Compliance"), which is independent of the LOBs and Corporate, provides independent review, monitoring and oversight of business operations with a focus on compliance with the laws, rules, and regulations applicable to the delivery of the Firm's products and services to clients and customers.

These compliance risks relate to a wide variety of laws, rules and regulations across the LOBs and Corporate, and jurisdictions, and include risks related to financial products and services, relationships and interactions with clients and customers, and employee activities. For example, compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying with the laws, rules, and regulations related to the offering of products and services across jurisdictional borders. Compliance risk is also inherent in the Firm's fiduciary activities, including the failure to exercise the applicable standard of care to act in the best interest of fiduciary clients and customers or to treat fiduciary clients and customers fairly.

Other functions provide oversight of significant regulatory obligations that are specific to their respective areas of responsibility.

Operational Risk and Compliance implements policies and standards designed to govern, identify, measure, monitor and test, manage, and report on compliance risk.

Governance and oversight

Operational Risk and Compliance is led by the Firm's Global CCO and FRE for Operational Risk and Qualitative Risk Appetite.

The Firm maintains oversight and coordination of its compliance risk through the CCOR Management Framework. The Firm's Global CCO and FRE for Operational Risk and Qualitative Risk Appetite also provides regular updates to the Board Risk Committee and the Audit Committee on significant compliance risk issues, as appropriate.

Code of Conduct

The Firm has a Code of Conduct (the "Code") that sets forth the Firm's expectation that employees will conduct themselves with integrity, at all times. The Code provides the principles that help govern employee conduct with clients, customers, suppliers, vendors, shareholders, regulators, other employees, as well as with the markets and communities in which the Firm operates. The Code requires employees to promptly report any potential or actual violation of the Code, Firm policies, or laws, rules or regulations applicable to the Firm's business. It also requires employees to report any illegal or unethical conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's employees, consultants, clients, customers, suppliers, contract or temporary workers, or business partners or agents. Training is assigned to newly hired employees after joining the Firm, and to current employees periodically thereafter. Employees are required to affirm their compliance with the Code annually.

Employees can report any potential or actual violations of the Code through the Firm's Conduct Hotline (the "Hotline") by phone, mobile device or the internet. The Hotline is anonymous, where permitted by law, is available at all times globally, has translation services, and is administered by an outside service provider. The Code prohibits retaliation against anyone who raises an issue or concern in good faith or assists with an inquiry or investigation. Periodically, the Audit Committee receives reports on the Code of Conduct program.

CONDUCT RISK MANAGEMENT

Conduct risk, a subcategory of operational risk, is the risk that any action or misconduct by an employee could lead to unfair client or customer outcomes, impact the integrity of the markets in which the Firm operates, harm employees or the Firm, or compromise the Firm's reputation.

Overview

Each LOB and Corporate is accountable for identifying and managing its conduct risk to provide appropriate engagement, ownership and sustainability of a culture consistent with the Firm's Business Principles. The Business Principles serve as a guide for how employees are expected to conduct themselves. With the Business Principles serving as a guide, the Firm's Code sets out the Firm's expectations for each employee and provides information and resources to help employees conduct business ethically and in compliance with applicable laws, rules and regulations everywhere the Firm operates. Refer to Compliance Risk Management on page 157 for further discussion of the Code.

Governance and oversight

The Firm's oversight and coordination of conduct risk is managed in the same manner as Compliance risk. Refer to Compliance Risk Management on page 157 for further information.

Conduct risk management encompasses various aspects of people management practices throughout the employee life cycle, including recruiting, onboarding, training and development, performance management, promotion and compensation processes. Each LOB, Treasury and CIO, and each designated corporate function completes an assessment of conduct risk periodically, reviews metrics and issues which may involve conduct risk, and provides conduct education as appropriate.

LEGAL RISK MANAGEMENT

Legal risk, a subcategory of operational risk, is the risk of loss primarily caused by the actual or alleged failure to meet legal obligations that arise from the rule of law in jurisdictions in which the Firm operates, agreements with clients and customers, and products and services offered by the Firm.

Overview

The global Legal function ("Legal") provides legal services and advice to the Firm. Legal is responsible for managing the Firm's exposure to legal risk by:

- managing actual and potential litigation and enforcement matters, including internal reviews and investigations related to such matters
- advising on products and services, including contract negotiation and documentation
- advising on offering and marketing documents and new business initiatives
- managing dispute resolution
- interpreting existing laws, rules and regulations, and advising on changes to them
- advising on advocacy in connection with contemplated and proposed laws, rules and regulations, and
- providing legal advice to the LOBs, Corporate and the Board.

Legal selects, engages and manages outside counsel for the Firm on all matters in which outside counsel is engaged. In addition, Legal advises the Firm's Conflicts Office which reviews the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

Governance and oversight

The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the Firmwide Control Committee. The Firm's General Counsel and other members of Legal report on significant legal matters to the Firm's Board of Directors and to the Audit Committee.

Legal serves on and advises various committees and advises the Firm's LOBs and Corporate on potential reputation risk issues.

ESTIMATIONS AND MODEL RISK MANAGEMENT

Estimations and Model risk, a subcategory of operational risk, is the potential for adverse consequences from decisions based on incorrect or misused estimation outputs.

The Firm uses models and other analytical and judgment-based estimations, including those based upon machine learning or artificial intelligence techniques, across various businesses and functions. The estimation methods are of varying levels of sophistication and are used for many purposes, such as the valuation of positions and measurement of risk, assessing regulatory capital requirements, conducting stress testing, evaluating the allowance for credit losses and making business decisions. A dedicated independent function, Model Risk Governance and Review ("MRGR"), defines and governs the Firm's policies relating to the management of model risk and risks associated with certain analytical and judgment-based estimations, such as those used in risk management, budget forecasting and capital planning and analysis.

Model risks are owned by the users of the models within the LOBs and Corporate based on the specific purposes of such models. Users and developers of models are responsible for developing, implementing and testing their models, as well as referring models to MRGR for review and approval. Once models have been approved, model users and developers are responsible for maintaining a robust operating environment, and must monitor and evaluate the performance of the models on an ongoing basis. Model users and developers may seek to enhance models in response to changes in the relevant portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of MRGR. In its review of a model, MRGR considers whether the model is suitable for the specific purposes for which it will be used. When reviewing a model, MRGR analyzes and challenges the model methodology and the reasonableness of model assumptions, and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within MRGR based on the relevant model tier.

Under the Firm's Estimations and Model Risk Management Policy, MRGR reviews and approves new models, as well as material changes to existing models, prior to their use. In certain circumstances, exceptions may be granted to the Firm's policy to allow a model to be used prior to review or approval. MRGR may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

While models are inherently imprecise, the degree of imprecision or uncertainty can be heightened by the market or economic environment. This is particularly true when the current and forecasted environments are significantly different from the historical environments upon which the models were developed. This increased uncertainty may necessitate a greater degree of judgment and analytics to inform any adjustments that the Firm may make to model outputs than would otherwise be the case. In addition, the Firm may experience increased uncertainty in its estimates if assets acquired differ from those used to develop the models.

Refer to Critical Accounting Estimates Used by the Firm on pages 161–164 and Note 2 for a summary of model-based valuations and other valuation techniques.

JPMorganChase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses generally comprises:

- The allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated),
- The allowance for lending-related commitments, and
- The allowance for credit losses on investment securities.

The allowance for credit losses involves significant judgment on a number of matters including development and weighting of macroeconomic forecasts, incorporation of historical loss experience, assessment of risk characteristics, assignment of risk ratings, valuation of collateral, and the determination of remaining expected life. Refer to Note 10 and Note 13 for further information on these judgments as well as the Firm's policies and methodologies used to determine the Firm's allowance for credit losses.

One of the most significant judgments involved in estimating the Firm's allowance for credit losses relates to the macroeconomic forecasts used to estimate credit losses over the eight-quarter forecast period within the Firm's methodology. The eight-quarter forecast incorporates hundreds of macroeconomic variables ("MEVs") that are relevant for exposures across the Firm, with modeled credit losses being driven primarily by a subset of less than twenty variables. The specific variables that have the greatest effect on the modeled losses vary by portfolio and geography.

- Key MEVs for the consumer portfolio include regional U.S. unemployment rates and U.S. HPI.
- Key MEVs for the wholesale portfolio include U.S. unemployment, U.S. real GDP, U.S. equity prices, U.S. interest rates, U.S. corporate credit spreads, oil prices, U.S. commercial real estate prices and U.S. HPI.

Changes in the Firm's assumptions and forecasts of economic conditions could significantly affect its estimate of expected credit losses in the portfolio at the balance sheet date or lead to significant changes in the estimate from one reporting period to the next.

As a result of the First Republic acquisition, the Firm recorded an allowance for credit losses for the loans acquired and lending-related commitments assumed as of May 1, 2023. Due to differences in risk rating methodologies for the First Republic portfolio and the ongoing integration of products and systems, the allowance for credit losses for the acquired wholesale portfolio was initially measured based on similar risk characteristics from other facilities underwritten by the Firm. Starting in the second quarter of 2024, the acquired portfolio was incorporated into the Firm's modeled credit loss estimates and is now reflected in the wholesale sensitivity analysis below. Refer to Note 34 for additional information on the First Republic acquisition.

It is difficult to estimate how potential changes in any one factor or input might affect the overall allowance for credit losses because management considers a wide variety of factors and inputs in estimating the allowance for credit losses. Changes in the factors and inputs considered may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors and inputs may be directionally inconsistent, such that improvement in one factor or input may offset deterioration in others.

To consider the impact of a hypothetical alternate macroeconomic forecast, the Firm compared the modeled credit losses determined using its central and relative adverse macroeconomic scenarios, which are two of the five scenarios considered in estimating the allowances for loan losses and lending-related commitments. The central and relative adverse scenarios each included a full suite of MEVs, but differed in the levels, paths and peaks/troughs of those variables over the eight-quarter forecast period.

For example, compared to the Firm's central scenario shown on page 137 and in Note 13, the Firm's relative adverse scenario assumes an elevated U.S.

unemployment rate, averaging approximately 2.1% higher over the eight-quarter forecast, with a peak difference of approximately 3.0% in the fourth quarter of 2025.

This analysis is not intended to estimate expected future changes in the allowance for credit losses, for a number of reasons, including:

- The allowance as of December 31, 2024, reflects credit losses beyond those estimated under the central scenario due to the weight placed on the adverse scenarios.
- The impacts of changes in many MEVs are both interrelated and nonlinear, so the results of this analysis cannot be simply extrapolated for more severe changes in macroeconomic variables.
- Expectations of future changes in portfolio composition and borrower behavior can significantly affect the allowance for credit losses.

To demonstrate the sensitivity of credit loss estimates to macroeconomic forecasts as of December 31, 2024, the Firm compared the modeled estimates under its relative adverse scenario to its central scenario. Without considering offsetting or correlated effects in other qualitative components of the Firm's allowance for credit losses, the comparison between these two scenarios for the exposures below reflect the following differences:

- An increase of approximately $850 million for residential real estate loans and lending-related commitments
- An increase of approximately $3.7 billion for credit card loans
- An increase of approximately $4.1 billion for wholesale loans and lending-related commitments

This analysis relates only to the modeled credit loss estimates and is not intended to estimate changes in the overall allowance for credit losses as it does not reflect any potential changes in other adjustments to the quantitative calculation, which would also be influenced by the judgment management applies to the modeled lifetime loss estimates to reflect the uncertainty and imprecision of these modeled lifetime loss estimates based on then-current circumstances and conditions.

Recognizing that forecasts of macroeconomic conditions are inherently uncertain, the Firm believes that its process to consider the available information and associated risks and uncertainties is appropriately governed and that its estimates of expected credit losses were reasonable and appropriate for the period ended December 31, 2024.

Fair value

JPMorganChase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis, including derivatives, structured note products and certain securities financing agreements. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the fair value hierarchy. Refer to Note 2 for further information.

December 31, 2024 (in millions, except ratios)	Total assets at fair value	Total level 3 assets
Federal funds sold and securities purchased under resale agreements	$ 286,771	$ —
Securities borrowed	83,962	—
Trading assets:		
Trading-debt and equity instruments	576,817	2,442
Derivative receivables[(a)]	60,967	8,452
Total trading assets	637,784	10,894
AFS securities	406,852	8
Loans	41,350	2,416
MSRs	9,121	9,121
Other	14,073	1,344
Total assets measured at fair value on a recurring basis	1,479,913	23,783
Total assets measured at fair value on a nonrecurring basis	2,489	1,742
Total assets measured at fair value	$ 1,482,402	$ 25,525
Total Firm assets	$ 4,002,814	
Level 3 assets at fair value as a percentage of total Firm assets[(a)]		1%
Level 3 assets at fair value as a percentage of total Firm assets at fair value[(a)]		2%

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $8.5 billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

Valuation

Details of the Firm's processes for determining fair value are set out in Note 2. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, the lack of observability of certain significant inputs requires management to assess relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment speeds, default rates, volatilities, correlations, prices (such as commodity, equity or debt prices), valuations of comparable instruments, foreign exchange rates and credit curves. Refer to Note 2 for a further discussion of the valuation of level 3 instruments, including unobservable inputs used.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. In periods of heightened market volatility and uncertainty judgments are further affected by the wider variation of reasonable valuation estimates, particularly for positions that are less liquid. Refer to Note 2 for a further discussion of valuation adjustments applied by the Firm.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. Refer to Note 2 for a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 15.

Management applies significant judgment when testing goodwill for impairment. The goodwill associated with each business combination is allocated to the related reporting units for goodwill impairment testing.

For the year ended December 31, 2024, the Firm reviewed current economic conditions, estimated market cost of equity, as well as actual business results and projections of business performance. Based on such reviews, the Firm has concluded that goodwill was not impaired as of December 31, 2024. For each of the reporting units, fair value exceeded carrying value by at least 10% and there was no indication of a significant risk of goodwill impairment based on current projections and valuations.

The projections for the Firm's reporting units are consistent with management's current business outlook assumptions in the short term, and the Firm's best estimates of long-term growth and return on equity in the longer term. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Refer to Note 15 for additional information on goodwill, including the goodwill impairment assessment as of December 31, 2024.

Credit card rewards liability

JPMorganChase offers credit cards with various rewards programs which allow cardholders to earn rewards points based on their account activity and the terms and conditions of the rewards program. Generally, there are no limits on the points that an eligible cardholder can earn, nor do the points expire, and the points can be redeemed for a variety of rewards, including cash (predominantly in the form of account credits), gift cards and travel. The Firm maintains a rewards liability which represents the estimated cost of rewards points earned and expected to be redeemed by cardholders. The liability is accrued as the cardholder earns the benefit and is reduced when the cardholder redeems points. This liability was $14.4 billion and $13.2 billion at December 31, 2024 and 2023, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets. The increase in the liability was driven by continued growth in rewards points earned on higher spend and promotional offers outpacing redemptions throughout 2024.

The rewards liability is sensitive to redemption rate ("RR") and cost per point ("CPP") assumptions. The RR

assumption is used to estimate the number of points earned by customers that will be redeemed over the life of the account. The CPP assumption is used to estimate the cost of future point redemptions. These assumptions are evaluated periodically considering historical actuals, cardholder redemption behavior and management judgment. Updates to these assumptions will impact the rewards liability. As of December 31, 2024, a combined increase of 25 basis points in RR and 1 basis point in CPP would increase the rewards liability by approximately $442 million.

Income taxes

JPMorganChase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local, and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorganChase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorganChase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorganChase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional unrecognized tax benefits, as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations, and business strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. Deferred taxes are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred taxes of a change in tax rates is recognized within the provision for income taxes in the period enacted.

The Firm has also recognized deferred tax assets in connection with certain tax attributes, including net operating loss ("NOL") carryforwards and foreign tax credit ("FTC") carryforwards. The Firm performs regular reviews to ascertain whether its deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, including foreign source income, and may incorporate various tax planning strategies, including strategies that may be available to utilize NOLs and FTCs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2024, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

The Firm adjusts its unrecognized tax benefits as necessary when new information becomes available, including changes in tax law and regulations, and interactions with taxing authorities. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorganChase's unrecognized tax benefits may have a material impact on its effective income tax rate in the period in which the reassessment occurs. Although the Firm believes that its estimates are reasonable, the final tax amount could be different from the amounts reflected in the Firm's income tax provisions and accruals. To the extent that the final outcome of these amounts is different than the amounts recorded, such differences will generally impact the Firm's provision for income taxes in the period in which such a determination is made.

The Firm's provision for income taxes is composed of current and deferred taxes. The current and deferred tax provisions are calculated based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed during the subsequent year. Adjustments based on filed returns are generally recorded in the period when the tax returns are filed and the global tax implications are known, which could impact the Firm's effective tax rate.

Refer to Note 25 for additional information on income taxes.

Litigation reserves

Refer to Note 30 for a description of the significant estimates and judgments associated with establishing litigation reserves.

Financial Accounting Standards Board ("FASB") Standards Adopted since January 1, 2024

Standard	Summary of guidance	Effects on financial statements
Fair Value Measurement: Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions *Issued June 2022*	• Clarifies that a contractual sale restriction is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. • Requires disclosure for investments in equity securities subject to contractual sale restrictions, including: 1) fair value of these investments, 2) nature and remaining duration of the restriction(s) and 3) circumstances that could cause a lapse in the restriction(s).	• Adopted prospectively on January 1, 2024, with no impact to the Firm's Consolidated Financial Statements.
Investments - Equity Method and Joint Ventures: Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method *Issued March 2023*	• Expands the ability to elect proportional amortization on a program-by-program basis, for additional types of tax-oriented investments (beyond affordable housing tax credit investments). • May be adopted using a full retrospective method, or a modified retrospective method wherein the effect of adoption is reflected as an adjustment to retained earnings at the effective date.	• Adopted under the modified retrospective method on January 1, 2024. • Refer to Note 1 for further information.
Segment Reporting: Improvements to Reportable Segment Disclosures *Issued November 2023*	• Requires disclosure of significant segment expenses that are readily provided to the chief operating decision maker ("CODM") and included in segment profit or loss. • Requires disclosure of the composition and aggregate amount of other segment items, which represent the difference between profit or loss and segment revenues less significant segment expenses. • Requires disclosure of the title and position of the CODM and an explanation of how the CODM uses the reported segment measures in assessing segment performance and deciding how to allocate resources.	• Adopted retrospectively for the Firm's annual Consolidated Financial Statements for the year ended December 31, 2024.[(a)] • The adoption of this guidance resulted in additional reportable segment disclosures, primarily relating to significant segment expenses and the CODM. Refer to Note 32 for further information.

(a) The accounting standards update applies to the Firm's annual Consolidated Financial Statements for the year ended December 31, 2024, and interim financial statements thereafter.

FASB Standards Issued but not yet Adopted as of December 31, 2024

Standard	Summary of guidance	Effects on financial statements
Income Taxes: Improvements to Income Tax Disclosures *Issued December 2023*	• Requires disclosure of income taxes paid disaggregated by 1) federal, state, and foreign taxes and 2) individual jurisdiction on the basis of a quantitative threshold of equal to or greater than 5 percent of total income taxes paid (net of refunds received). • Requires disclosure of the effective tax rate reconciliation by specific categories, at a minimum, with accompanying qualitative disclosures, and separate disclosure of reconciling items based on quantitative thresholds. • Requires categories within the effective tax rate reconciliation to be further disaggregated if quantitative thresholds are met.	• Required effective date: Annual financial statements for the year ending December 31, 2025. • The guidance can be applied on a prospective basis with the option to apply the standard retrospectively. • The Firm is evaluating the potential impact on the Consolidated Financial Statements disclosures.
Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures: Disaggregation of Income Statement Expenses *Issued November 2024*	• Requires additional annual and interim disclosures about specific types of expenses presented in the Consolidated statements of income.	• Required effective date: Annual financial statements for the year ending December 31, 2027, and interim financial statements for the year ending December 31, 2028. [(a)] • The guidance can be applied on a prospective basis with the option to apply the standard retrospectively. • The Firm is evaluating the potential impact on the Consolidated Financial Statements disclosures, as well as the Firm's planned date of adoption.

(a) Early adoption is permitted.

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorganChase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorganChase's disclosures in this 2024 Form 10-K contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorganChase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events, including geopolitical tensions and hostilities;
- Changes in laws, rules and regulatory requirements, including capital and liquidity requirements affecting the Firm's businesses, and the ability of the Firm to address those requirements;
- Heightened regulatory and governmental oversight and scrutiny of JPMorganChase's business practices, including dealings with retail customers;
- Changes in trade, monetary and fiscal policies and laws;
- Changes in the level of inflation;
- Changes in income tax laws, rules, and regulations;
- Changes in FDIC assessments;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm's reputation;
- Ability of the Firm to appropriately address social, environmental and sustainability concerns that may arise, including from its business activities;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption, including, but not limited to, in the interest rate environment;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The effectiveness of the Firm's control agenda;
- Ability of the Firm to develop or discontinue products and services, and the extent to which products or services previously sold by the Firm require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expenses;
- Competitive pressures;
- Changes in the credit quality of the Firm's clients, customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities, including health emergencies, the spread of infectious diseases, epidemics or pandemics, an outbreak or escalation of hostilities or other geopolitical instabilities, the effects of climate change or extraordinary events beyond the Firm's control, and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities;
- Ability of the Firm to withstand disruptions that may be caused by any failure of its operational systems or those of third parties;
- Ability of the Firm to effectively defend itself against cyber attacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in JPMorganChase's 2024 Form 10-K.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorganChase does not undertake to update any forward-looking statements. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-Ks, Quarterly Reports on Form 10-Qs, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

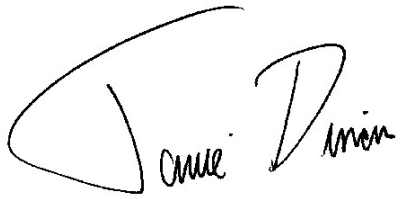
Management of JPMorgan Chase & Co. ("JPMorganChase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorganChase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

JPMorganChase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorganChase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2024. In making the assessment, management used the "Internal Control — Integrated Framework" ("COSO 2013") promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

Based upon the assessment performed, management concluded that as of December 31, 2024, JPMorganChase's internal control over financial reporting was effective based upon the COSO 2013 framework. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2024.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2024, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer



Jeremy Barnum
Executive Vice President and Chief Financial Officer

February 14, 2025



To the Board of Directors and Shareholders of JPMorgan Chase & Co.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of December 31, 2024 and 2023, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2024, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Firm's internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Firm as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Firm's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's report on internal control over financial reporting. Our responsibility is to express opinions on the Firm's consolidated financial statements and on the Firm's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Allowance for Loan Losses – Portfolio-based component of Wholesale Loan and Credit Card Loan Portfolios

As described in Note 13 to the consolidated financial statements, the allowance for loan losses for the portfolio-based component of the wholesale and credit card loan portfolios was $22.0 billion on total portfolio-based retained loans of $919.3 billion at December 31, 2024. The Firm's allowance for loan losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's loan portfolios and considers expected future changes in macroeconomic conditions. The portfolio-based component of the Firm's allowance for loan losses for the wholesale and credit card retained loan portfolios begins with a quantitative calculation of expected credit losses over the expected life of the loan by applying credit loss factors to the estimated exposure at default. The credit loss factors applied are determined based on the weighted average of five internally developed macroeconomic scenarios that take into consideration the Firm's economic outlook as derived through forecast macroeconomic variables, the most significant of which are U.S. unemployment and U.S. real gross domestic product. This quantitative calculation is further adjusted to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet otherwise reflected in the credit loss estimate.

The principal considerations for our determination that performing procedures relating to the allowance for loan losses for the portfolio-based component of the wholesale and credit card loan portfolios is a critical audit matter are (i) the significant judgment and estimation by management in the forecast of macroeconomic variables, specifically U.S. unemployment and U.S. real gross domestic product, as the Firm's forecasts of economic conditions significantly affect its estimate of expected credit losses at the balance sheet date, (ii) the significant judgment and estimation by management in determining the quantitative calculation utilized in their credit loss estimates and the adjustments to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet otherwise reflected in the credit loss estimate, which in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence obtained relating to the credit loss estimates and the appropriateness of the adjustments to the credit loss estimates, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Firm's allowance for loan losses, including controls over model validation and generation of macroeconomic scenarios. These procedures also included, among others, testing management's process for estimating the allowance for loan losses, which involved (i) evaluating the appropriateness of the models and methodologies used in quantitative calculations; (ii) evaluating the reasonableness of forecasts of U.S. unemployment and U.S. real gross domestic product; (iii) testing the completeness and accuracy of data used in the estimate; and (iv) evaluating the reasonableness of management's adjustments to the quantitative output for the impacts of model imprecision, emerging risk assessments, trends and other subjective factors that are not yet otherwise reflected in the credit loss estimate. These procedures also included the use of professionals with specialized skill and knowledge to assist in evaluating the appropriateness of certain models, methodologies and macroeconomic variables.

Fair Value of Certain Level 3 Financial Instruments

As described in Notes 2 and 3 to the consolidated financial statements, the Firm carries $1.5 trillion of its assets and $586.2 billion of its liabilities at fair value on a recurring basis. Included in these balances are $10.9 billion of trading assets and $51.8 billion of liabilities measured at fair value on a recurring basis, collectively financial instruments, which are classified as level 3 as they contain one or more inputs to valuation which are unobservable and significant to their fair value measurement. The Firm utilized internally developed valuation models and unobservable inputs to estimate fair value of the level 3 financial instruments. The unobservable inputs used by management to estimate the fair value of certain of these financial instruments include interest rate volatility, equity volatility, Bermudan switch value and correlation relating to interest rates, interest rate-to-foreign exchange,

equity prices, equity-to-foreign exchange and equity-to-interest rate.

The principal considerations for our determination that performing procedures relating to the fair value of certain level 3 financial instruments is a critical audit matter are (i) the significant judgment and estimation by management in determining the inputs to estimate fair value, which in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and in evaluating audit evidence obtained related to the fair value of these financial instruments, and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Firm's determination of the fair value, including controls over models, inputs, and data. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in developing an independent estimate of fair value for a sample of these financial instruments and comparing management's estimate to the independently developed estimate of fair value. Developing the independent estimate involved testing the completeness and accuracy of data provided by management, developing independent inputs and, as appropriate, evaluating and utilizing management's aforementioned unobservable inputs.



New York, New York
February 14, 2025

We have served as the Firm's auditor since 1965.

JPMorgan Chase & Co.
Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2024	2023	2022
Revenue			
Investment banking fees	**$ 8,910**	$ 6,519	$ 6,686
Principal transactions	**24,787**	24,460	19,912
Lending- and deposit-related fees	**7,606**	7,413	7,098
Asset management fees	**17,801**	15,220	14,096
Commissions and other fees	**7,530**	6,836	6,581
Investment securities losses	**(1,021)**	(3,180)	(2,380)
Mortgage fees and related income	**1,401**	1,176	1,250
Card income	**5,497**	4,784	4,420
Other income	**12,462**	5,609	4,322
Noninterest revenue	**84,973**	68,837	61,985
Interest income	**193,933**	170,588	92,807
Interest expense	**101,350**	81,321	26,097
Net interest income	**92,583**	89,267	66,710
Total net revenue	**177,556**	158,104	128,695
Provision for credit losses	**10,678**	9,320	6,389
Noninterest expense			
Compensation expense	**51,357**	46,465	41,636
Occupancy expense	**5,026**	4,590	4,696
Technology, communications and equipment expense	**9,831**	9,246	9,358
Professional and outside services	**11,057**	10,235	10,174
Marketing	**4,974**	4,591	3,911
Other expense	**9,552**	12,045	6,365
Total noninterest expense	**91,797**	87,172	76,140
Income before income tax expense	**75,081**	61,612	46,166
Income tax expense	**16,610**	12,060	8,490
Net income	**$ 58,471**	$ 49,552	$ 37,676
Net income applicable to common stockholders	**$ 56,868**	$ 47,760	$ 35,892
Net income per common share data			
Basic earnings per share	**$ 19.79**	$ 16.25	$ 12.10
Diluted earnings per share	**19.75**	16.23	12.09
Weighted-average basic shares	**2,873.9**	2,938.6	2,965.8
Weighted-average diluted shares	**2,879.0**	2,943.1	2,970.0

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2024	2023	2022
Net income	**$ 58,471**	$ 49,552	$ 37,676
Other comprehensive income/(loss), after–tax			
Unrealized gains/(losses) on investment securities	**(87)**	5,381	(11,764)
Translation adjustments, net of hedges	**(858)**	329	(611)
Fair value hedges	**(87)**	(101)	98
Cash flow hedges	**(882)**	1,724	(5,360)
Defined benefit pension and OPEB plans	**(63)**	373	(1,241)
DVA on fair value option elected liabilities	**(36)**	(808)	1,621
Total other comprehensive income/(loss), after–tax	**(2,013)**	6,898	(17,257)
Comprehensive income	**$ 56,458**	$ 56,450	$ 20,419

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated balance sheets

December 31, (in millions, except share data)	2024	2023
Assets		
Cash and due from banks	**$ 23,372**	$ 29,066
Deposits with banks	**445,945**	595,085
Federal funds sold and securities purchased under resale agreements (included **$286,771** and $259,813 at fair value)	**295,001**	276,152
Securities borrowed (included **$83,962** and $70,086 at fair value)	**219,546**	200,436
Trading assets (included assets pledged of **$136,070** and $128,994)	**637,784**	540,607
Available-for-sale securities (amortized cost of **$411,045** and $205,456; included assets pledged of **$10,162** and $9,219)	**406,852**	201,704
Held-to-maturity securities	**274,468**	369,848
Investment securities, net of allowance for credit losses	**681,320**	571,552
Loans (included **$41,350** and $38,851 at fair value)	**1,347,988**	1,323,706
Allowance for loan losses	**(24,345)**	(22,420)
Loans, net of allowance for loan losses	**1,323,643**	1,301,286
Accrued interest and accounts receivable	**101,223**	107,363
Premises and equipment	**32,223**	30,157
Goodwill, MSRs and other intangible assets	**64,560**	64,381
Other assets (included **$15,122** and $12,306 at fair value and assets pledged of **$6,288** and $6,764)	**178,197**	159,308
Total assets[(a)]	**$ 4,002,814**	$ 3,875,393
Liabilities		
Deposits (included **$33,768** and $78,384 at fair value)	**$ 2,406,032**	$ 2,400,688
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$226,329** and $169,003 at fair value)	**296,835**	216,535
Short-term borrowings (included **$26,521** and $20,042 at fair value)	**52,893**	44,712
Trading liabilities	**192,883**	180,428
Accounts payable and other liabilities (included **$5,893** and $5,637 at fair value)	**280,672**	290,307
Beneficial interests issued by consolidated VIEs (included **$1** and $1 at fair value)	**27,323**	23,020
Long-term debt (included **$100,780** and $87,924 at fair value)	**401,418**	391,825
Total liabilities[(a)]	**3,658,056**	3,547,515
Commitments and contingencies (refer to Notes 28, 29 and 30)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,005,375** and 2,740,375 shares)	**20,050**	27,404
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**90,911**	90,128
Retained earnings	**376,166**	332,901
Accumulated other comprehensive losses	**(12,456)**	(10,443)
Treasury stock, at cost (**1,307,313,494** and 1,228,275,301 shares)	**(134,018)**	(116,217)
Total stockholders' equity	**344,758**	327,878
Total liabilities and stockholders' equity	**$ 4,002,814**	$ 3,875,393

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2024 and 2023. The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorganChase. The assets and liabilities in the table below include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation. Refer to Note 14 for a further discussion.

December 31, (in millions)	2024	2023
Assets		
Trading assets	**$ 3,885**	$ 2,170
Loans	**36,510**	37,611
All other assets	**681**	591
Total assets	**$ 41,076**	$ 40,372
Liabilities		
Beneficial interests issued by consolidated VIEs	**$ 27,323**	$ 23,020
All other liabilities	**454**	263
Total liabilities	**$ 27,777**	$ 23,283

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2024	2023	2022
Preferred stock			
Balance at January 1	**$ 27,404**	$ 27,404	$ 34,838
Issuance	**2,496**	—	—
Redemption	**(9,850)**	—	(7,434)
Balance at December 31	**20,050**	27,404	27,404
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**90,128**	89,044	88,415
Shares issued and commitments to issue common stock for employee share-based compensation awards, and related tax effects	**768**	1,084	629
Other	**15**	—	—
Balance at December 31	**90,911**	90,128	89,044
Retained earnings			
Balance at January 1	**332,901**	296,456	272,268
Cumulative effect of change in accounting principles	**(161)**	449	—
Net income	**58,471**	49,552	37,676
Preferred stock dividends	**(1,259)**	(1,501)	(1,595)
Common stock dividends (**$4.80**, $4.10 and $4.00 per share for 2024, 2023 and 2022, respectively)	**(13,786)**	(12,055)	(11,893)
Balance at December 31	**376,166**	332,901	296,456
Accumulated other comprehensive income/(loss)			
Balance at January 1	**(10,443)**	(17,341)	(84)
Other comprehensive income/(loss), after-tax	**(2,013)**	6,898	(17,257)
Balance at December 31	**(12,456)**	(10,443)	(17,341)
Treasury stock, at cost			
Balance at January 1	**(116,217)**	(107,336)	(105,415)
Repurchase	**(19,007)**	(9,980)	(3,122)
Reissuance	**1,206**	1,099	1,201
Balance at December 31	**(134,018)**	(116,217)	(107,336)
Total stockholders' equity	**$ 344,758**	$ 327,878	$ 292,332

Effective January 1, 2024, the Firm adopted the Equity Method and Joint Ventures: Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method accounting guidance. Effective January 1, 2023, the Firm adopted the Financial Instruments – Credit Losses: Troubled Debt Restructurings, and Derivatives and Hedging: Fair Value Hedging – Portfolio Layer Method accounting guidance. Refer to Note 1 for further information.

The Notes to Consolidated Financial Statements are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of cash flows

Year ended December 31, (in millions)	2024	2023	2022
Operating activities			
Net income	**$ 58,471**	$ 49,552	$ 37,676
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for credit losses	**10,678**	9,320	6,389
Depreciation and amortization	**7,938**	7,512	7,051
Deferred tax (benefit)/expense	**2,004**	(4,534)	(2,738)
Estimated bargain purchase gain associated with the First Republic acquisition	**(103)**	(2,775)	—
Initial gain on the Visa share exchange	**(7,990)**	—	—
Other	**1,985**	4,301	5,174
Originations and purchases of loans held-for-sale	**(212,238)**	(115,245)	(149,167)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**205,303**	116,430	167,709
Net change in:			
Trading assets	**(95,729)**	(74,091)	(31,449)
Securities borrowed	**(18,762)**	(14,902)	20,203
Accrued interest and accounts receivable	**5,735**	19,928	(22,970)
Other assets	**(7,650)**	32,970	(2,882)
Trading liabilities	**2,276**	5,315	11,170
Accounts payable and other liabilities	**(90)**	(25,388)	58,614
Other operating adjustments	**6,160**	4,581	2,339
Net cash (used in)/provided by operating activities	**(42,012)**	12,974	107,119
Investing activities			
Net change in:			
Federal funds sold and securities purchased under resale agreements	**(18,706)**	39,740	(54,278)
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**99,363**	53,056	48,626
Purchases	**(4,709)**	(4,141)	(33,676)
Available-for-sale securities:			
Proceeds from paydowns and maturities	**38,499**	53,744	39,159
Proceeds from sales	**104,625**	108,434	84,616
Purchases	**(352,712)**	(115,499)	(126,258)
Proceeds from sales and securitizations of loans held-for-investment	**57,921**	47,312	44,892
Other changes in loans, net	**(83,176)**	(88,343)	(128,968)
Net cash used in First Republic Acquisition	**(2,362)**	(9,920)	—
All other investing activities, net	**(2,146)**	(16,740)	(11,932)
Net cash (used in)/provided by investing activities	**(163,403)**	67,643	(137,819)
Financing activities			
Net change in:			
Deposits	**3,299**	(32,196)	(136,895)
Federal funds purchased and securities loaned or sold under repurchase agreements	**80,288**	13,801	8,455
Short-term borrowings	**7,439**	(1,934)	(8,984)
Beneficial interests issued by consolidated VIEs	**1,543**	9,029	2,205
Proceeds from long-term borrowings	**109,915**	75,417	78,442
Payments of long-term borrowings	**(96,605)**	(64,880)	(45,556)
Proceeds from issuance of preferred stock	**2,500**	—	—
Redemption of preferred stock	**(9,850)**	—	(7,434)
Treasury stock repurchased	**(18,830)**	(9,824)	(3,162)
Dividends paid	**(14,783)**	(13,463)	(13,562)
All other financing activities, net	**(1,469)**	(1,521)	234
Net cash provided by/(used in) financing activities	**63,447**	(25,571)	(126,257)
Effect of exchange rate changes on cash and due from banks and deposits with banks	**(12,866)**	1,871	(16,643)
Net increase/(decrease) in cash and due from banks and deposits with banks	**(154,834)**	56,917	(173,600)
Cash and due from banks and deposits with banks at the beginning of the period	**624,151**	567,234	740,834
Cash and due from banks and deposits with banks at the end of the period	**$ 469,317**	$ 624,151	$ 567,234
Cash interest paid	**$ 99,642**	$ 77,114	$ 23,143
Cash income taxes paid, net	**11,715**	9,908	4,355

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorganChase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Refer to Note 32 for further discussion of the Firm's reportable business segments.

The accounting and financial reporting policies of JPMorganChase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorganChase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorganChase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.

Voting interest entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting, or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in noninterest revenue.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these voting interest entities. However, in the limited cases where the non-managing partners or members do not have substantive kick-out or participating rights, the Firm evaluates the funds as VIEs and consolidates the funds if the Firm is the general partner or managing member and has both power and a potentially significant interest.

The Firm's investment companies and asset management funds have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and, accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets, with income or loss included in noninterest revenue. If consolidated, the Firm retains the accounting under such specialized investment company guidelines.

Variable interest entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The

primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and are therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

Refer to Note 14 for further discussion of Firm-sponsored VIEs.

Revenue recognition

Interest income

The Firm recognizes interest income on loans, debt securities, and other debt instruments, generally on a level-yield basis, based on the underlying contractual rate. Refer to Note 7 for further information.

Revenue from contracts with customers

JPMorganChase recognizes noninterest revenue from certain contracts with customers, in investment banking fees, deposit-related fees, asset management fees, commissions and other fees, and components of card income, when the Firm's related performance obligations are satisfied. Refer to Note 6 for further discussion of the Firm's revenue from contracts with customers.

Principal transactions revenue

JPMorganChase carries a portion of its assets and liabilities at fair value. Changes in fair value are reported primarily in principal transactions revenue. Refer to Notes 2 and 3 for further discussion of fair value measurement. Refer to Note 6 for further discussion of principal transactions revenue.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorganChase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in the Consolidated statements of comprehensive income. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements and securities borrowed or loaned under securities loan agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances where it has determined that the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivative contracts, resale, repurchase, securities borrowed and securities loaned

agreements. A master netting agreement is a single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due). Upon the exercise of derivatives termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive values of "in the money" transactions are netted against the negative values of "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of default rights under repurchase agreements and securities loan agreements in general (i) all transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

Refer to Note 5 for further discussion of the Firm's derivative instruments. Refer to Note 11 for further discussion of the Firm's securities financing agreements.

Statements of cash flows

For JPMorganChase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks and deposits with banks on the Consolidated balance sheets.

Accounting standard adopted January 1, 2024

Equity Method and Joint Ventures: Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method

The guidance expanded the types of tax-oriented investments, beyond affordable housing tax credit investments, that the Firm can elect on a program by program basis, to be accounted for using the proportional amortization method. This method requires the cost of eligible investments, within an elected program, to be amortized in proportion to the tax benefits received with the resulting amortization reported directly in income tax expense, which aligns with the associated tax credits and other tax benefits. Eligible investments must meet certain criteria, including that substantially all of the return is from income tax credits and other income tax benefits.

This guidance was adopted on January 1, 2024 under the modified retrospective method. The adoption of this guidance resulted in a change to the classification and timing of the amortization associated with certain of the Firm's alternative energy tax-oriented investments. As a result of the adoption, the amortization of these investments that was previously recognized in other income is now recognized in income tax expense. The change in accounting resulted in a decrease to retained earnings of $161 million and increased the Firm's income tax expense and the effective tax rate by approximately $450 million and two percentage points, respectively, in the first quarter of 2024, with no material impact to net income.

The guidance requires additional disclosure for all investments that generate income tax credits and other income tax benefits from a tax-oriented investment program for which the Firm has elected to apply the proportional amortization method. The guidance also requires a reevaluation of eligible investments when significant modifications or events occur that result in a change in the nature of the investment or a change in the Firm's relationship with the underlying project.

Refer to Notes 6, 14 and 25 for additional information.

Accounting standards adopted January 1, 2023

Derivatives and Hedging: Fair Value Hedging – Portfolio Layer Method

The adoption of this guidance expanded the ability to hedge a portfolio of fixed-rate assets in a qualifying hedge accounting relationship. As permitted by the guidance, the Firm elected to transfer HTM securities to AFS and designated those securities in a portfolio layer method hedge upon adoption. The adoption impact of the transfer on retained earnings was not material.

Financial Instruments – Credit Losses: Troubled Debt Restructurings ("TDRs")

The adoption of this guidance eliminated the requirement to measure the allowance for TDRs using a discounted cash flow ("DCF") methodology and allowed the option of a non-DCF portfolio-based approach for modified loans to troubled borrowers. The Firm elected this option for all portfolios of modified loans to troubled borrowers except collateral-dependent loans and nonaccrual risk-rated loans, for which the Firm elected to continue applying a DCF methodology. The adoption of this guidance under the modified retrospective method on January 1, 2023, resulted in a $446 million increase to retained earnings.

Significant accounting policies

The following table identifies JPMorganChase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 2	page 181
Fair value option	Note 3	page 203
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Note 2 – Fair value measurement

JPMorganChase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets, liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices or inputs, where available. If prices or quotes are not available, fair value is based on valuation models and other valuation techniques that consider relevant transaction characteristics (such as maturity) and use, as inputs, observable or unobservable market parameters, including yield curves, interest rates, volatilities, prices (such as commodity, equity or debt prices), correlations, foreign exchange rates and credit curves. Fair value may also incorporate valuation adjustments.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in the Firm deriving a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's Valuation Control Group ("VCG"), which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the Firm's Valuation Governance Forum ("VGF"), which is composed of senior finance and risk executives, is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The Firmwide VGF is chaired by the Firmwide head of the VCG (under the direction of the Firm's Controller), and includes sub-forums covering the CIB, CCB, AWM and certain corporate functions including Treasury and CIO.

Price verification process

The VCG verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, the VCG performs additional review to ensure the reasonableness of the estimates. The additional review may include evaluating the limited market activity including client unwinds, benchmarking valuation inputs to those used for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.

The VCG determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments to quoted prices are applied for instruments classified within level 1 of the fair value hierarchy (refer to the discussion of the fair value hierarchy on page 182 for further information). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are made based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are

based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to sufficiently reduce the net open risk position.

- Uncertainty adjustments related to unobservable parameters may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Adjustments are made to reflect the uncertainty inherent in the resulting valuation estimate.
- Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality (CVA), the Firm's own creditworthiness (DVA) and the impact of funding (FVA), using a consistent framework across the Firm. Refer to Credit and funding adjustments on page 198 of this Note for more information on such adjustments.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction terms such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs in those models.

Under the Firm's Estimations and Model Risk Management Policy, MRGR reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances exceptions may be granted to the Firm's policy to allow a model to be used prior to review or approval. MRGR may also require the user to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

Fair value hierarchy

A three-level fair value hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The fair value hierarchy is based on the observability of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies generally used by the Firm to measure its significant products/instruments at fair value, including the general classification of such instruments pursuant to the fair value hierarchy.

Product/instrument	Valuation methodology	Classifications in the fair value hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features: refer to the discussion of derivatives below for further information • Market rates for the respective maturity • Collateral characteristics	Predominantly level 2
Loans and lending-related commitments — wholesale Loans carried at fair value (trading loans and non-trading loans) and associated lending-related commitments	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Credit spreads derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed • Collateral characteristics	Level 2 or 3
Loans — consumer Loans carried at fair value — residential mortgage loans expected to be sold	Fair value is based on observable market prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2
Investment and trading securities	Quoted market prices In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: Mortgage- and asset-backed securities specific inputs: • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity Collateralized loan obligations (“CLOs”) specific inputs: • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 1 Level 2 or 3
Physical commodities	Valued using observable market prices or data.	Predominantly Level 1 or 2

Product/instrument	Valuation methodology	Classifications in the fair value hierarchy
Derivatives	Actively traded derivatives, e.g., exchange-traded derivatives, that are valued using quoted prices.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that may use observable or unobservable valuation inputs as well as considering the contractual terms. The key valuation inputs used will depend on the type of derivative and the nature of the underlying instruments and may include equity prices, commodity prices, foreign exchange rates, volatilities, correlations, CDS spreads, recovery rates and prepayment speed. In addition, specific inputs used for derivatives that are valued based on models with significant unobservable inputs are as follows: Interest rate and FX exotic derivatives specific inputs include: • Interest rate curve • Interest rate volatility • Interest rate spread volatility • Bermudan switch value • Interest rate correlation • Interest rate-FX correlation • Foreign exchange correlation Credit derivatives specific inputs include: • Credit correlation between the underlying debt instruments Equity derivatives specific inputs include: • Forward equity price • Equity volatility • Equity correlation • Equity-FX correlation • Equity-IR correlation Commodity derivatives specific inputs include: • Forward commodity price • Commodity volatility • Commodity correlation Additionally, adjustments are made to reflect counterparty credit quality (CVA) and the impact of funding (FVA). Refer to page 198 of this Note.	Level 2 or 3
Mortgage servicing rights	Refer to Mortgage servicing rights in Note 15.	Level 3
Private equity direct investments	Fair value is estimated using all available information; the range of potential inputs include: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues including lack of liquidity • Additional available inputs relevant to the investment	Level 2 or 3

Product/instrument	Valuation methodology	Classification in the fair value hierarchy
Fund investments (e.g., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value	
	• NAV is supported by the ability to redeem and purchase at the NAV level	Level 1
	• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock-up periods or withdrawal limitations) or where observable activity is limited	Level 2 or 3[(a)]
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available. In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE.	Level 2 or 3
Structured notes (included in deposits, short-term borrowings and long-term debt)	Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that may use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivatives valuation. Adjustments are then made to this base valuation to reflect the Firm's own credit risk (DVA). Refer to page 198 of this Note.	Level 2 or 3

(a) Excludes certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient.

The following table presents the assets and liabilities reported at fair value as of December 31, 2024 and 2023, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2024 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments[e]	Total fair value
Federal funds sold and securities purchased under resale agreements	$ —	$ 286,771	$ —	$ —	$ 286,771
Securities borrowed	—	83,962	—	—	83,962
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	—	104,312	488	—	104,800
Residential – nonagency	—	2,282	5	—	2,287
Commercial – nonagency	—	1,283	10	—	1,293
Total mortgage-backed securities	—	107,877	503	—	108,380
U.S. Treasury, GSEs and government agencies[a]	150,580	11,702	—	—	162,282
Obligations of U.S. states and municipalities	—	6,100	1	—	6,101
Certificates of deposit, bankers' acceptances and commercial paper	—	3,950	—	—	3,950
Non-U.S. government debt securities	34,108	54,335	152	—	88,595
Corporate debt securities	—	33,591	390	—	33,981
Loans	—	10,228	1,088	—	11,316
Asset-backed securities	—	2,813	10	—	2,823
Total debt instruments	184,688	230,596	2,144	—	417,428
Equity securities	130,307	1,359	62	—	131,728
Physical commodities[b]	5,957	1,533	26	—	7,516
Other	—	19,935	210	—	20,145
Total debt and equity instruments[c]	320,952	253,423	2,442	—	576,817
Derivative receivables:					
Interest rate	4,934	282,019	3,781	(265,789)	24,945
Credit	—	10,379	708	(10,273)	814
Foreign exchange	196	261,520	1,204	(237,608)	25,312
Equity	—	82,855	2,365	(79,935)	5,285
Commodity	—	15,232	394	(11,015)	4,611
Total derivative receivables	5,130	652,005	8,452	(604,620)	60,967
Total trading assets[d]	326,082	905,428	10,894	(604,620)	637,784
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	—	91,893	—	—	91,893
Residential – nonagency	—	4,811	—	—	4,811
Commercial – nonagency	—	4,057	8	—	4,065
Total mortgage-backed securities	—	100,761	8	—	100,769
U.S. Treasury and government agencies	234,491	288	—	—	234,779
Obligations of U.S. states and municipalities	—	17,913	—	—	17,913
Non-U.S. government debt securities	23,973	12,272	—	—	36,245
Corporate debt securities	—	70	—	—	70
Asset-backed securities:					
Collateralized loan obligations	—	14,943	—	—	14,943
Other[a]	—	2,133	—	—	2,133
Total available-for-sale securities	258,464	148,380	8	—	406,852
Loans[e]	—	38,934	2,416	—	41,350
Mortgage servicing rights	—	—	9,121	—	9,121
Other assets[d]	5,732	6,997	1,344	—	14,073
Total assets measured at fair value on a recurring basis	$ 590,278	$ 1,470,472	$ 23,783	$ (604,620)	$ 1,479,913
Deposits	$ —	$ 31,583	$ 2,185	$ —	$ 33,768
Federal funds purchased and securities loaned or sold under repurchase agreements	—	226,329	—	—	226,329
Short-term borrowings	—	23,045	3,476	—	26,521
Trading liabilities:					
Debt and equity instruments[c]	120,719	32,457	46	—	153,222
Derivative payables:					
Interest rate	3,981	266,767	3,480	(264,989)	9,239
Credit	—	12,725	1,071	(11,898)	1,898
Foreign exchange	187	253,196	1,184	(238,970)	15,597
Equity	—	90,908	5,231	(87,491)	8,648
Commodity	—	14,021	467	(10,209)	4,279
Total derivative payables	4,168	637,617	11,433	(613,557)	39,661
Total trading liabilities	124,887	670,074	11,479	(613,557)	192,883
Accounts payable and other liabilities	3,100	2,717	76	—	5,893
Beneficial interests issued by consolidated VIEs	—	1	—	—	1
Long-term debt	—	66,216	34,564	—	100,780
Total liabilities measured at fair value on a recurring basis	$ 127,987	$ 1,019,965	$ 51,780	$ (613,557)	$ 586,175

December 31, 2023 (in millions)	Fair value hierarchy			Derivative netting adjustments[e]	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	$ —	$ 259,813	$ —	$ —	$ 259,813
Securities borrowed	—	70,086	—	—	70,086
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	—	73,840	758	—	74,598
Residential – nonagency	—	1,921	5	—	1,926
Commercial – nonagency	—	1,362	12	—	1,374
Total mortgage-backed securities	—	77,123	775	—	77,898
U.S. Treasury, GSEs and government agencies[a]	133,997	9,998	—	—	143,995
Obligations of U.S. states and municipalities	—	5,858	10	—	5,868
Certificates of deposit, bankers' acceptances and commercial paper	—	756	—	—	756
Non-U.S. government debt securities	24,846	55,557	179	—	80,582
Corporate debt securities	—	32,854	484	—	33,338
Loans	—	7,872	684	—	8,556
Asset-backed securities	—	2,199	6	—	2,205
Total debt instruments	158,843	192,217	2,138	—	353,198
Equity securities	107,926	679	127	—	108,732
Physical commodities[b]	2,479	3,305	7	—	5,791
Other	—	17,879	101	—	17,980
Total debt and equity instruments[c]	269,248	214,080	2,373	—	485,701
Derivative receivables:					
Interest rate	2,815	243,578	4,298	(224,367)	26,324
Credit	—	8,644	1,010	(9,103)	551
Foreign exchange	149	204,737	889	(187,756)	18,019
Equity	—	55,167	2,522	(52,761)	4,928
Commodity	—	15,234	205	(10,397)	5,042
Total derivative receivables	2,964	527,360	8,924	(484,384)	54,864
Total trading assets[d]	272,212	741,440	11,297	(484,384)	540,565
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	—	85,170	—	—	85,170
Residential – nonagency	—	3,639	—	—	3,639
Commercial – nonagency	—	2,803	—	—	2,803
Total mortgage-backed securities	—	91,612	—	—	91,612
U.S. Treasury and government agencies	57,683	122	—	—	57,805
Obligations of U.S. states and municipalities	—	21,367	—	—	21,367
Non-U.S. government debt securities	13,095	8,187	—	—	21,282
Corporate debt securities	—	100	—	—	100
Asset-backed securities:					
Collateralized loan obligations	—	6,752	—	—	6,752
Other[a]	—	2,786	—	—	2,786
Total available-for-sale securities	70,778	130,926	—	—	201,704
Loans[e]	—	35,772	3,079	—	38,851
Mortgage servicing rights	—	—	8,522	—	8,522
Other assets[d]	6,635	3,929	758	—	11,322
Total assets measured at fair value on a recurring basis	$ 349,625	$ 1,241,966	$ 23,656	$ (484,384)	$ 1,130,863
Deposits	$ —	$ 76,551	$ 1,833	$ —	$ 78,384
Federal funds purchased and securities loaned or sold under repurchase agreements	—	169,003	—	—	169,003
Short-term borrowings	—	18,284	1,758	—	20,042
Trading liabilities:					
Debt and equity instruments[c]	107,292	32,252	37	—	139,581
Derivative payables:					
Interest rate	4,409	232,277	3,796	(228,586)	11,896
Credit	—	11,293	745	(10,949)	1,089
Foreign exchange	147	211,289	827	(199,643)	12,620
Equity	—	60,887	4,924	(56,443)	9,368
Commodity	—	15,894	484	(10,504)	5,874
Total derivative payables	4,556	531,640	10,776	(506,125)	40,847
Total trading liabilities	111,848	563,892	10,813	(506,125)	180,428
Accounts payable and other liabilities	3,968	1,617	52	—	5,637
Beneficial interests issued by consolidated VIEs	—	1	—	—	1
Long-term debt	—	60,198	27,726	—	87,924
Total liabilities measured at fair value on a recurring basis	$ 115,816	$ 889,546	$ 42,182	$ (506,125)	$ 541,419

(a) At December 31, 2024 and 2023, included total U.S. GSE obligations of $120.1 billion and $78.5 billion, respectively, which were mortgage-related.

(b) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net realizable value is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. Refer to Note 5 for a further discussion of the Firm's hedge accounting relationships. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

(c) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
(d) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At both December 31, 2024 and 2023, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $1.0 billion, primarily reported in other assets.
(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

Level 3 valuations

The Firm has established well-structured processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). Refer to pages 181–185 of this Note for further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed valuation models and other valuation techniques that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate valuation model or other valuation technique to use. Second, due to the lack of observability of significant inputs, management must assess relevant empirical data in deriving valuation inputs including transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, prices (such as commodity, equity or debt prices), valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and the weighted or arithmetic averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range, weighted and arithmetic average values do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted and arithmetic average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

Level 3 inputs[a]

December 31, 2024						
Product/Instrument	**Fair value** (in millions)	**Principal valuation technique**	**Unobservable inputs[g]**	**Range of input values**		**Average[i]**
Residential mortgage-backed securities and loans[b]	$ 861	Discounted cash flows	Yield	0%	103%	8%
			Prepayment speed	3%	13%	8%
			Conditional default rate	0%	7%	0%
			Loss severity	0%	110%	5%
Commercial mortgage-backed securities and loans[c]	1,424	Market comparables	Price	$0	$90	$81
Corporate debt securities	390	Market comparables	Price	$0	$148	$95
Loans[d]	1,730	Market comparables	Price	$0	$107	$79
Non-U.S. government debt securities	152	Market comparables	Price	$0	$103	$95
Net interest rate derivatives	293	Option pricing	Interest rate volatility	9bps	1,097bps	115bps
			Interest rate spread volatility	37bps	77bps	64bps
			Bermudan switch value	0%	45%	17%
			Interest rate correlation	(82)%	97%	64%
			IR-FX correlation	(35)%	60%	8%
	8	Discounted cash flows	Prepayment speed	0%	21%	7%
Net credit derivatives	(393)	Discounted cash flows	Credit correlation	31%	79%	47%
			Credit spread	0bps	2,717bps	331bps
			Recovery rate	10%	90%	61%
	30	Market comparables	Price	$0	$115	$74
Net foreign exchange derivatives	62	Option pricing	IR-FX correlation	(40)%	60%	22%
	(42)	Discounted cash flows	Prepayment speed		11%	11%
			Interest rate curve	1%	27%	7%
Net equity derivatives	(2,866)	Option pricing	Forward equity price[h]	76%	153%	100%
			Equity volatility	5%	135%	32%
			Equity correlation	17%	100%	56%
			Equity-FX correlation	(80)%	65%	(32)%
			Equity-IR correlation	5%	25%	14%
Net commodity derivatives	(73)	Option pricing	Oil commodity forward	$87 / BBL	$291 / BBL	$160 / BBL
			Natural gas commodity forward	$2 / MMBTU	$7 / MMBTU	$4 / MMBTU
			Commodity volatility	2%	43%	5%
			Commodity correlation	(35)%	98%	(9)%
MSRs	9,121	Discounted cash flows	Refer to Note 15			
Long-term debt, short-term borrowings, and deposits[e]	38,901	Option pricing	Interest rate volatility	9bps	1,097bps	115bps
			Bermudan switch value	0%	45%	17%
			Interest rate correlation	(82)%	97%	64%
			IR-FX correlation	(35)%	60%	8%
			Equity volatility	2%	137%	28%
			Equity correlation	17%	100%	56%
			Equity-FX correlation	(80)%	65%	(32)%
			Equity-IR correlation	5%	25%	14%
	1,324	Discounted cash flows	Credit correlation	30%	57%	46%
			Credit spread	2bps	270bps	83bps
			Recovery rate	20%	40%	35%
			Yield	5%	20%	10%
			Loss severity	0%	100%	50%
Other level 3 assets and liabilities, net[f]	1,531					

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.
(b) Comprises U.S. GSE and government agency securities of $488 million, nonagency securities of $5 million and non-trading loans of $368 million.
(c) Comprises nonagency securities of $18 million, trading loans of $65 million and non-trading loans of $1.3 billion.
(d) Comprises trading loans of $1.0 billion and non-trading loans of $707 million.
(e) Long-term debt, short-term borrowings and deposits include structured notes issued by the Firm that are financial instruments that typically contain embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.
(f) Includes equity securities of $734 million including $672 million in Other assets, for which quoted prices are not readily available and the fair value is generally based on internal valuation techniques such as EBITDA multiples and comparable analysis. All other level 3 assets and liabilities are insignificant both individually and in aggregate.
(g) Price is a significant unobservable input for certain instruments. When quoted market prices are not readily available, reliance is generally placed on price-based internal valuation techniques. The price input is expressed assuming a par value of $100.
(h) Forward equity price is expressed as a percentage of the current equity price.
(i) Amounts represent weighted averages except for derivative related inputs where arithmetic averages are used.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent, as a change in one unobservable input may give rise to a change in another unobservable input. Where relationships do exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

The following discussion also provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, LTV ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, and the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security depends on factors relating to the underlying mortgages, including the LTV ratio, the nature of the lender's lien on the property and other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables. Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity, foreign exchange and commodity) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input, as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

Bermudan switch value – The switch value is the difference between the overall value of a Bermudan swaption, which can be exercised at multiple points in time, and its most expensive European swaption and reflects the additional value that the multiple exercise dates provide the holder. Switch values are dependent on market conditions and can vary greatly depending on a number of factors, such as the tenor of the underlying swap as well as the strike price of the option. An increase in switch value, in isolation, would generally result in an increase in a fair value measurement.

Interest rate curve – The interest rate curve represents the relationship of interest rates over differing tenors. The interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is also a pricing input used in the discounting of any derivative cash flow.

Forward price – The forward price is the price at which the buyer agrees to purchase the asset underlying a forward contract on the predetermined future delivery date, and is such that the value of the contract is zero at inception.

The forward price is used as an input in the valuation of certain derivatives and depends on a number of factors including interest rates, the current price of the underlying asset, and the expected income to be received and costs to be incurred by the seller as a result of holding that asset until the delivery date. An increase in the forward can result in an increase or a decrease in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2024, 2023 and 2022. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable inputs to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. The Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2024 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2024
	Fair value at Jan. 1, 2024	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3	Transfers (out of) level 3	Fair value at Dec. 31, 2024	
Assets:[a]									
Federal funds sold and securities purchased under resale agreements	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	758	18	46	(260)	(81)	7	—	488	(3)
Residential – nonagency	5	7	—	(5)	(2)	4	(4)	5	—
Commercial – nonagency	12	(2)	—	—	—	—	—	10	(1)
Total mortgage-backed securities	775	23	46	(265)	(83)	11	(4)	503	(4)
Obligations of U.S. states and municipalities	10	—	—	—	(3)	—	(6)	1	—
Non-U.S. government debt securities	179	(6)	175	(183)	—	17	(30)	152	(10)
Corporate debt securities	484	36	459	(354)	(181)	13	(67)	390	45
Loans	684	63	800	(642)	(74)	839	(582)	1,088	29
Asset-backed securities	6	—	9	(5)	(8)	8	—	10	—
Total debt instruments	2,138	116	1,489	(1,449)	(349)	888	(689)	2,144	60
Equity securities	127	(21)	138	(123)	(1)	85	(143)	62	(308)
Physical commodities	7	17	3	—	(1)	—	—	26	16
Other	101	144	53	—	(68)	28	(48)	210	108
Total trading assets – debt and equity instruments	2,373	256 [c]	1,683	(1,572)	(419)	1,001	(880)	2,442	(124) [c]
Net derivative receivables:[b]									
Interest rate	502	745	387	(197)	(608)	(172)	(356)	301	(362)
Credit	265	(208)	(2)	(17)	(333)	(61)	(7)	(363)	(265)
Foreign exchange	62	248	178	(538)	(30)	128	(28)	20	353
Equity	(2,402)	(321)	904	(2,488)	953	(91)	579	(2,866)	783
Commodity	(279)	64	32	(215)	310	15	—	(73)	102
Total net derivative receivables	(1,852)	528 [c]	1,499	(3,455)	292	(181)	188	(2,981)	611 [c]
Available-for-sale securities:									
Mortgage-backed securities:									
Commercial – nonagency	—	—	—	—	—	8	—	8	—
Corporate debt securities	—	—	—	—	—	—	—	—	—
Total available-for-sale securities	—	— [d]	—	—	—	8	—	8	— [d]
Loans	3,079	266 [c]	431	(756)	(993)	816	(427)	2,416	251 [c]
Mortgage servicing rights	8,522	762 [e]	926	(21)	(1,068)	—	—	9,121	762 [e]
Other assets	758	105 [c]	623	(62)	(58)	5	(27)	1,344	88 [c]

Year ended December 31, 2024 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2024
	Fair value at Jan. 1, 2024	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3	Transfers (out of) level 3	Fair value at Dec. 31, 2024	
Liabilities:[a]										
Deposits	$ 1,833	$ (14) [c][f]	$ —	$ —	$ 2,006	$ (1,522)	$ 34	$ (152)	$ 2,185	$ (44) [c][f]
Short-term borrowings	1,758	180 [c][f]	—	—	7,752	(6,230)	23	(7)	3,476	58 [c][f]
Trading liabilities – debt and equity instruments	37	(47) [c]	(45)	70	—	—	48	(17)	46	18 [c]
Accounts payable and other liabilities	52	(6) [c]	(35)	63	—	—	5	(3)	76	(6) [c]
Long-term debt	27,726	1,475 [c][f]	—	—	23,920	(18,432)	738	(863)	34,564	1,212 [c][f]

Year ended December 31, 2023 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at Jan. 1, 2023	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3	Transfers (out of) level 3	Fair value at Dec. 31, 2023	Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2023
Assets:[a]									
Federal funds sold and securities purchased under resale agreements	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	759	4	249	(133)	(107)	—	(14)	758	1
Residential – nonagency	5	6	—	(6)	(1)	1	—	5	1
Commercial – nonagency	7	6	—	—	(1)	8	(8)	12	7
Total mortgage-backed securities	771	16	249	(139)	(109)	9	(22)	775	9
Obligations of U.S. states and municipalities	7	—	1	—	(1)	3	—	10	—
Non-U.S. government debt securities	155	74	217	(254)	—	22	(35)	179	74
Corporate debt securities	463	36	322	(172)	(41)	114	(238)	484	35
Loans	759	(15)	1,027	(499)	(441)	382	(529)	684	30
Asset-backed securities	23	—	7	(12)	(1)	5	(16)	6	—
Total debt instruments	2,178	111	1,823	(1,076)	(593)	535	(840)	2,138	148
Equity securities	665	(53)	164	(239)	(384)	192	(218)	127	(422)
Physical commodities	2	—	7	—	(2)	—	—	7	—
Other	64	(58)	141	—	(5)	1	(42)	101	(28)
Total trading assets – debt and equity instruments	2,909	—	2,135	(1,315)	(984)	728	(1,100)	2,373	(302)[c]
Net derivative receivables:[b]									
Interest rate	701	556	251	(255)	654	(1,117)	(288)	502	419
Credit	13	304	(60)	(25)	47	15	(29)	265	230
Foreign exchange	489	31	151	(144)	(187)	144	(422)	62	(80)
Equity	(384)	191	928	(1,931)	(1,306)	700	(600)	(2,402)	(646)
Commodity	(146)	(59)	59	(290)	(51)	(11)	219	(279)	(144)
Total net derivative receivables	673	1,023[c]	1,329	(2,645)	(843)	(269)	(1,120)	(1,852)	(221)[c]
Available-for-sale securities:									
Mortgage-backed securities:									
Commercial – nonagency	—	—	—	—	—	—	—	—	—
Corporate debt securities	239	24	—	(225)	—	—	(38)	—	—
Total available-for-sale securities	239	24[d]	—	(225)	—	—	(38)	—	—[d]
Loans	1,418	289[c]	2,398	(120)	(1,147)	1,306	(1,065)	3,079	293[c]
Mortgage servicing rights	7,973	467[e]	1,281	(188)	(1,011)	—	—	8,522	467[e]
Other assets	405	(36)[c]	525	(20)	(147)	45	(14)	758	(82)[c]

Year ended December 31, 2023 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at Jan. 1, 2023	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3	Transfers (out of) level 3	Fair value at Dec. 31, 2023	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2023
Liabilities:[a]										
Deposits	$ 2,162	$ 95[c][f]	$ —	$ —	$ 940	$ (1,043)	$ —	$ (321)	$ 1,833	$ 73[c][f]
Short-term borrowings	1,401	201[c][f]	—	—	4,522	(4,345)	3	(24)	1,758	14[c][f]
Trading liabilities – debt and equity instruments	84	(21)[c]	(32)	9	—	(2)	19	(20)	37	—
Accounts payable and other liabilities	53	(4)[c]	(16)	24	—	—	8	(13)	52	(4)[c]
Long-term debt	24,092	3,010[c][f]	—	—	12,679	(11,555)	229	(729)	27,726	2,870[c][f]

Year ended December 31, 2022 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2022
	Fair value at Jan. 1, 2022	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3	Transfers (out of) level 3	Fair value at Dec. 31, 2022	
Assets:[a]									
Federal funds sold and securities purchased under resale agreements	$ —	$ —	$ 1	$ (1)	$ (1)	$ 1	$ —	$ —	$ —
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	265	31	673	(125)	(84)	4	(5)	759	29
Residential – nonagency	28	(1)	7	(5)	(12)	—	(12)	5	—
Commercial – nonagency	10	—	—	(1)	—	3	(5)	7	—
Total mortgage-backed securities	303	30	680	(131)	(96)	7	(22)	771	29
Obligations of U.S. states and municipalities	7	—	—	—	—	—	—	7	—
Non-U.S. government debt securities	81	(92)	494	(338)	(4)	84	(70)	155	(153)
Corporate debt securities	332	(30)	404	(178)	(100)	357	(322)	463	(48)
Loans	708	(51)	652	(605)	(230)	925	(640)	759	(26)
Asset-backed securities	26	5	19	(24)	(1)	5	(7)	23	1
Total debt instruments	1,457	(138)	2,249	(1,276)	(431)	1,378	(1,061)	2,178	(197)
Equity securities	662	(1,036)	473	(377)	(2)	1,066	(121)	665	(840)
Physical commodities	—	(1)	3	—	—	—	—	2	(1)
Other	160	93	37	—	(221)	1	(6)	64	46
Total trading assets – debt and equity instruments	2,279	(1,082)[c]	2,762	(1,653)	(654)	2,445	(1,188)	2,909	(992)[c]
Net derivative receivables:[b]									
Interest rate	(16)	187	325	(483)	329	732	(373)	701	332
Credit	74	226	17	(9)	(271)	5	(29)	13	170
Foreign exchange	(419)	726	215	(114)	83	3	(5)	489	459
Equity	(3,626)	5,016	1,226	(2,530)	96	(656)	90	(384)	3,435
Commodity	(907)	571	110	(331)	350	5	56	(146)	369
Total net derivative receivables	(4,894)	6,726[c]	1,893	(3,467)	587	89	(261)	673	4,765[c]
Available-for-sale securities:									
Mortgage-backed securities:									
Commercial – nonagency	—	—	—	—	—	—	—	—	—
Corporate debt securities	161	5	88	—	(15)	—	—	239	5
Total available-for-sale securities	161	5[d]	88	—	(15)	—	—	239	5[d]
Loans	1,933	(158)[c]	568	(261)	(886)	1,053	(831)	1,418	(76)[c]
Mortgage servicing rights	5,494	2,039[e]	2,198	(822)	(936)	—	—	7,973	2,039[e]
Other assets	306	194[c]	50	(38)	(103)	2	(6)	405	191[c]

Year ended December 31, 2022 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/ losses related to financial instruments held at Dec. 31, 2022
	Fair value at Jan. 1, 2022	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3	Transfers (out of) level 3	Fair value at Dec. 31, 2022	
Liabilities:[a]										
Deposits	$ 2,317	$ (292)[c][f]	$ —	$ —	$ 531	$ (114)	$ —	$ (280)	$ 2,162	$ (76)[c][f]
Short-term borrowings	2,481	(358)[c][f]	—	—	3,963	(4,685)	15	(15)	1,401	90[c][f]
Trading liabilities – debt and equity instruments	30	(31)[c]	(41)	77	—	—	57	(8)	84	101[c]
Accounts payable and other liabilities	69	(16)[c]	(37)	42	—	—	1	(6)	53	(16)[c]
Long-term debt	24,374	(3,869)[c][f]	—	—	12,714	(8,876)	793	(1,044)	24,092	(3,447)[c][f]

(a) Level 3 assets at fair value as a percentage of total Firm assets at fair value (including assets measured at fair value on a nonrecurring basis) were 2% at December 31, 2024, 2023 and 2022. Level 3 liabilities at fair value as a percentage of total Firm liabilities at fair value (including liabilities measured at fair value on a nonrecurring basis) were 9% at December 31, 2024, and 8% at both December 31, 2023 and 2022.
(b) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
(c) Primarily reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities are reported in investment securities gains/(losses). Unrealized gains/(losses) are reported in OCI. Realized and unrealized gains/(losses) recorded on level 3 AFS securities were not material for the years ended December 31, 2024, 2023 and 2022.
(e) Changes in fair value for MSRs are reported in mortgage fees and related income.
(f) Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue, and were not material for the years ended December 31, 2024, 2023 and 2022. Unrealized (gains)/losses are reported in OCI, and were $(50) million, $(158) million and $(529) million for the years ended December 31, 2024, 2023 and 2022, respectively.
(g) Loan originations are included in purchases.
(h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, deconsolidations associated with beneficial interests in VIEs and other items.

Level 3 analysis

Consolidated balance sheets changes

The following describes significant changes to level 3 assets since December 31, 2023, for those items measured at fair value on a recurring basis. Refer to Assets and liabilities measured at fair value on a nonrecurring basis on page 199 for further information on changes impacting items measured at fair value on a nonrecurring basis.

For the year ended December 31, 2024

Level 3 assets were $23.8 billion at December 31, 2024, reflecting an increase of $127 million from December 31, 2023.

The increase for the year ended December 31, 2024 was driven by:

- $599 million increase in MSRs.
- $586 million increase in other assets primarily due to purchases,

offset by:

- $472 million decrease in gross derivative receivables due to sales and settlements predominantly offset by gains, purchases and net transfers.
- $663 million decrease in non-trading loans due to sales and settlements largely offset by gains, purchases and net transfers.

Refer to Note 15 for information on MSRs.

Refer to the sections below for additional information.

Transfers between levels for instruments carried at fair value on a recurring basis

During the year ended December 31, 2024, significant transfers from level 2 into level 3 included the following:

- $1.0 billion of total debt and equity instruments, predominantly trading loans, driven by a decrease in observability.
- $959 million of gross interest rate derivative receivables and $1.1 billion of gross interest rate derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $1.6 billion of gross equity derivative receivables and $1.7 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $816 million of non-trading loans driven by a decrease in observability.

During the year ended December 31, 2024, significant transfers from level 3 into level 2 included the following:

- $880 million of total debt and equity instruments, predominantly trading loans and equity securities, driven by an increase in observability.
- $1.4 billion of gross equity derivative receivables and $2.0 billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $863 million of long-term debt as a result of an increase in observability and a decrease in the significance of unobservable inputs.

During the year ended December 31, 2023, significant transfers from level 2 into level 3 included the following:

- $951 million of gross interest rate derivative receivables as a result of a decrease in observability and an increase in the significance of unobservable inputs and $2.1 billion of gross interest rate derivative payables as a result of transition to term SOFR for certain interest rate options.
- $1.5 billion of gross equity derivative receivables and $829 million of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $1.3 billion of non-trading loans driven by a decrease in observability.

During the year ended December 31, 2023, significant transfers from level 3 into level 2 included the following:

- $1.1 billion of total debt and equity instruments, partially due to trading loans, driven by an increase in observability.
- $921 million of gross interest rate derivative receivables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $2.3 billion of gross equity derivative receivables and $1.7 billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $1.1 billion of non-trading loans as a result of an increase in observability and a decrease in the significance of unobservable inputs.

During the year ended December 31, 2022, significant transfers from level 2 into level 3 included the following:

- $2.4 billion of total debt and equity instruments, predominantly due to equity securities of $1.1 billion driven by a decrease in observability predominantly as a result of restricted access to certain markets and trading loans of $925 million driven by a decrease in observability.
- $1.6 billion of gross interest rate derivative receivables and $878 million of gross interest rate derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $1.6 billion of gross equity derivative receivables and $2.3 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $1.1 billion of non-trading loans driven by a decrease in observability.
- $793 million of long-term debt driven by a decrease in observability and an increase in the significance of unobservable inputs for structured notes.

During the year ended December 31, 2022, significant transfers from level 3 into level 2 included the following:

- $1.2 billion of total debt and equity instruments, largely due to trading loans, driven by an increase in observability.
- $1.2 billion of gross interest rate derivative receivables and $807 million of gross interest rate derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $2.2 billion of gross equity derivative receivables and $2.3 billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $831 million of non-trading loans driven by an increase in observability.
- $1.0 billion of long-term debt driven by an increase in observability and a decrease in the significance of unobservable inputs for structured notes.

All transfers are based on changes in the observability and/or significance of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2024, 2023 and 2022. These amounts exclude any effects of the Firm's risk management activities where the financial instruments are classified as level 1 and 2 of the fair value hierarchy. Refer to Changes in level 3 recurring fair value measurements rollforward tables on pages 192–196 for further information on these instruments.

2024

- $1.9 billion of net gains on assets, predominantly driven by gains in net interest rate derivative receivables due to market movements and gains in MSRs reflecting lower prepayment speeds on higher rates.
- $1.6 billion of net losses on liabilities, predominantly driven by losses in long-term debt due to market movements.

2023

- $1.8 billion of net gains on assets, largely driven by gains in net interest rate derivative receivables due to market movements and gains in MSRs reflecting lower prepayment speeds on higher rates.
- $3.3 billion of net losses on liabilities, predominantly driven by losses in long-term debt due to market movements.

2022

- $7.7 billion of net gains on assets, predominantly driven by gains in net equity derivative receivables due to market movements and gains in MSRs reflecting lower prepayment speeds on higher rates.
- $4.6 billion of net gains on liabilities, predominantly driven by a decline in the fair value of long-term debt due to market movements.

Refer to Note 15 for information on MSRs.

Credit and funding adjustments – derivatives

Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters generally do not consider factors such as counterparty nonperformance risk, the Firm's own credit quality, and funding costs. Therefore, it is generally necessary to make adjustments to the base estimate of fair value to reflect these factors.

CVA represents the adjustment, relative to the relevant benchmark interest rate, necessary to reflect counterparty nonperformance risk. The Firm estimates CVA using a scenario analysis to estimate the expected positive credit exposure across all of the Firm's existing positions with each counterparty, and then estimates losses based on the probability of default and estimated recovery rate as a result of a counterparty credit event considering contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset. The key inputs to this methodology are (i) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (ii) estimated recovery rates implied by CDS spreads, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.

FVA represents the adjustment to reflect the impact of funding and is recognized where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. The Firm's FVA framework, applied to uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives incorporates key inputs such as: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; and (ii) the estimated market funding cost in the principal market which, for derivative liabilities, considers the Firm's credit risk (DVA). For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap rate given the underlying collateral agreement with the counterparty, and therefore a separate FVA is not necessary.

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The FVA presented below includes the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

Year ended December 31, (in millions)	**2024**	2023	2022
Credit and funding adjustments:			
Derivatives CVA	**$ 29**	$ 221	$ 22
Derivatives FVA	**99**	114	42

Valuation adjustments on fair value option elected liabilities

The valuation of the Firm's liabilities for which the fair value option has been elected requires consideration of the Firm's own credit risk. DVA on fair value option elected liabilities reflects changes (subsequent to the issuance of the liability) in the Firm's probability of default and LGD, which are estimated based on changes in the Firm's credit spread observed in the bond market. Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue. Unrealized (gains)/losses are reported in OCI. Refer to page 196 in this Note and Note 24 for further information.

Assets and liabilities measured at fair value on a nonrecurring basis

The following tables present the assets held as of December 31, 2024 and 2023, for which nonrecurring fair value adjustments were recorded during the years ended December 31, 2024 and 2023, by major product category and fair value hierarchy. There were no liabilities measured at fair value on a nonrecurring basis at both December 31, 2024 and 2023.

December 31, 2024 (in millions)	Fair value hierarchy			Total fair value
	Level 1	Level 2	Level 3	
Loans	**$ —**	**$ 738**	**$ 694**	**$ 1,432**
Other assets[(a)]	**—**	**9**	**1,048**	**1,057**
Total assets measured at fair value on a nonrecurring basis	**$ —**	**$ 747**	**$ 1,742**	**$ 2,489**

December 31, 2023 (in millions)	Fair value hierarchy			Total fair value
	Level 1	Level 2	Level 3	
Loans	$ —	$ 599	$ 1,156	$ 1,755
Other assets	—	52	1,334	1,386
Total assets measured at fair value on a nonrecurring basis	$ —	$ 651	$ 2,490	$ 3,141

(a) Included equity securities without readily determinable fair values that were adjusted based on observable price changes in orderly transactions from an identical or similar investment of the same issuer (measurement alternative). Of the $1.0 billion in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2024, $668 million related to equity securities adjusted based on the measurement alternative. These equity securities are classified as level 3 due to the infrequency of the observable prices and/or the restrictions on the shares. Also, included impairments on certain equity method investments.

Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which fair value adjustments have been recognized for the years ended December 31, 2024, 2023 and 2022, related to assets and liabilities held at those dates.

December 31, (in millions)	**2024**	2023	2022
Loans	**$ (302)**	$ (276)	$ (55)
Other assets[(a)]	**(610)**	(789)	(409)
Accounts payable and other liabilities	**—**	—	(83)
Total nonrecurring fair value gains/(losses)	**$ (912)**	$ (1,065)	$ (547)

(a) Included $(197) million, $(232) million and $(338) million for the years ended December 31, 2024, 2023 and 2022, respectively, of net gains/(losses) as a result of the measurement alternative. The current period also included impairments on certain equity method investments.

Equity securities without readily determinable fair values

The Firm measures certain equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer (i.e., measurement alternative), with such changes recognized in other income.

In its determination of the new carrying values upon observable price changes, the Firm may adjust the prices if deemed necessary to arrive at the Firm's estimated fair values. Such adjustments may include adjustments to reflect the different rights and obligations of similar securities, and other adjustments that are consistent with the Firm's valuation techniques for private equity direct investments.

The following table presents the carrying value of equity securities without readily determinable fair values held as of December 31, 2024 and 2023, that are measured under the measurement alternative and the related adjustments recorded during the periods presented for those securities with observable price changes. These securities are included in the nonrecurring fair value tables when applicable price changes are observable.

As of or for the year ended December 31, (in millions)		**2024**		2023
Other assets				
Carrying value[(a)]	**$**	**3,737**	$	4,457
Upward carrying value changes[(b)]		**89**		93
Downward carrying value changes/impairment[(c)]		**(286)**		(325)

(a) The period-end carrying values reflect cumulative purchases and sales in addition to upward and downward carrying value changes.
(b) The cumulative upward carrying value changes between January 1, 2018 and December 31, 2024 were $1.1 billion.
(c) The cumulative downward carrying value changes/impairment between January 1, 2018 and December 31, 2024 were $(1.5) billion.

Included in other assets above is the Firm's interest in approximately 18.6 million Visa Class B-2 common shares ("Visa B-2 shares") and 37.2 million Visa Class B common shares ("Visa B shares") reflected in the Firm's principal investment portfolio as of December 31, 2024 and 2023, respectively.

The Visa B shares were redenominated to Visa Class B-1 common shares ("Visa B-1 shares") on January 24, 2024. On April 8, 2024, Visa commenced an initial exchange offer for any and all outstanding Visa B-1 shares. On May 6, 2024, the Firm announced that Visa had accepted the Firm's tender of its 37.2 million Visa B-1 shares in exchange for a combination of Visa B-2 shares and Visa Class C common shares ("Visa C shares"), resulting in an initial gain of $8.0 billion based on the fair value of the Visa C shares. In addition, the second quarter of 2024 also reflected other Visa-related activity, including the fair value changes of the Visa C shares and derivative instruments, as well as dividends, resulting in the $7.9 billion net gain on Visa shares in the quarter. As of September 30, 2024, the Firm had disposed of all of its Visa C shares through sales in the second and third quarters of 2024 and through a $1.0 billion contribution to the Firm's Foundation in the second quarter of 2024.

The Visa B-2 shares are subject to certain transfer restrictions and are convertible into Visa Class A common shares ("Visa A shares") at a specified conversion rate upon final resolution of certain litigation matters involving Visa. The conversion rate of Visa B-2 shares to Visa A shares was 1.5430 at December 31, 2024 and may be adjusted by Visa depending on developments related to the litigation matters. The outcome of those litigation matters, and the effect that the resolution of those matters may have on the conversion rate, is unknown. Accordingly, as of December 31, 2024, there is significant uncertainty regarding when the transfer restrictions on Visa B-2 shares may be terminated and what the final conversion rate for the Visa B-2 shares will be. As a result of these considerations, as well as differences in voting rights, Visa B-2 shares are not considered to be similar to Visa A shares, and are held at their nominal carryover basis.

Separately, in connection with sales of Visa B shares prior to 2024, the Firm has entered into derivative instruments with the purchasers of the shares under which the Firm retains the risk associated with changes in the conversion rate. Under the terms of the derivative instruments, the Firm will (a) make or receive payments based on subsequent changes in the conversion rate and (b) make periodic interest payments to the purchasers of the Visa B shares. The payments under the derivative instruments will continue as long as the Visa B-2 shares associated with the previously sold Visa B shares remain subject to transfer restrictions. The derivative instruments are accounted for at fair value using a discounted cash flow methodology based upon the Firm's estimate of the timing and magnitude of final resolution of the litigation matters. The derivative instruments are recorded in trading liabilities, and changes in fair value are recognized in other income. The notional amount of shares associated with those derivative instruments has been adjusted as a result of the Visa exchange offer. As of December 31, 2024, the Firm held derivative instruments associated with 11.6 million Visa B-2 shares related to Visa B share sales prior to 2024, which are all subject to similar terms and conditions.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, which are included in the following table. However, this table does not include other items, such as nonfinancial assets, intangible assets, certain financial instruments, and customer relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorganChase.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, short-term receivables and accrued interest receivable, short-term borrowings, federal funds purchased, securities loaned and sold under repurchase agreements, accounts payable, and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents, by fair value hierarchy classification, the carrying values and estimated fair values at December 31, 2024 and 2023, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy.

	December 31, 2024					December 31, 2023				
	Estimated fair value hierarchy					Estimated fair value hierarchy				
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 23.4**	**$ 23.4**	**$ —**	**$ —**	**$ 23.4**	$ 29.1	$ 29.1	$ —	$ —	$ 29.1
Deposits with banks	**445.9**	**445.8**	**0.1**	**—**	**445.9**	595.1	594.6	0.5	—	595.1
Accrued interest and accounts receivable	**101.1**	**—**	**101.0**	**0.1**	**101.1**	107.1	—	107.0	0.1	107.1
Federal funds sold and securities purchased under resale agreements	**8.2**	**—**	**8.2**	**—**	**8.2**	16.3	—	16.3	—	16.3
Securities borrowed	**135.6**	**—**	**135.6**	**—**	**135.6**	130.3	—	130.3	—	130.3
Investment securities, held-to-maturity	**274.5**	**97.4**	**150.5**	**—**	**247.9**	369.8	160.6	182.2	—	342.8
Loans, net of allowance for loan losses[(a)]	**1,282.3**	**—**	**268.7**	**1,007.8**	**1,276.5**	1,262.5	—	285.6	964.6	1,250.2
Other	**82.7**	**—**	**81.3**	**1.6**	**82.9**	76.1	—	74.9	1.4	76.3
Financial liabilities										
Deposits	**$2,372.3**	**$ —**	**$2,372.5**	**$ —**	**$ 2,372.5**	$ 2,322.3	$ —	$ 2,322.6	$ —	$ 2,322.6
Federal funds purchased and securities loaned or sold under repurchase agreements	**70.5**	**—**	**70.5**	**—**	**70.5**	47.5	—	47.5	—	47.5
Short-term borrowings	**26.4**	**—**	**26.3**	**—**	**26.3**	24.7	—	24.7	—	24.7
Accounts payable and other liabilities[(b)]	**232.8**	**—**	**219.6**	**12.6**	**232.2**	241.8	—	233.3	8.1	241.4
Beneficial interests issued by consolidated VIEs	**27.3**	**—**	**27.4**	**—**	**27.4**	23.0	—	23.0	—	23.0
Long-term debt	**300.6**	**—**	**251.2**	**50.7**	**301.9**	303.9	—	252.2	51.3	303.5

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. Carrying value of the loan takes into account the loan's allowance for loan losses, which represents the loan's expected credit losses over its remaining expected life. The difference between the estimated fair value and carrying value of a loan is generally attributable to changes in market interest rates, including credit spreads, market liquidity premiums and other factors that affect the fair value of a loan but do not affect its carrying value.

(b) Excludes lending-related commitments disclosed in the table below.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets. The carrying value and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2024					December 31, 2023				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[a][b][c]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[a][b][c]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 2.7**	**$ —**	**$ —**	**$ 4.4**	**$ 4.4**	$ 3.0	$ —	$ —	$ 4.8	$ 4.8

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.
(b) Includes the wholesale allowance for lending-related commitments.
(c) As of December 31, 2024 and 2023, included fair value adjustments associated with First Republic for other unfunded commitments to extend credit totaling $699 million and $1.1 billion, respectively, recorded in accounts payable and other liabilities on the Consolidated balance sheets. Refer to Notes 28 and 34 for additional information.

The Firm does not estimate the fair value of consumer off-balance sheet lending-related commitments. In many cases, the Firm can reduce or cancel these commitments with or without notice to the borrower, as permitted by law, or in accordance with the contract. Refer to page 183 of this Note for a further discussion of the valuation of lending-related commitments.

Note 3 – Fair value option

The fair value option provides an option to elect fair value for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.

The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis of elected instruments (e.g., certain instruments that otherwise would be accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fair value basis, as well as to better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis, including lending-related commitments
- Certain securities financing agreements
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes and other hybrid instruments, which are predominantly financial instruments that contain embedded derivatives, that are issued or transacted as part of client-driven activities
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2024, 2023 and 2022, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2024			2023			2022		
December 31, (in millions)	Principal transactions	All other income	Total changes in fair value recorded[e]	Principal transactions	All other income	Total changes in fair value recorded[e]	Principal transactions	All other income	Total changes in fair value recorded[e]
Federal funds sold and securities purchased under resale agreements	**$ 144**	**$ —**	**$ 144**	$ 300	$ —	$ 300	$ (384)	$ —	$ (384)
Securities borrowed	**347**	**—**	**347**	164	—	164	(499)	—	(499)
Trading assets:									
Debt and equity instruments, excluding loans	**7,205**	**—**	**7,205**	3,656	—	3,656	(1,703)	—	(1,703)
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**346**	**—**	**346**	248	—	248	(136)	—	(136)
Other changes in fair value	**9**	**10** [c]	**19**	3	5 [c]	8	(59)	—	(59)
Loans:									
Changes in instrument-specific credit risk	**517**	**(6)** [c]	**511**	322	(4) [c]	318	(242)	21 [c]	(221)
Other changes in fair value	**75**	**371** [c]	**446**	427	216 [c]	643	(1,421)	(794) [c]	(2,215)
Other assets	**63**	**—**	**63**	282	(4) [d]	278	39	(6) [d]	33
Deposits[a]	**(3,398)**	**—**	**(3,398)**	(2,582)	—	(2,582)	901	—	901
Federal funds purchased and securities loaned or sold under repurchase agreements	**(12)**	**—**	**(12)**	(121)	—	(121)	181	—	181
Short-term borrowings[a]	**(922)**	**—**	**(922)**	(567)	—	(567)	473	—	473
Trading liabilities	**(1)**	**—**	**(1)**	(24)	—	(24)	43	—	43
Beneficial interests issued by consolidated VIEs	**—**	**—**	**—**	—	—	—	(1)	—	(1)
Other liabilities	**(11)**	**—**	**(11)**	(16)	—	(16)	(11)	—	(11)
Long-term debt[a][b]	**(2,711)**	**(6)** [c][d]	**(2,717)**	(5,875)	(78) [c][d]	(5,953)	8,990	98 [c][d]	9,088

(a) Unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected are recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transactions revenue were not material for the years ended December 31, 2024, 2023 and 2022.

(b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

(e) Changes in fair value exclude contractual interest, which is included in interest income and interest expense for all instruments other than certain hybrid financial instruments in CIB. Refer to Note 7 for further information regarding interest income and interest expense.

Determination of instrument-specific credit risk for items for which the fair value option was elected

The following describes how the gains and losses that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread as observed in the bond market.
- Securities financing agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2024 and 2023, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2024			2023		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding
Loans						
Nonaccrual loans						
Loans reported as trading assets	**$ 3,429**	**$ 464**	**$ (2,965)**	$ 2,987	$ 588	$ (2,399)
Loans	**1,711**	**1,492**	**(219)**	838	732	(106)
Subtotal	**5,140**	**1,956**	**(3,184)**	3,825	1,320	(2,505)
90 or more days past due and government guaranteed						
Loans[a]	**50**	**45**	**(5)**	65	59	(6)
All other performing loans[b]						
Loans reported as trading assets	**12,171**	**10,852**	**(1,319)**	9,547	7,968	(1,579)
Loans[c]	**40,342**	**39,813**	**(529)**	38,948	38,060	(888)
Subtotal	**52,513**	**50,665**	**(1,848)**	48,495	46,028	(2,467)
Total loans	**$ 57,703**	**$ 52,666**	**$ (5,037)**	$ 52,385	$ 47,407	$ (4,978)
Long-term debt						
Principal-protected debt	**$ 57,414** [e]	**$ 47,780**	**$ (9,634)**	$ 47,768 [e]	$ 38,882	$ (8,886)
Nonprincipal-protected debt[d]	**NA**	**53,000**	**NA**	NA	49,042	NA
Total long-term debt	**NA**	**$ 100,780**	**NA**	NA	$ 87,924	NA
Long-term beneficial interests						
Nonprincipal-protected debt[d]	**NA**	**$ 1**	**NA**	NA	$ 1	NA
Total long-term beneficial interests	**NA**	**$ 1**	**NA**	NA	$ 1	NA

(a) These balances are excluded from nonaccrual loans as the loans are insured and/or guaranteed by U.S. government agencies.
(b) There were no performing loans that were ninety days or more past due as of December 31, 2024 and 2023.
(c) Includes loans insured and/or guaranteed by U.S. government agencies less than 90 days past due.
(d) Remaining contractual principal is not applicable to nonprincipal-protected structured notes and long-term beneficial interests. Unlike principal-protected structured notes and long-term beneficial interests, for which the Firm is obligated to return a stated amount of principal at maturity, nonprincipal-protected structured notes and long-term beneficial interests do not obligate the Firm to return a stated amount of principal at maturity, but for structured notes to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal-protected notes.
(e) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At December 31, 2024 and 2023, the contractual amount of lending-related commitments for which the fair value option was elected was $12.2 billion and $9.7 billion, respectively, with a corresponding fair value of $50 million and $97 million, respectively. Refer to Note 28 for further information regarding off-balance sheet lending-related financial instruments.

Structured note products by balance sheet classification and risk component

The following table presents the fair value of structured notes, by balance sheet classification and the primary risk type.

(in millions)	December 31, 2024				December 31, 2023			
	Long-term debt	Short-term borrowings	Deposits	Total	Long-term debt	Short-term borrowings	Deposits	Total
Risk exposure								
Interest rate	**$ 46,220**	**$ 1,065**	**$ 28,871**	**$ 76,156**	$ 38,604	$ 654	$ 74,526	$ 113,784
Credit	**6,213**	**1,242**	**—**	**7,455**	5,444	350	—	5,794
Foreign exchange	**2,309**	**1,058**	**416**	**3,783**	2,605	941	187	3,733
Equity	**44,149**	**7,881**	**2,986**	**55,016**	38,685	5,483	2,905	47,073
Commodity	**1,331**	**62**	**1** [(a)]	**1,394**	1,862	11	1 [(a)]	1,874
Total structured notes	**$100,222**	**$ 11,308**	**$ 32,274**	**$143,804**	$ 87,200	$ 7,439	$ 77,619	$ 172,258

(a) Excludes deposits linked to precious metals for which the fair value option has not been elected of $869 million and $627 million for the years ended December 31, 2024 and 2023, respectively.

Note 4 – Credit risk concentrations

Concentrations of credit risk arise when a number of clients, counterparties or customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorganChase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain additional collateral when deemed necessary and permitted under the Firm's agreements. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are managed primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. Refer to Note 12 for additional information on the geographic composition of the Firm's consumer loan portfolios. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual client or counterparty basis.

The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, collateral and other risk-reduction techniques. Refer to Note 12 for additional information on loans.

The Firm does not believe that its exposure to any particular loan product or industry segment results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for credit losses. Refer to Note 13 for additional information on the allowance for credit losses.

The table below presents both on–balance sheet and off–balance sheet consumer and wholesale credit exposure by the Firm's three credit portfolio segments as of December 31, 2024 and 2023. The wholesale industry of risk category is generally based on the client or counterparty's primary business activity.

	2024				2023			
		On-balance sheet		Off-balance sheet[i]		On-balance sheet		Off-balance sheet[i]
December 31, (in millions)	Credit exposure[h]	Loans	Derivatives		Credit exposure[h]	Loans	Derivatives	
Consumer, excluding credit card	**$ 437,654**	**$ 392,810**	**$ —**	**$ 44,844**	$ 455,496	$ 410,093	$ —	$ 45,403
Credit card[a]	**1,234,171**	**232,860**	**—**	**1,001,311**	1,126,781	211,123	—	915,658
Total consumer[a]	**1,671,825**	**625,670**	**—**	**1,046,155**	1,582,277	621,216	—	961,061
Wholesale[b]								
Real Estate	**207,050**	**169,506**	**310**	**37,234**	208,261	166,372	420	41,469
Individuals and Individual Entities[c]	**144,145**	**130,317**	**1,259**	**12,569**	145,849	126,339	725	18,785
Asset Managers	**135,541**	**58,720**	**15,695**	**61,126**	129,574	52,178	9,925	67,471
Consumer & Retail	**129,815**	**46,509**	**1,608**	**81,698**	127,086	46,274	2,013	78,799
Technology, Media & Telecommunications	**84,716**	**21,449**	**2,448**	**60,819**	77,296	22,450	2,451	52,395
Industrials	**72,530**	**24,011**	**2,035**	**46,484**	75,092	26,548	1,335	47,209
Healthcare	**64,224**	**23,243**	**616**	**40,365**	65,025	23,169	1,577	40,279
Banks & Finance Companies	**61,287**	**40,239**	**3,890**	**17,158**	57,177	33,941	2,898	20,338
Utilities	**35,871**	**6,172**	**2,631**	**27,068**	36,061	7,067	3,396	25,598
State & Municipal Govt[d]	**35,039**	**19,279**	**372**	**15,388**	35,986	20,019	442	15,525
Automotive	**34,336**	**17,696**	**794**	**15,846**	33,977	17,459	428	16,090
Oil & Gas	**31,724**	**7,226**	**1,153**	**23,345**	34,475	8,480	705	25,290
Insurance	**24,267**	**2,533**	**9,703**	**12,031**	20,501	2,535	7,138	10,828
Chemicals & Plastics	**20,782**	**6,176**	**267**	**14,339**	20,773	6,458	441	13,874
Transportation	**17,019**	**5,380**	**769**	**10,870**	16,060	5,080	555	10,425
Metals & Mining	**15,860**	**4,425**	**564**	**10,871**	15,508	4,655	274	10,579
Central Govt	**13,862**	**4,715**	**6,285**	**2,862**	17,704	5,463	10,669	1,572
Securities Firms	**9,443**	**1,878**	**3,197**	**4,368**	8,689	865	3,285	4,539
Financial Markets Infrastructure	**4,446**	**16**	**2,410**	**2,020**	4,251	86	2,155	2,010
All other[e]	**140,873**	**100,906**	**4,961**	**35,006**	134,777	97,034	4,032	33,711
Subtotal	**1,282,830**	**690,396**	**60,967**	**531,467**	1,264,122	672,472	54,864	536,786
Loans held-for-sale and loans at fair value	**31,922**	**31,922**	**—**	**—**	30,018	30,018	—	—
Receivables from customers[f]	**51,929**	**—**	**—**	**—**	47,625	—	—	—
Total wholesale	**1,366,681**	**722,318**	**60,967**	**531,467**	1,341,765	702,490	54,864	536,786
Total exposure[g]	**$3,038,506**	**$1,347,988**	**$ 60,967**	**$1,577,622**	$2,924,042	$1,323,706	$ 54,864	$1,497,847

(a) Also includes commercial card lending-related commitments primarily in CIB.
(b) The industry rankings presented in the table as of December 31, 2023, are based on the industry rankings of the corresponding exposures at December 31, 2024, not actual rankings of such exposures at December 31, 2023.
(c) Individuals and Individual Entities predominantly consists of Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB, and includes exposure to personal investment companies and personal and testamentary trusts.
(d) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2024 and 2023, noted above, the Firm held: $6.1 billion and $5.9 billion, respectively, of trading assets; $17.9 billion and $21.4 billion, respectively, of AFS securities; and $9.3 billion and $9.9 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(e) All other includes: SPEs and Private education and civic organizations, representing approximately 94% and 6%, respectively, at both December 31, 2024 and 2023. Refer to Note 14 for more information on exposures to SPEs.
(f) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB, CCB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (including cash on deposit, and primarily liquid and readily marketable debt or equity securities).
(g) Excludes cash placed with banks of $459.2 billion and $614.1 billion, at December 31, 2024 and 2023, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(h) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.
(i) Represents lending-related financial instruments.

Note 5 – Derivative instruments

Derivative contracts derive their value from underlying asset prices, indices, reference rates, other inputs or a combination of these factors and may expose counterparties to risks and rewards of an underlying asset or liability without having to initially invest in, own or exchange the asset or liability. JPMorganChase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Clients use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative contracts or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives.

Risk management derivatives
The Firm manages certain market and credit risk exposures using derivative instruments, including derivatives in hedge accounting relationships and other derivatives that are used to manage risks associated with specified assets and liabilities.

The Firm generally uses interest rate derivatives to manage the risk associated with changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increase or decrease as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains and losses on the derivative instruments related to these assets and liabilities are expected to substantially offset this variability.

Foreign currency derivatives are used to manage the foreign exchange risk associated with certain foreign currency–denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar–equivalent values of the foreign currency–denominated assets and liabilities or the forecasted revenues or expenses increase or decrease. Gains or losses on the derivative instruments related to these foreign currency–denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities derivatives are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of CDS. Refer to the Credit derivatives section on pages 222–224 of this Note for a further discussion of credit derivatives.

Refer to the risk management derivatives gains and losses table on page 221 and the hedge accounting gains and losses tables on pages 218–221 of this Note for more information about risk management derivatives.

Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain ETD such as futures and options, and OTC-cleared derivative contracts with CCPs. ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the Firm's counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Derivative clearing services
The Firm provides clearing services for clients in which the Firm acts as a clearing member at certain exchanges and clearing houses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. Refer to Note 28 for further information on the Firm's clearing services.

Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. Refer to Note 1 for further discussion of the offsetting of assets and liabilities. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 213–221 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. Refer to Notes 2 and 3 for a further discussion of derivatives embedded in structured notes.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorganChase does not seek to apply hedge accounting to all of the derivatives associated with the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased CDS used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate, foreign exchange, and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, nonstatistical methods such as dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item, and qualitative comparisons of critical terms and the evaluation of any changes in those terms. The extent to which a derivative has been, and is expected to continue to be, highly effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorganChase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. Certain amounts excluded from the assessment of effectiveness are recorded in OCI and recognized in earnings over the life of the derivative. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item and, for interest-bearing financial instruments, is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

The Firm employs the portfolio layer method to manage the interest rate risk of portfolios of fixed-rate assets. Throughout the life of the open hedge, basis adjustments are maintained at the portfolio level and are only allocated to individual assets under certain circumstances. These include instances where the portfolio amount falls below the hedged layer amounts, or in cases of voluntary de-designation.

JPMorganChase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, changes in the fair value of the derivative are recorded in OCI and recognized in earnings as the hedged item affects earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily noninterest revenue, net interest income and compensation expense. If the hedge relationship is terminated, then the change in value of the derivative recorded in AOCI is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is expected to not occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorganChase uses net investment hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For qualifying net investment hedges, changes in the fair value of the derivatives due to changes in spot foreign exchange rates are recorded in OCI as translation adjustments. Amounts excluded from the assessment of effectiveness are recorded directly in earnings.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
• Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	218-219
• Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	220
• Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	218-219
• Foreign exchange	Hedge foreign currency-denominated forecasted revenue and expense	Cash flow hedge	Corporate	220
• Foreign exchange	Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	221
• Commodity	Hedge commodity inventory	Fair value hedge	CIB, AWM	218-219
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
• Interest rate	Manage the risk associated with mortgage commitments, warehouse loans and MSRs	Specified risk management	CCB	221
• Credit	Manage the credit risk associated with wholesale lending exposures	Specified risk management	CIB, AWM	221
• Interest rate and foreign exchange	Manage the risk associated with certain other specified assets and liabilities	Specified risk management	Corporate, CIB	221
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	221
• Various	Other derivatives	Market-making and other	CIB, AWM, Corporate	221

Notional amount of derivative contracts
The following table summarizes the notional amount of free-standing derivative contracts outstanding as of December 31, 2024 and 2023.

	Notional amounts[b]	
December 31, (in billions)	**2024**	2023
Interest rate contracts		
Swaps	**$ 20,437**	$ 23,251
Futures and forwards	**3,067**	2,690
Written options	**3,067**	3,370
Purchased options	**3,089**	3,362
Total interest rate contracts	**29,660**	32,673
Credit derivatives[a]	**1,191**	1,045
Foreign exchange contracts		
Cross-currency swaps	**4,509**	4,721
Spot, futures and forwards	**7,005**	6,957
Written options	**1,015**	830
Purchased options	**984**	798
Total foreign exchange contracts	**13,513**	13,306
Equity contracts		
Swaps	**850**	639
Futures and forwards	**206**	157
Written options	**914**	778
Purchased options	**788**	698
Total equity contracts	**2,758**	2,272
Commodity contracts		
Swaps	**148**	115
Spot, futures and forwards	**191**	157
Written options	**137**	130
Purchased options	**125**	115
Total commodity contracts	**601**	517
Total derivative notional amounts	**$ 47,723**	$ 49,813

(a) Refer to the Credit derivatives discussion on pages 222–224 for more information on volumes and types of credit derivative contracts.
(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative contracts, the notional amount is not exchanged; it is simply a reference amount used to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2024 and 2023, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[(a)]

	Gross derivative receivables				Gross derivative payables			
December 31, 2024 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	**$ 290,734**	**$ —**	**$ 290,734**	**$ 24,945**	**$ 274,226**	**$ 2**	**$ 274,228**	**$ 9,239**
Credit	**11,087**	**—**	**11,087**	**814**	**13,796**	**—**	**13,796**	**1,898**
Foreign exchange	**261,035**	**1,885**	**262,920**	**25,312**	**253,289**	**1,278**	**254,567**	**15,597**
Equity	**85,220**	**—**	**85,220**	**5,285**	**96,139**	**—**	**96,139**	**8,648**
Commodity	**15,490**	**136**	**15,626**	**4,611**	**14,415**	**73**	**14,488**	**4,279**
Total fair value of trading assets and liabilities	**$ 663,566**	**$ 2,021**	**$ 665,587**	**$ 60,967**	**$ 651,865**	**$ 1,353**	**$ 653,218**	**$ 39,661**

	Gross derivative receivables				Gross derivative payables			
December 31, 2023 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	$ 250,689	$ 2	$ 250,691	$ 26,324	$ 240,482	$ —	$ 240,482	$ 11,896
Credit	9,654	—	9,654	551	12,038	—	12,038	1,089
Foreign exchange	205,010	765	205,775	18,019	210,623	1,640	212,263	12,620
Equity	57,689	—	57,689	4,928	65,811	—	65,811	9,368
Commodity	15,228	211	15,439	5,042	16,286	92	16,378	5,874
Total fair value of trading assets and liabilities	$ 538,270	$ 978	$ 539,248	$ 54,864	$ 545,240	$ 1,732	$ 546,972	$ 40,847

(a) Balances exclude structured notes for which the fair value option has been elected. Refer to Note 3 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting

The following tables present, as of December 31, 2024 and 2023, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty, have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of liquid securities and other cash collateral held at third-party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables, up to the fair value exposure amount. For the purpose of this disclosure, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule;
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables.

December 31, (in millions)	2024 Gross derivative receivables	2024 Amounts netted on the Consolidated balance sheets	2024 Net derivative receivables	2023 Gross derivative receivables	2023 Amounts netted on the Consolidated balance sheets	2023 Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
OTC	**$ 158,202**	**$ (134,791)**	**$ 23,411**	$ 176,901	$ (152,703)	$ 24,198
OTC–cleared	**130,989**	**(130,810)**	**179**	71,419	(71,275)	144
Exchange-traded[(a)]	**190**	**(188)**	**2**	402	(389)	13
Total interest rate contracts	**289,381**	**(265,789)**	**23,592**	248,722	(224,367)	24,355
Credit contracts:						
OTC	**8,680**	**(8,030)**	**650**	7,637	(7,226)	411
OTC–cleared	**2,267**	**(2,243)**	**24**	1,904	(1,877)	27
Total credit contracts	**10,947**	**(10,273)**	**674**	9,541	(9,103)	438
Foreign exchange contracts:						
OTC	**259,608**	**(236,931)**	**22,677**	203,624	(187,295)	16,329
OTC–cleared	**685**	**(677)**	**8**	469	(459)	10
Exchange-traded[(a)]	**34**	**—**	**34**	6	(2)	4
Total foreign exchange contracts	**260,327**	**(237,608)**	**22,719**	204,099	(187,756)	16,343
Equity contracts:						
OTC	**33,269**	**(30,742)**	**2,527**	25,001	(23,677)	1,324
Exchange-traded[(a)]	**51,040**	**(49,193)**	**1,847**	30,462	(29,084)	1,378
Total equity contracts	**84,309**	**(79,935)**	**4,374**	55,463	(52,761)	2,702
Commodity contracts:						
OTC	**8,340**	**(5,848)**	**2,492**	8,049	(5,084)	2,965
OTC–cleared	**126**	**(84)**	**42**	133	(123)	10
Exchange-traded[(a)]	**5,179**	**(5,083)**	**96**	5,214	(5,190)	24
Total commodity contracts	**13,645**	**(11,015)**	**2,630**	13,396	(10,397)	2,999
Derivative receivables with appropriate legal opinion	**658,609**	**(604,620)**	**53,989** [(d)]	531,221	(484,384)	46,837 [(d)]
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**6,978**		**6,978**	8,027		8,027
Total derivative receivables recognized on the Consolidated balance sheets	**$ 665,587**		**$ 60,967**	$ 539,248		$ 54,864
Collateral not nettable on the Consolidated balance sheets[(b)(c)]			**(28,160)**			(22,461)
Net amounts			**$ 32,807**			$ 32,403

December 31, (in millions)	2024 Gross derivative payables	2024 Amounts netted on the Consolidated balance sheets	2024 Net derivative payables	2023 Gross derivative payables	2023 Amounts netted on the Consolidated balance sheets	2023 Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 138,215**	**$ (130,375)**	**$ 7,840**	$ 161,901	$ (152,467)	$ 9,434
OTC–cleared	**134,555**	**(134,262)**	**293**	76,007	(75,729)	278
Exchange-traded[(a)]	**363**	**(352)**	**11**	436	(390)	46
Total interest rate contracts	**273,133**	**(264,989)**	**8,144**	238,344	(228,586)	9,758
Credit contracts:						
OTC	**11,381**	**(10,133)**	**1,248**	10,332	(9,313)	1,019
OTC–cleared	**1,779**	**(1,765)**	**14**	1,639	(1,636)	3
Total credit contracts	**13,160**	**(11,898)**	**1,262**	11,971	(10,949)	1,022
Foreign exchange contracts:						
OTC	**251,860**	**(238,292)**	**13,568**	209,386	(199,173)	10,213
OTC–cleared	**772**	**(678)**	**94**	552	(470)	82
Exchange-traded[(a)]	**14**	**—**	**14**	6	—	6
Total foreign exchange contracts	**252,646**	**(238,970)**	**13,676**	209,944	(199,643)	10,301
Equity contracts:						
OTC	**44,394**	**(38,298)**	**6,096**	29,999	(27,360)	2,639
Exchange-traded[(a)]	**49,578**	**(49,193)**	**385**	33,137	(29,083)	4,054
Total equity contracts	**93,972**	**(87,491)**	**6,481**	63,136	(56,443)	6,693
Commodity contracts:						
OTC	**6,918**	**(5,206)**	**1,712**	8,788	(5,192)	3,596
OTC–cleared	**84**	**(84)**	**—**	120	(120)	—
Exchange-traded[(a)]	**5,182**	**(4,919)**	**263**	5,376	(5,192)	184
Total commodity contracts	**12,184**	**(10,209)**	**1,975**	14,284	(10,504)	3,780
Derivative payables with appropriate legal opinion	**645,095**	**(613,557)**	**31,538** [(d)]	537,679	(506,125)	31,554 [(d)]
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**8,123**		**8,123**	9,293		9,293
Total derivative payables recognized on the Consolidated balance sheets	**$ 653,218**		**$ 39,661**	$ 546,972		$ 40,847
Collateral not nettable on the Consolidated balance sheets[(b)(c)]			**(10,163)**			(4,547)
Net amounts			**$ 29,498**			$ 36,300

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Includes liquid securities and other cash collateral held at third-party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.
(c) Derivative collateral relates only to OTC and OTC-cleared derivative instruments.
(d) Net derivatives receivable included cash collateral netted of $51.9 billion and $48.3 billion at December 31, 2024 and 2023, respectively. Net derivatives payable included cash collateral netted of $60.8 billion and $70.0 billion at December 31, 2024 and 2023, respectively. Derivative cash collateral relates to OTC and OTC-cleared derivative instruments.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorganChase to credit risk — the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorganChase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk inherent in derivative receivables.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2024 and 2023.

OTC and OTC-cleared derivative payables containing downgrade triggers

(in millions)	**December 31, 2024**	December 31, 2023
Aggregate fair value of net derivative payables	**$ 15,371**	$ 14,655
Collateral posted	**15,204**	14,673

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, N.A., at December 31, 2024 and 2023, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined rating threshold is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

	December 31, 2024		December 31, 2023	
(in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 119**	**$ 1,205**	$ 75	$ 1,153
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**78**	**458**	93	592

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 11, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding was not material at December 31, 2024 and 2023.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2024, 2023 and 2022, respectively. The Firm includes gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the related hedged item.

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Year ended December 31, 2024 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	**$ 711**	**$ (65)**	**$ 646**	**$ —**	**$ 699**	**$ —**
Foreign exchange[c]	**(177)**	**402**	**225**	**(532)**	**225**	**(115)**
Commodity[d]	**293**	**(160)**	**133**	**—**	**122**	**—**
Total	**$ 827**	**$ 177**	**$ 1,004**	**$ (532)**	**$ 1,046**	**$ (115)**

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Year ended December 31, 2023 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	$ 1,554	$ (1,248)	$ 306	$ —	$ 157	$ —
Foreign exchange[c]	722	(483)	239	(601)	239	(134)
Commodity[d]	1,227	(706)	521	—	525	—
Total	$ 3,503	$ (2,437)	$ 1,066	$ (601)	$ 921	$ (134)

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Year ended December 31, 2022 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	$ (14,352)	$ 14,047	$ (305)	$ —	$ (262)	$ —
Foreign exchange[c]	(1,317)	1,423	106	(528)	106	130
Commodity[d]	106	(70)	36	—	48	—
Total	$ (15,563)	$ 15,400	$ (163)	$ (528)	$ (108)	$ 130

(a) Primarily consists of hedges of the benchmark (e.g., Secured Overnight Financing Rate ("SOFR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.

(b) Includes the amortization of income/expense associated with the inception hedge accounting adjustment applied to the hedged item. Excludes the accrual of interest on interest rate swaps and the related hedged items.

(c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items due to changes in foreign currency rates and the income statement impact of excluded components were recorded primarily in principal transactions revenue and net interest income.

(d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or net realizable value (net realizable value approximates fair value). Gains and losses were recorded in principal transactions revenue.

(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts, time values and cross-currency basis spreads. Excluded components may impact earnings either through amortization of the initial amount over the life of the derivative or through fair value changes recognized in the current period.

(f) Represents the change in value of amounts excluded from the assessment of effectiveness under the amortization approach, predominantly cross-currency basis spreads. The amount excluded at inception of the hedge is recognized in earnings over the life of the derivative.

As of December 31, 2024 and 2023, the following amounts were recorded on the Consolidated balance sheets related to certain cumulative fair value hedge basis adjustments that are expected to reverse through the income statement in future periods as an adjustment to yield.

December 31, 2024 (in millions)	Carrying amount of the hedged items[a][b]		Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:[d]		
			Active hedging relationships	Discontinued hedging relationships[e]	Total
Assets					
Investment securities - AFS	**$ 203,141**	[c]	**$ (1,675)**	**$ (1,959)**	**$ (3,634)**
Liabilities					
Long-term debt	**$ 211,288**		**$ (3,711)**	**$ (9,332)**	**$ (13,043)**
Beneficial interests issued by consolidated VIEs	**$ 5,312**		**$ (30)**	**$ (5)**	**$ (35)**

December 31, 2023 (in millions)	Carrying amount of the hedged items[a][b]		Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:[d]		
			Active hedging relationships	Discontinued hedging relationships[e]	Total
Assets					
Investment securities - AFS	$ 151,752	[c]	$ 549	$ (2,010)	$ (1,461)
Liabilities					
Long-term debt	$ 195,455		$ (2,042)	$ (9,727)	$ (11,769)
Beneficial interests issued by consolidated VIEs	$ —		$ —	$ —	$ —

(a) Excludes physical commodities with a carrying value of $6.2 billion and $5.6 billion at December 31, 2024 and 2023, respectively, to which the Firm applies fair value hedge accounting. As a result of the application of hedge accounting, these inventories are carried at fair value, thus recognizing unrealized gains and losses in current periods. Since the Firm exits these positions at fair value, there is no incremental impact to net income in future periods.

(b) Excludes hedged items where only foreign currency risk is the designated hedged risk, as basis adjustments related to foreign currency hedges will not reverse through the income statement in future periods. At December 31, 2024 and 2023, the carrying amount excluded for AFS securities was $28.7 billion and $19.3 billion, respectively. At December 31, 2024 and 2023, the carrying amount excluded for long-term debt was $518 million and zero, respectively.

(c) Carrying amount represents the amortized cost, net of allowance if applicable. At December 31, 2024 and December 31, 2023, the amortized cost of the portfolio layer method closed portfolios was $72.8 billion and $83.9 billion, of which $41.2 billion and $68.0 billion was designated as hedged, respectively. The amount designated as hedged is the sum of the notional amounts of all outstanding layers in each portfolio, which includes both spot starting and forward starting layers. At December 31, 2024 and December 31, 2023, the cumulative amount of basis adjustments was $(1.7) billion and $(165) million, which is comprised of $(1.2) billion and $73 million for active hedging relationships, and $(566) million and $(238) million for discontinued hedging relationships, respectively. Refer to Note 10 for additional information.

(d) Positive (negative) amounts related to assets represent cumulative fair value hedge basis adjustments that will reduce (increase) net interest income in future periods. Positive (negative) amounts related to liabilities represent cumulative fair value hedge basis adjustments that will increase (reduce) net interest income in future periods.

(e) Represents basis adjustments existing on the balance sheet date associated with hedged items that have been de-designated from qualifying fair value hedging relationships.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/(losses) recorded on such derivatives, for the years ended December 31, 2024, 2023 and 2022, respectively. The Firm includes the gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the change in cash flows on the related hedged item.

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Year ended December 31, 2024 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[a]	**$ (2,668)**	**$ (3,603)**	**$ (935)**
Foreign exchange[b]	**89**	**(139)**	**(228)**
Total	**$ (2,579)**	**$ (3,742)**	**$ (1,163)**

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Year ended December 31, 2023 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[a]	$ (1,839)	$ 274	$ 2,113
Foreign exchange[b]	64	209	145
Total	$ (1,775)	$ 483	$ 2,258

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Year ended December 31, 2022 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[a]	$ (153)	$ (7,131)	$ (6,978)
Foreign exchange[b]	(267)	(342)	(75)
Total	$ (420)	$ (7,473)	$ (7,053)

(a) Primarily consists of hedges of SOFR-indexed floating-rate assets. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.

The Firm did not experience any forecasted transactions that failed to occur for the years ended 2024, 2023 and 2022.

Over the next 12 months, the Firm expects that approximately $(1.6) billion (after-tax) of net losses recorded in AOCI at December 31, 2024, related to cash flow hedges will be recognized in income. For cash flow hedges that have been terminated, the maximum length of time over which the derivative results recorded in AOCI will be recognized in earnings is approximately seven years, corresponding to the timing of the originally hedged forecasted cash flows. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately seven years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/(losses) recorded on such instruments for the years ended December 31, 2024, 2023 and 2022.

Year ended December 31, (in millions)	**2024**		2023		2022	
	Amounts recorded in income[a][b]	Amounts recorded in OCI	Amounts recorded in income[a][b]	Amounts recorded in OCI	Amounts recorded in income[a][b]	Amounts recorded in OCI
Foreign exchange derivatives	**$467**	**$4,411**	$384	$(1,732)	$(123)	$3,591

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. The Firm elects to record changes in fair value of these amounts directly in other income.

(b) Excludes amounts reclassified from AOCI to income on the sale or liquidation of hedged entities. During the year ended December 31, 2024, the Firm reclassified a net pre-tax gain of $89 million to other income/expense. During the year ended December 31, 2023, the Firm reclassified a net pre-tax loss of $(35) million to other revenue including the impact of the acquisition of CIFM. During the year ended December 31, 2022, the Firm reclassified net pre-tax gains of $38 million to other income/expense related to the liquidation of certain legal entities. Refer to Note 24 for further information.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pre-tax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from mortgage commitments, warehouse loans, MSRs, wholesale lending exposures, and foreign currency denominated assets and liabilities.

Year ended December 31, (in millions)	Derivatives gains/(losses) recorded in income		
	2024	2023	2022
Contract type			
Interest rate[a]	**$ (425)**	$ (135)	$ (827)
Credit[b]	**(604)**	(441)	51
Foreign exchange[c]	**(10)**	(2)	(48)
Total	**$ (1,039)**	$ (578)	$ (824)

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in mortgage commitments, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. Refer to Note 6 for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) in its wholesale and consumer businesses and derivatives counterparty exposures in its wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name"), broad-based index or portfolio. The Firm purchases and sells protection on both single- name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index consists of a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded derivative with a credit risk component where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer makes periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2024 and 2023. Upon a credit event, the Firm as a seller of protection would typically pay out a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased by CIB through credit-related notes. Other purchased protection also includes credit protection against certain loans in the retained lending portfolio through the issuance of credit derivatives and credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

December 31, 2024 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/ purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	**$ (450,184)**	**$ 474,554**	**$ 24,370**	**$ 6,858**
Other credit derivatives[a]	**(110,913)**	**137,927**	**27,014**	**10,169**
Total credit derivatives	**(561,097)**	**612,481**	**51,384**	**17,027**
Credit-related notes[b]	**—**	**—**	**—**	**10,471**
Total	**$ (561,097)**	**$ 612,481**	**$ 51,384**	**$ 27,498**

December 31, 2023 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/ purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	$ (450,172)	$ 473,823	$ 23,651	$ 7,517
Other credit derivatives[a]	(38,846)	45,416	6,570	29,206
Total credit derivatives	(489,018)	519,239	30,221	36,723
Credit-related notes[b]	—	—	—	9,788
Total	$ (489,018)	$ 519,239	$ 30,221	$ 46,511

(a) Other credit derivatives predominantly consist of credit swap options and total return swaps.
(b) Predominantly represents Other protection purchased by CIB.
(c) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(d) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(e) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument. Also includes credit protection against certain loans and lending-related commitments in the retained lending portfolio through the issuance of credit derivatives and credit-related notes.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives as of December 31, 2024 and 2023, where JPMorganChase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives where JPMorganChase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives ratings[a]/maturity profile

December 31, 2024 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (135,950)**	**$ (277,052)**	**$ (33,379)**	**$ (446,381)**	**$ 4,593**	**$ (904)**	**$ 3,689**
Noninvestment-grade	**(42,149)**	**(70,525)**	**(2,042)**	**(114,716)**	**1,889**	**(1,738)**	**151**
Total	**$ (178,099)**	**$ (347,577)**	**$ (35,421)**	**$ (561,097)**	**$ 6,482**	**$ (2,642)**	**$ 3,840**

December 31, 2023 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (89,981)	$ (263,834)	$ (29,470)	$ (383,285)	$ 3,659	$ (1,144)	$ 2,515
Noninvestment-grade	(31,419)	(69,515)	(4,799)	(105,733)	2,466	(1,583)	883
Total	$ (121,400)	$ (333,349)	$ (34,269)	$ (489,018)	$ 6,125	$ (2,727)	$ 3,398

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements including cash collateral netting.

Note 6 – Noninterest revenue and noninterest expense

Noninterest revenue

The Firm records noninterest revenue from certain contracts with customers in investment banking fees, deposit-related fees, asset management fees, commissions and other fees, and components of card income. The related contracts are often terminable on demand and the Firm has no remaining obligation to deliver future services. For arrangements with a fixed term, the Firm may commit to deliver services in the future. Revenue associated with these remaining performance obligations typically depends on the occurrence of future events or underlying asset values, and is not recognized until the outcome of those events or values are known.

Investment banking fees

This revenue category includes debt and equity underwriting and advisory fees. As an underwriter, the Firm helps clients raise capital via public offering and private placement of various types of debt and equity instruments. Underwriting fees are primarily based on the issuance price and quantity of the underlying instruments, and are recognized as revenue typically upon execution of the client's transaction. The Firm also manages and syndicates loan arrangements. Credit arrangement and syndication fees, included within debt underwriting fees, are recorded as revenue after satisfying certain retention, timing and yield criteria.

The Firm also provides advisory services by assisting its clients with mergers and acquisitions, divestitures, restructuring and other complex transactions. Advisory fees are recognized as revenue typically upon execution of the client's transaction.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2024	2023	2022
Underwriting			
Equity	**$ 1,687**	$ 1,149	$ 975
Debt	**3,945**	2,610	2,732
Total underwriting	**5,632**	3,759	3,707
Advisory	**3,278**	2,760	2,979
Total investment banking fees	**$ 8,910**	$ 6,519	$ 6,686

Investment banking fees are earned primarily by CIB.

Principal transactions

Principal transactions revenue is driven by many factors, including:

- the bid-offer spread, which is the difference between the price at which a market participant is willing and able to sell an instrument to the Firm and the price at which another market participant is willing and able to buy it from the Firm, and vice versa; and
- realized and unrealized gains and losses on financial instruments and commodities transactions, including those accounted for under the fair value option, primarily used in client-driven market-making activities.
  - Realized gains and losses result from the sale of instruments, closing out or termination of transactions, or interim cash payments.
  - Unrealized gains and losses result from changes in valuation.

In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities, including physical commodities inventories and financial instruments that reference commodities.

Principal transactions revenue also includes realized and unrealized gains and losses related to:

- derivatives designated in qualifying hedge accounting relationships, primarily fair value hedges of commodity and foreign exchange risk;
- derivatives used for specific risk management purposes, primarily to mitigate credit, foreign exchange and interest rate risks.

Refer to Note 5 for further information on the income statement classification of gains and losses from derivatives activities.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and ETD that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals, natural gas, and may hold other commodities inventories under financing and other arrangements with clients.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities in CIB and fund deployment activities in Treasury and CIO. Refer to Note 7 for further information on interest income and interest expense.

Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument

types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual LOB.

Year ended December 31, (in millions)	2024	2023	2022
Trading revenue by instrument type			
Interest rate[a]	**$ 3,631**	$ 5,607	$ 3,010
Credit[b]	**1,545**	1,434	1,412 [c]
Foreign exchange	**4,874**	5,082	5,119
Equity	**13,476**	10,229	8,068
Commodity	**1,194**	2,202	2,348
Total trading revenue	**24,720**	24,554	19,957
Private equity gains/(losses)	**67**	(94)	(45)
Principal transactions	**$24,787**	$ 24,460	$ 19,912

(a) Includes the impact of changes in funding valuation adjustments on derivatives.
(b) Includes the impact of changes in credit valuation adjustments on derivatives, net of the associated hedging activities.
(c) Includes net markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio.

Principal transactions revenue is earned primarily by CIB.

Lending- and deposit-related fees

Lending-related fees include fees earned from loan commitments, standby letters of credit, financial guarantees, and other loan-servicing activities. Deposit-related fees include fees earned from performing cash management activities, and providing overdraft and other deposit account services. Deposit-related fees also include the impact of credits earned by clients that reduce such fees. Lending- and deposit-related fees are recognized over the period in which the related service is provided. Refer to Note 28 for further information on lending-related commitments.

The following table presents the components of lending- and deposit-related fees.

Year ended December 31, (in millions)	2024	2023	2022
Lending-related fees	**$ 2,192** [a]	$ 2,365 [a]	$ 1,468
Deposit-related fees	**5,414**	5,048	5,630
Total lending- and deposit-related fees	**$7,606**	$ 7,413	$ 7,098

(a) Includes the amortization of the fair value discount on certain acquired lending-related commitments associated with First Republic, predominantly in AWM and CIB. The discount is deferred in other liabilities and recognized on a straight-line basis over the commitment period and was largely recognized in 2023 as the commitments were generally short term. Refer to Note 34 for additional information.

Lending- and deposit-related fees are earned by CCB, CIB and AWM.

Asset management fees

Investment management fees include fees associated with assets the Firm manages on behalf of its clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts. Management fees are typically based on the value of assets under management and are collected and recognized at the end of each period over which the management services are provided and the value of the managed assets is known. The Firm also receives performance-based management fees, which are earned based on exceeding certain benchmarks or other performance targets and are accrued and recognized when the probability of reversal is remote, typically at the end of the related billing period.

All other asset management fees include commissions earned on the sales or distribution of mutual funds to clients. These fees are recorded as revenue at the time the service is rendered or, in the case of certain distribution fees, based on the underlying fund's asset value or investor redemption activity.

The following table presents the components of asset management fees.

Year ended December 31, (in millions)	2024	2023	2022
Asset management fees			
Investment management fees	**$ 17,425**	$ 14,908	$ 13,765
All other asset management fees	**376**	312	331
Total asset management fees	**$ 17,801**	$ 15,220	$ 14,096

Asset management fees earned primarily by AWM and CCB.

Commissions and other fees

This revenue category includes commissions and fees from brokerage and custody services, and other products.

Brokerage commissions represents commissions earned when the Firm acts as a broker, by facilitating its clients' purchases and sales of securities and other financial instruments. Brokerage commissions are collected and recognized as revenue upon occurrence of the client transaction. The Firm reports certain costs paid to third-party clearing houses and exchanges net against commission revenue.

Administration fees predominantly include fees for custody, funds services, securities lending and securities clearance. These fees are recorded as revenue over the period in which the related service is provided.

The following table presents the components of commissions and other fees.

Year ended December 31, (in millions)	2024	2023	2022
Commissions and other fees			
Brokerage commissions and fees	**$ 3,119**	$ 2,820	$ 2,831
Administration fees	**2,526**	2,310	2,348
All other commissions and fees[(a)]	**1,885**	1,706	1,402
Total commissions and other fees	**$ 7,530**	$ 6,836	$ 6,581

(a) Includes annuity sales commissions, depositary receipt-related service fees and travel-related sales commissions, as well as other service fees, which are recognized as revenue when the services are rendered.

Commissions and other fees are earned primarily by CIB, CCB and AWM.

Mortgage fees and related income

This revenue category reflects CCB's Home Lending production and net mortgage servicing revenue.

Production revenue includes fees and income recognized as earned on mortgage loans originated with the intent to sell, and the impact of risk management activities associated with the mortgage pipeline and warehouse loans. Production revenue also includes gains and losses on sales and lower of cost or fair value adjustments on mortgage loans held-for-sale (excluding certain repurchased loans insured by U.S. government agencies), and changes in the fair value of financial instruments measured under the fair value option. Net mortgage servicing revenue includes operating revenue earned from servicing third-party mortgage loans, which is recognized over the period in which the service is provided; changes in the fair value of MSRs; the impact of risk management activities associated with MSRs; and gains and losses on securitization of excess mortgage servicing. Net mortgage servicing revenue also includes gains and losses on sales and lower of cost or fair value adjustments of certain repurchased loans insured by U.S. government agencies.

Refer to Note 15 for further information on risk management activities and MSRs.

Net interest income from mortgage loans is recorded in interest income.

Card income

This revenue category includes interchange and other income from credit and debit card transactions; and fees earned from processing card transactions for merchants, both of which are recognized when purchases are made by a cardholder and presented net of certain transaction-related costs. Card income also includes account origination costs and annual fees, which are deferred and recognized on a straight-line basis over a 12-month period.

Certain credit card products offer the cardholder the ability to earn points based on account activity, which the cardholder can choose to redeem for cash and non-cash rewards. The cost to the Firm related to these proprietary rewards programs varies based on multiple factors including the terms and conditions of the rewards programs, cardholder activity, cardholder reward redemption rates and cardholder reward selections. The Firm maintains a liability for its obligations under its rewards programs and reports the current-period cost as a reduction of card income.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous co-brand partners that grant the Firm exclusive rights to issue co-branded credit card products and market them to the customers of such partners. These partners endorse the co-brand credit card programs and provide their customer or member lists to the Firm. The partners may also conduct marketing activities and provide rewards redeemable under their own loyalty programs that the Firm will grant to co-brand credit cardholders based on account activity. The terms of these agreements generally range from five to ten years.

The Firm typically makes payments to the co-brand credit card partners based on the cost of partners' marketing activities and loyalty program rewards provided to credit cardholders, new account originations and sales volumes. Payments to partners based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as marketing expense. Payments for partner loyalty program rewards are reported as a reduction of card income when incurred. Payments to partners based on new credit card account originations are accounted for as direct loan origination costs and are deferred and recognized as a reduction of card income on a straight-line basis over a 12-month period. Payments to partners based on sales volumes are reported as a reduction of card income when the related interchange income is earned.

The following table presents the components of card income:

Year ended December 31, (in millions)	2024	2023	2022
Interchange and merchant processing income	**$ 33,847**	$ 31,021	$ 28,085
Reward costs and partner payments	**(26,784)**	(24,601)	(22,162)
All other[(a)]	**(1,566)**	(1,636)	(1,503)
Total card income	**$ 5,497**	$ 4,784	$ 4,420

(a) Predominantly represents the amortization of account origination costs and annual fees, which are deferred and recognized on a straight-line basis over a 12-month period.

Card income is earned primarily by CCB and CIB.

Other income

This revenue category includes operating lease income, as well as losses associated with the Firm's tax-oriented investments, predominantly alternative energy equity-method investments in CIB. The losses associated with these tax-oriented investments are more than offset by lower income tax expense from the associated tax credits.

The following table presents certain components of other income:

Year ended December 31, (in millions)	2024	2023	2022
Operating lease income	**$ 2,795**	$ 2,843	$ 3,654
Losses on tax-oriented investments	**(97)**	(1,538)	(1,491)
Gain on Visa shares	**7,990** [b]	—	914 [c]
Estimated bargain purchase gain associated with the First Republic acquisition	**103**	2,775	—
Gain related to the acquisition of CIFM [a]	**—**	339	—

(a) Gain on the original minority interest in CIFM upon the Firm's acquisition of the remaining 51% of the entity.
(b) Relates to the initial gain recognized on May 6, 2024 on the Visa C shares. Refer to Note 2 for additional information.
(c) Relates to the sale of Visa B shares.

Refer to Note 18 for additional information on operating leases.

Proportional Amortization Method: Effective January 1, 2024, as a result of adopting updates to the Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method guidance, the amortization of certain of the Firm's alternative energy tax-oriented investments that was previously recognized in other income is now recognized in income tax expense, which aligns with the associated tax credits and other tax benefits. Refer to Notes 1, 14 and 25 for additional information.

Noninterest expense

Other expense

Other expense on the Firm's Consolidated statements of income included:

Year ended December 31, (in millions)	2024	2023	2022
Legal expense	**$ 740**	$1,436	$ 266
FDIC-related expense	**1,893** [c]	4,203 [c]	860
Operating losses	**1,417**	1,228	1,101
Contribution of Visa shares[a]	**1,000**	—	—
First Republic-related expense[b]	**777**	1,060	—

(a) Represents the contribution of a portion of Visa C shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024. Refer to Note 2 for additional information.
(b) Reflects the expenses classified within other expense, including $488 million and $360 million of integration and restructuring costs associated with First Republic for the full years ended December 31, 2024 and 2023, respectively. Additionally, the second quarter of 2023 included payments to the FDIC for the First Republic individuals who were not employees of the Firm until July 2, 2023. Refer to Note 34 for additional information on the First Republic acquisition.
(c) The first quarter of 2024 included an increase of $725 million to the FDIC special assessment reflecting the FDIC's revised estimate of Deposit Insurance Fund losses. The fourth quarter of 2023 included the $2.9 billion FDIC special assessment.

Refer to Note 32 for additional information on noninterest revenue and expense by segment.

Note 7 – Interest income and interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability.

Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for derivatives and certain financial instruments containing embedded derivatives; for those instruments, all changes in fair value including any interest elements, are primarily reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable. Interest income and interest expense also includes the effect of derivatives that qualify for hedge accounting where applicable.

Interest income on loans and securities include the amortization and accretion of purchase premiums and discounts, as well as net deferred fees and costs on loans. These amounts are deferred in loans and investment securities, respectively, and recognized on a level-yield basis.

Refer to Notes 5, 10, 11, 12, and 20 for further information on accounting for interest income and interest expense related to hedge accounting, investment securities, securities financing activities (i.e., securities purchased or sold under resale or repurchase agreements; securities borrowed; and securities loaned), loans and long-term debt, respectively.

The following table presents the components of interest income and interest expense:

Year ended December 31, (in millions)	2024	2023	2022
Interest income			
Loans	**$ 92,353** [d]	$ 83,384 [d]	$ 52,736
Taxable securities	**21,947**	17,390	10,372
Non-taxable securities[a]	**1,197**	1,336	975
Total investment securities	**23,144** [d]	18,726 [d]	11,347
Trading assets - debt instruments	**20,327**	15,950	9,053
Federal funds sold and securities purchased under resale agreements	**18,299**	15,079	4,632
Securities borrowed	**9,208**	7,983	2,237
Deposits with banks	**22,297**	21,797	9,039
All other interest-earning assets[b]	**8,305**	7,669	3,763
Total interest income	**$193,933**	$170,588	$ 92,807
Interest expense			
Interest bearing deposits	**$ 49,559**	$ 40,016	$ 10,082
Federal funds purchased and securities loaned or sold under repurchase agreements	**19,149**	13,259	3,721
Short-term borrowings	**2,101**	1,894	747
Trading liabilities - debt and all other interest-bearing liabilities[c]	**10,238**	9,396	3,246
Long-term debt	**18,920**	15,803	8,075
Beneficial interest issued by consolidated VIEs	**1,383**	953	226
Total interest expense	**$101,350**	$ 81,321	$ 26,097
Net interest income	**$ 92,583**	$ 89,267	$ 66,710
Provision for credit losses	**10,678**	9,320	6,389
Net interest income after provision for credit losses	**$ 81,905**	$ 79,947	$ 60,321

(a) Represents securities that are tax-exempt for U.S. federal income tax purposes.
(b) Includes interest earned on brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated balance sheets.
(c) All other interest-bearing liabilities includes interest expense on brokerage-related customer payables.
(d) Includes the accretion of the purchase discount on certain acquired loans and investment securities associated with First Republic. Refer to Note 34 for additional information.

Note 8 – Pension and other postretirement employee benefit plans

The Firm has various defined benefit pension plans and OPEB plans that provide benefits to its employees in the U.S. and certain non-U.S. locations. Substantially all the defined benefit pension plans are closed to new participants. The principal defined benefit pension plan in the U.S., which covered substantially all U.S. employees, was closed to new participants and frozen for existing participants on January 1, 2020, (and January 1, 2019 for new hires on or after December 2, 2017). Interest credits continue to accrue to participants' accounts based on their accumulated balances.

The Firm maintains funded and unfunded postretirement benefit plans that provide medical and life insurance for certain eligible employees and retirees as well as their dependents covered under these programs. None of these plans have a material impact on the Firm's Consolidated Financial Statements.

The Firm also provides a qualified defined contribution plan in the U.S. and maintains other similar arrangements in certain non-U.S. locations. The most significant of these plans is the JPMorgan Chase 401(k) Savings Plan ("the 401(k) Savings Plan"), which covers substantially all U.S. employees. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. The Firm makes annual matching and pay credit contributions to the 401(k) Savings Plan on behalf of eligible participants.

The following table presents the pretax benefit obligations, plan assets, the net funded status, and the amounts recorded in AOCI on the Consolidated balance sheets for the Firm's significant defined benefit pension and OPEB plans.

As of or for the year ended December 31, (in millions)	2024	2023
Projected benefit obligations	**$ (14,459)**	$ (14,740)
Fair value of plan assets	**22,201**	22,013
Net funded status	**7,742**	7,273
Accumulated other comprehensive income/(loss)	**(1,649)**	(1,517)

The weighted-average discount rate used to value the benefit obligations as of December 31, 2024 and 2023, was 5.49% and 5.16%, respectively.

Gains and losses

Gains or losses resulting from changes in the benefit obligation and the fair value of plan assets are recorded in OCI. Amortization of net gains or losses are recognized as part of the net periodic benefit cost over subsequent periods, if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Amortization is generally over the average expected remaining lifetime of plan participants, given the frozen status of most plans. For the year ended December 31, 2024, the net loss was attributable to lower than expected returns on plan assets, partially offset by projected benefit obligation net gains primarily related to changes in the discount rate. For the year ended December 31, 2023, the net gain was attributable to market-driven increases in the fair value of plan assets, partially offset by changes in the discount rate and interest crediting rate.

The following table presents the net periodic benefit costs reported in the Consolidated statements of income for the Firm's defined benefit pension, defined contribution and OPEB plans, and in other comprehensive income for the defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	2024	2023	2022
Total net periodic defined benefit plan cost/(credit)[a]	**$ (462)**	$ (393)	$ (192) [b]
Total defined contribution plans	**1,733**	1,609	1,408
Total pension and OPEB cost included in noninterest expense	**$ 1,271**	$ 1,216	$ 1,216
Total recognized in other comprehensive (income)/loss	**$ 131**	$ (421)	$ 1,459

(a) The service cost component of net periodic defined benefit cost is reported in compensation expense; all other components of net periodic defined benefit costs are reported in other expense in the Consolidated statements of income.
(b) Includes pension settlement losses of $92 million for the year ended December 31, 2022.

The following table presents the weighted-average actuarial assumptions used to determine the net periodic benefit costs for the defined benefit pension and OPEB plans.

Year ended December 31,	**2024**	2023	2022
Discount rate	**5.16 %**	5.14 %	2.54 %
Expected long-term rate of return on plan assets	**6.15 %**	5.74 %	3.68 %

Plan assumptions

The Firm's expected long-term rate of return is a blended weighted average, by asset allocation of the projected long-term returns for the various asset classes, taking into consideration local market conditions and the specific allocation of plan assets. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns, with consideration given to current market conditions and the portfolio mix of each plan.

The discount rates used in determining the benefit obligations are generally provided by the Firm's actuaries, with the Firm's principal defined benefit pension plan using a rate that was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match the plan's projected annual cash flows.

Investment strategy and asset allocation

The assets of the Firm's defined benefit pension plans are held in various trusts and are invested in well-diversified portfolios of equity and fixed income securities, cash and cash equivalents, and alternative investments. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that could impact the portfolios, which are rebalanced when deemed necessary. As of December 31, 2024, the approved asset allocation ranges by asset class for the Firm's principal defined benefit plan are 41-100% debt securities, 0-40% equity securities, 0-1% real estate, and 0-8% alternatives.

Assets held by the Firm's defined benefit pension and OPEB plans do not include securities issued by JPMorganChase or its affiliates, except through indirect exposures through investments in exchange traded funds, mutual funds and collective investment funds managed by third-parties. The defined benefit pension and OPEB plans hold investments that are sponsored or managed by affiliates of JPMorganChase in the amount of $1.8 billion as of both December 31, 2024 and 2023.

Fair value measurement of the plans' assets and liabilities

Refer to Note 2 for information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm.

Defined benefit pension and OPEB plans assets and liabilities measured at fair value

	2024				2023			
December 31, (in millions)	Level 1[a]	Level 2[b]	Level 3[c]	Total fair value	Level 1[a]	Level 2[b]	Level 3[c]	Total fair value
Assets measured at fair value classified in the fair value hierarchy	**$ 6,910**	**$ 9,693**	**$ 3,956**	**$ 20,559**	$ 6,521	$ 10,713	$ 3,124	$ 20,358
Assets measured at fair value using NAV as a practical expedient				**2,101**				2,097
Net defined benefit pension plan payables				**(459)**				(442)
Total fair value of plan assets				**$ 22,201**				$ 22,013

(a) Consists predominantly of equity securities, U.S. federal, state, and local and non-U.S. government debt securities, and cash equivalents.
(b) Consists of corporate debt securities, fund investments, mortgage-backed securities, and U.S. federal, state, and local and non-U.S. government debt securities.
(c) Consists predominantly of corporate-owned life insurance policies.

Changes in level 3 fair value measurements using significant unobservable inputs

Investments classified in level 3 of the fair value hierarchy increased in 2024 to $4.0 billion, due to $536 million of transfers in and $415 million in unrealized gains, partially offset by $123 million in settlements. The net increase in 2023 was due to $400 million in unrealized gains and $173 million of transfers in, partially offset by $59 million in settlements.

Estimated future benefit payments

The following table presents benefit payments expected to be paid for the defined benefit pension and OPEB plans for the years indicated.

Year ended December 31, (in millions)		
2025	$	1,186
2026		1,155
2027		1,134
2028		1,095
2029		1,093
Years 2030–2034		5,229

Note 9 – Employee share-based incentives

Employee share-based awards

In 2024, 2023 and 2022, JPMorganChase granted long-term share-based awards to certain employees under its LTIP, as amended and restated effective May 18, 2021, and subsequently amended effective May 21, 2024. Under the terms of the LTIP, as of December 31, 2024, 81 million shares of common stock were available for issuance through May 2028. The LTIP is the only active plan under which the Firm is currently granting share-based incentive awards. In the following discussion, the LTIP constitutes the Firm's share-based incentive plans.

RSUs are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination based on age and/or service-related requirements, subject to post-employment and other restrictions. All RSU awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. Predominantly all RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding.

Performance share units ("PSUs") are granted annually, and approved by the Firm's Board of Directors, to members of the Firm's Operating Committee under the variable compensation program. PSUs are subject to the Firm's achievement of specified performance criteria over a three-year period. The number of awards that vest can range from zero to 150% of the grant amount. In addition, dividends that accrue during the vesting period are reinvested in dividend equivalent share units. PSUs and the related dividend equivalent share units are converted into shares of common stock after vesting.

Once the PSUs and dividend equivalent share units have vested, the shares of common stock that are delivered, after applicable tax withholding, must be retained for an additional holding period, for a total combined vesting and holding period of approximately five to eight years from the grant date depending on regulations in certain countries.

Under the LTI Plans, stock appreciation rights ("SARs") were granted with an exercise price equal to the fair value of JPMorganChase's common stock on the grant date. SARs expire ten years after the grant date. There were no grants of SARs in 2024, 2023 or 2022.

The Firm separately recognizes compensation expense for each tranche of each award, net of estimated forfeitures, as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee share-based incentive awards is to issue either new shares of common stock or treasury shares. During 2024, 2023 and 2022, the Firm settled all of its employee share-based awards by issuing treasury shares.

Refer to Note 23 for further information on the classification of share-based awards for purposes of calculating earnings per share.

RSUs, PSUs and SARs activity

Generally, compensation expense for RSUs and PSUs is measured based on the number of units granted multiplied by the stock price at the grant date, and for SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorganChase's RSUs, PSUs and SARs activity for 2024.

	RSUs/PSUs		SARs			
Year ended December 31, 2024 (in thousands, except weighted-average data, and where otherwise stated)	Number of units	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**52,243**	**$ 141.31**	**2,250**	**$ 152.19**		
Granted	**20,020**	**166.74**	**—**	**—**		
Exercised or vested	**(19,542)**	**143.02**	**—**	**—**		
Forfeited	**(2,112)**	**147.41**	**—**	**—**		
Canceled	**NA**	**NA**	**—**	**—**		
Outstanding, December 31	**50,609**	**$ 150.41**	**2,250**	**$ 152.19**	**6.7**	**$ 198,113**
Exercisable, December 31	**NA**	**NA**	**—**	**—**	**—**	**—**

The total fair value of RSUs and PSUs that vested during the years ended December 31, 2024, 2023 and 2022, was $3.5 billion, $2.5 billion and $3.2 billion, respectively. There were no SARs exercised in 2024. The total intrinsic value of SARs exercised during the years ended December 31, 2023 and 2022, was $24 million and $75 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee share-based incentive plans in its Consolidated statements of income.

Year ended December 31, (in millions)	**2024**	2023	2022
Cost of prior grants of RSUs, PSUs and SARs that are amortized over their applicable vesting periods	**$ 1,622**	$ 1,510	$ 1,253
Accrual of estimated costs of share-based awards to be granted in future periods, predominantly those to full-career eligible employees	**1,882**	1,607	1,541
Total noncash compensation expense related to employee share-based incentive plans	**$3,504**	$ 3,117	$ 2,794

At December 31, 2024, approximately $963 million (pretax) of compensation expense related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.6 years. The Firm does not capitalize any compensation expense related to share-based compensation awards to employees.

Tax benefits

Income tax benefits (including tax benefits from dividends or dividend equivalents) related to share-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2024, 2023 and 2022, were $1.0 billion, $836 million and $901 million, respectively.

Note 10 – Investment securities

Investment securities consist of debt securities that are classified as AFS or HTM. Debt securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities.

AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments or allowance for credit losses, are reported in AOCI. The specific identification method is used to determine realized gains and losses on AFS securities, which are included in investment securities gains/(losses) on the Consolidated statements of income. HTM securities, which the Firm has the intent and ability to hold until maturity, are carried at amortized cost, net of allowance for credit losses, on the Consolidated balance sheets.

For both AFS and HTM securities, purchase discounts or premiums are generally amortized into interest income on a level-yield basis over the contractual life of the security. However, premiums on certain callable debt securities are amortized to the earliest call date.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

December 31, (in millions)	2024 Amortized cost[d][e]	2024 Gross unrealized gains	2024 Gross unrealized losses	2024 Fair value	2023 Amortized cost[d][e]	2023 Gross unrealized gains	2023 Gross unrealized losses	2023 Fair value
Available-for-sale securities								
Mortgage-backed securities:								
U.S. GSEs and government agencies	**$ 95,671**	**$ 251**	**$ 4,029**	**$ 91,893**	$ 88,377	$ 870	$ 4,077	$ 85,170
Residential:								
U.S.	**4,242**	**16**	**50**	**4,208**	2,086	10	68	2,028
Non-U.S.	**600**	**3**	**—**	**603**	1,608	4	1	1,611
Commercial	**4,115**	**20**	**70**	**4,065**	2,930	12	139	2,803
Total mortgage-backed securities	**104,628**	**290**	**4,149**	**100,769**	95,001	896	4,285	91,612
U.S. Treasury and government agencies	**235,495**	**545**	**1,261**	**234,779**	58,051	276	522	57,805
Obligations of U.S. states and municipalities	**18,337**	**110**	**534**	**17,913**	21,243	390	266	21,367
Non-U.S. government debt securities	**36,655**	**94**	**504**	**36,245**	21,387	254	359	21,282
Corporate debt securities	**71**	**—**	**1**	**70**	128	—	28	100
Asset-backed securities:								
Collateralized loan obligations	**14,887**	**59**	**3**	**14,943**	6,769	11	28	6,752
Other	**2,125**	**17**	**9**	**2,133**	2,804	8	26	2,786
Unallocated portfolio layer fair value basis adjustments[a]	**(1,153)**	**—**	**(1,153)**	**NA**	73	(73)	—	NA
Total available-for-sale securities	**411,045**	**1,115**	**5,308**	**406,852**	205,456	1,762	5,514	201,704
Held-to-maturity securities[b]								
Mortgage-backed securities:								
U.S. GSEs and government agencies	**97,177**	**6**	**13,531**	**83,652**	105,614	39	11,643	94,010
U.S. Residential	**8,605**	**4**	**904**	**7,705**	9,709	4	970	8,743
Commercial	**8,817**	**24**	**389**	**8,452**	10,534	13	581	9,966
Total mortgage-backed securities	**114,599**	**34**	**14,824**	**99,809**	125,857	56	13,194	112,719
U.S. Treasury and government agencies	**108,632**	**—**	**11,212**	**97,420**	173,666	—	13,074	160,592
Obligations of U.S. states and municipalities	**9,310**	**32**	**631**	**8,711**	9,945	74	591	9,428
Asset-backed securities:								
Collateralized loan obligations	**40,573**	**84**	**14**	**40,643**	58,565	47	352	58,260
Other	**1,354**	**2**	**39**	**1,317**	1,815	1	61	1,755
Total held-to-maturity securities[c]	**274,468**	**152**	**26,720**	**247,900**	369,848	178	27,272	342,754
Total investment securities, net of allowance for credit losses	**$ 685,513**	**$ 1,267**	**$ 32,028**	**$ 654,752**	$ 575,304	$ 1,940	$ 32,786	$ 544,458

(a) Represents the amount of portfolio layer method basis adjustments related to AFS securities hedged in a closed portfolio. Under U.S. GAAP portfolio layer method basis adjustments are not allocated to individual securities, however the amounts impact the unrealized gains or losses in the table for the types of securities being hedged. Refer to Note 1 and Note 5 for additional information.

(b) The Firm purchased $4.7 billion, $4.1 billion and $33.7 billion of HTM securities for the years ended December 31, 2024, 2023 and 2022, respectively.

(c) Effective January 1, 2023, the Firm adopted the portfolio layer method hedge accounting guidance which permitted a transfer of HTM securities to AFS upon adoption. The Firm transferred obligations of U.S. states and municipalities with a carrying value of $7.1 billion resulting in the recognition of $38 million net pre-tax unrealized losses in AOCI. This transfer was a non-cash transaction. Refer to Note 24 for additional information.

(d) The amortized cost of investment securities is reported net of allowance for credit losses of $152 million, $128 million and $96 million at December 31, 2024, 2023 and 2022, respectively.

(e) Excludes $3.7 billion and $2.8 billion of accrued interest receivable at December 31, 2024 and 2023, respectively, included in accrued interest and accounts receivable on the Consolidated balance sheets. The Firm generally does not recognize an allowance for credit losses on accrued interest receivable, consistent with its policy to write them off no later than 90 days past due by reversing interest income. The Firm did not reverse through interest income any accrued interest receivable for the years ended December 31, 2024 and 2023.

At December 31, 2024, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings). Risk ratings are used to identify the credit quality of securities and differentiate risk within the portfolio. The Firm's internal risk ratings generally align with the qualitative characteristics (e.g., borrower capacity to meet financial commitments and vulnerability to changes in the economic environment) defined by S&P and Moody's, however the quantitative characteristics (e.g., probability of default ("PD") and loss given default ("LGD")) may differ as they reflect internal historical experiences and assumptions. Risk ratings are assigned at acquisition, reviewed on a regular and ongoing basis by Credit Risk Management and adjusted as necessary over the life of the investment for updated information affecting the issuer's ability to fulfill its obligations.

AFS securities impairment

The following tables present the fair value and gross unrealized losses by aging category for AFS securities at December 31, 2024 and 2023. The tables exclude U.S. Treasury and government agency securities and U.S. GSE and government agency MBS with unrealized losses of $5.3 billion and $4.6 billion, at December 31, 2024 and 2023, respectively; changes in the value of these securities are generally driven by changes in interest rates rather than changes in their credit profile given the explicit or implicit guarantees provided by the U.S. government.

	Available-for-sale securities with gross unrealized losses					
	Less than 12 months		12 months or more			
Year ended December 31, 2024 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale securities						
Mortgage-backed securities:						
Residential:						
U.S.	**$ 1,505**	**$ 6**	**$ 925**	**$ 44**	**$ 2,430**	**$ 50**
Non-U.S.	**—**	**—**	**30**	**—**	**30**	**—**
Commercial	**763**	**8**	**1,184**	**62**	**1,947**	**70**
Total mortgage-backed securities	**2,268**	**14**	**2,139**	**106**	**4,407**	**120**
Obligations of U.S. states and municipalities	**10,037**	**233**	**2,412**	**301**	**12,449**	**534**
Non-U.S. government debt securities	**14,234**	**234**	**4,184**	**270**	**18,418**	**504**
Corporate debt securities	**9**	**—**	**30**	**1**	**39**	**1**
Asset-backed securities:						
Collateralized loan obligations	**2**	**—**	**375**	**3**	**377**	**3**
Other	**214**	**1**	**200**	**8**	**414**	**9**
Total available-for-sale securities with gross unrealized losses	**$ 26,764**	**$ 482**	**$ 9,340**	**$ 689**	**$ 36,104**	**$ 1,171**

	Available-for-sale securities with gross unrealized losses					
	Less than 12 months		12 months or more			
Year ended December 31, 2023 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale securities						
Mortgage-backed securities:						
Residential:						
U.S.	$ 81	$ —	$ 1,160	$ 68	$ 1,241	$ 68
Non-U.S.	—	—	722	1	722	1
Commercial	228	3	1,775	136	2,003	139
Total mortgage-backed securities	309	3	3,657	205	3,966	208
Obligations of U.S. states and municipalities	2,134	20	2,278	246	4,412	266
Non-U.S. government debt securities	7,145	23	4,987	336	12,132	359
Corporate debt securities	9	—	79	28	88	28
Asset-backed securities:						
Collateralized loan obligations	932	2	3,744	26	4,676	28
Other	208	1	1,288	25	1,496	26
Total available-for-sale securities with gross unrealized losses	$ 10,737	$ 49	$ 16,033	$ 866	$ 26,770	$ 915

AFS securities are considered impaired if the fair value is less than the amortized cost.

The Firm recognizes impairment losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost. In these circumstances the impairment loss is recognized in investment securities gains/(losses) in the Consolidated Statements of Income and is equal to the full difference between the amortized cost (net of allowance if applicable) and the fair value of the security.

For impaired debt securities that the Firm has the intent and ability to hold, the securities are evaluated to determine if a credit loss exists. If it is determined that a credit loss exists, that loss is recognized as an allowance for credit losses through the provision for credit losses in the Consolidated Statements of Income, limited by the amount of impairment. Any impairment on debt securities that the Firm has the intent and ability to hold not due to credit losses is recorded in OCI.

Factors considered in evaluating credit losses include adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; and payment structure of the security.

When assessing securities issued in a securitization for credit losses, the Firm estimates cash flows considering relevant market and economic data, underlying loan-level data, and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists.

For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm evaluates impairment for credit losses when there is an adverse change in expected cash flows.

HTM securities – credit risk

Allowance for credit losses

The allowance for credit losses on HTM securities represents expected credit losses over the remaining expected life of the securities.

The allowance for credit losses on HTM obligations of U.S. states and municipalities and commercial mortgage-backed securities is calculated by applying statistical credit loss factors (estimated PD and LGD) to the amortized cost. The credit loss factors are derived using a weighted average of five internally developed eight-quarter macroeconomic scenarios, followed by a single year straight-line interpolation to revert to long run historical information for periods beyond the forecast period. Refer to Note 13 for further information on the eight-quarter macroeconomic forecast.

The allowance for credit losses on HTM collateralized loan obligations and U.S. residential mortgage-backed securities is calculated as the difference between the amortized cost and the present value of the cash flows expected to be collected, discounted at the security's effective interest rate. These cash flow estimates are developed based on expectations of underlying collateral performance derived using the eight-quarter macroeconomic forecast and the single year straight-line interpolation, as well as considering the structural features of the security.

The application of different inputs and assumptions into the calculation of the allowance for credit losses is subject to significant management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for credit losses on HTM securities.

Credit quality indicator

The primary credit quality indicator for HTM securities is the risk rating assigned to each security. At both December 31, 2024 and 2023, all HTM securities were rated investment grade and were current and accruing, with approximately 99% rated at least AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings).

Allowance for credit losses on investment securities

The allowance for credit losses on investment securities was $152 million, $128 million and $96 million as of December 31, 2024, 2023 and 2022, respectively, which included a cumulative-effect adjustment to retained earnings related to the transfer of HTM securities to AFS for the year ended December 31, 2023.

Selected impacts of investment securities on the Consolidated statements of income

Year ended December 31, (in millions)	**2024**	2023	2022
Realized gains	**$ 593**	$ 622	$ 198
Realized losses	**(1,614)**	(3,802)	(2,578)
Investment securities losses	**$(1,021)**	$(3,180)	$(2,380)
Provision for credit losses	**$ 24**	$ 38	$ 54

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2024, of JPMorganChase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2024 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale securities					
Mortgage-backed securities					
Amortized cost	$ 132	$ 9,410	$ 4,059	$ 91,027	$ 104,628
Fair value	130	9,345	4,041	87,253	100,769
Average yield[a]	3.32 %	4.58 %	5.25 %	4.75 %	4.75 %
U.S. Treasury and government agencies					
Amortized cost	$ 20,685	$ 169,162	$ 38,667	$ 6,981	$ 235,495
Fair value	20,730	169,145	38,619	6,285	234,779
Average yield[a]	4.50 %	4.57 %	4.96 %	5.53 %	4.65 %
Obligations of U.S. states and municipalities					
Amortized cost	$ 4	$ 16	$ 92	$ 18,225	$ 18,337
Fair value	4	16	90	17,803	17,913
Average yield[a]	1.59 %	3.95 %	4.46 %	5.32 %	5.32 %
Non-U.S. government debt securities					
Amortized cost	$ 13,331	$ 11,769	$ 7,609	$ 3,946	$ 36,655
Fair value	13,327	11,701	7,403	3,814	36,245
Average yield[a]	4.24 %	4.32 %	2.82 %	4.15 %	3.96 %
Corporate debt securities					
Amortized cost	$ 106	$ 9	$ 5	$ —	$ 120
Fair value	57	9	4	—	70
Average yield[a]	14.09 %	4.06 %	4.19 %	— %	12.92 %
Asset-backed securities					
Amortized cost	$ —	$ 368	$ 1,609	$ 15,035	$ 17,012
Fair value	—	370	1,619	15,087	17,076
Average yield[a]	— %	6.14 %	6.04 %	5.96 %	5.97 %
Total available-for-sale securities					
Amortized cost[b]	$ 34,258	$ 190,734	$ 52,041	$ 135,214	$ 412,247
Fair value	34,248	190,586	51,776	130,242	406,852
Average yield[a]	4.42 %	4.56 %	4.70 %	4.98 %	4.70 %
Held-to-maturity securities					
Mortgage-backed securities					
Amortized cost	$ 104	$ 7,994	$ 6,077	$ 100,495	$ 114,670
Fair value	101	7,453	5,352	86,903	99,809
Average yield[a]	0.97 %	2.63 %	2.67 %	2.95 %	2.92 %
U.S. Treasury and government agencies					
Amortized cost	$ 20,083	$ 40,497	$ 48,052	$ —	$ 108,632
Fair value	19,500	37,715	40,205	—	97,420
Average yield[a]	0.43 %	1.23 %	1.25 %	— %	1.09 %
Obligations of U.S. states and municipalities					
Amortized cost	$ —	$ 9	$ 307	$ 9,026	$ 9,342
Fair value	—	9	276	8,426	8,711
Average yield[a]	— %	4.76 %	3.25 %	3.97 %	3.95 %
Asset-backed securities					
Amortized cost	$ —	$ 134	$ 22,433	$ 19,360	$ 41,927
Fair value	—	134	22,466	19,360	41,960
Average yield[a]	— %	5.94 %	5.57 %	5.73 %	5.65 %
Total held-to-maturity securities					
Amortized cost[b]	$ 20,187	$ 48,634	$ 76,869	$ 128,881	$ 274,571
Fair value	19,601	45,311	68,299	114,689	247,900
Average yield[a]	0.43 %	1.47 %	2.63 %	3.44 %	2.64 %

(a) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives, including closed portfolio hedges. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid. However, for certain callable debt securities, the average yield is calculated to the earliest call date.

(b) For purposes of this table, the amortized cost of available-for-sale securities excludes the allowance for credit losses of $49 million and the portfolio layer fair value hedge basis adjustments of $(1.2) billion at December 31, 2024. The amortized cost of held-to-maturity securities also excludes the allowance for credit losses of $103 million at December 31, 2024.

(c) Substantially all of the Firm's U.S. residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately eight years for agency residential MBS, six years for agency residential collateralized mortgage obligations, and five years for nonagency residential collateralized mortgage obligations.

Note 11 – Securities financing activities

JPMorganChase enters into resale, repurchase, securities borrowed and securities loaned agreements (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short sales, accommodate customers' financing needs, settle other securities obligations and to deploy the Firm's excess cash.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Where appropriate under applicable accounting guidance, securities financing agreements with the same counterparty are reported on a net basis. Refer to Note 1 for further discussion of the offsetting of assets and liabilities. Fees received and paid in connection with securities financing agreements are recorded over the life of the agreement in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. Refer to Note 3 for further information regarding the fair value option. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

Securities financing agreements not elected under the fair value option are measured at amortized cost. As a result of the Firm's credit risk mitigation practices described below, the Firm did not hold any allowance for credit losses with respect to resale and securities borrowed arrangements as of December 31, 2024 and 2023.

Credit risk mitigation practices

Securities financing agreements expose the Firm primarily to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and U.S. GSEs and government agencies MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale and securities borrowed agreements, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase and securities loaned agreements, credit risk exposure arises to the extent that the value of underlying securities advanced exceeds the value of the initial cash principal received, and any collateral amounts exchanged.

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale and securities borrowed agreements. Refer to Note 29 for further information regarding assets pledged and collateral received in securities financing agreements.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements, as of December 31, 2024 and 2023. When the Firm has obtained an appropriate legal opinion with respect to a master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparty to reduce the economic exposure with the counterparty, but such collateral is not eligible for net Consolidated balance sheet presentation. Where the Firm has obtained an appropriate legal opinion with respect to the counterparty master netting agreement, such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented in the table below as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below. In transactions where the Firm is acting as the lender in a securities-for-securities lending agreement and receives securities that can be pledged or sold as collateral, the Firm recognizes the securities received at fair value within other assets and the obligation to return those securities within accounts payable and other liabilities on the Consolidated balance sheets.

	December 31, 2024				
(in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets[(b)]	Net amounts[(c)]
Assets					
Securities purchased under resale agreements	**$ 607,154**	**$ (312,183)**	**$ 294,971**	**$ (282,220)**	**$ 12,751**
Securities borrowed	**267,917**	**(48,371)**	**219,546**	**(170,702)**	**48,844**
Liabilities					
Securities sold under repurchase agreements	**$ 603,683**	**$ (312,183)**	**$ 291,500**	**$ (249,763)**	**$ 41,737**
Securities loaned and other[(a)]	**58,989**	**(48,371)**	**10,618**	**(10,557)**	**61**

	December 31, 2023				
(in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets[(b)]	Net amounts[(c)]
Assets					
Securities purchased under resale agreements	$ 523,308	$ (247,181)	$ 276,127	$ (267,582)	$ 8,545
Securities borrowed	244,046	(43,610)	200,436	(144,543)	55,893
Liabilities					
Securities sold under repurchase agreements	$ 459,985	$ (247,181)	$ 212,804	$ (182,011)	$ 30,793
Securities loaned and other[(a)]	52,142	(43,610)	8,532	(8,501)	31

(a) Includes securities-for-securities lending agreements of $5.9 billion and $5.6 billion at December 31, 2024 and 2023, respectively, accounted for at fair value, where the Firm is acting as lender.

(b) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related net asset or liability with that counterparty.

(c) Includes securities financing agreements that provide collateral rights, but where an appropriate legal opinion with respect to the master netting agreement has not been either sought or obtained. At December 31, 2024 and 2023, included $8.7 billion and $7.1 billion, respectively, of securities purchased under resale agreements; $42.9 billion and $50.7 billion, respectively, of securities borrowed; $40.9 billion and $30.0 billion, respectively, of securities sold under repurchase agreements; and securities loaned and other which were not material.

The tables below present as of December 31, 2024 and 2023 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

	Gross liability balance			
	2024		2023	
December 31, (in millions)	Securities sold under repurchase agreements	Securities loaned and other	Securities sold under repurchase agreements	Securities loaned and other
Mortgage-backed securities:				
U.S. GSEs and government agencies	**$ 82,645**	**$ —**	$ 71,064	$ —
Residential - nonagency	**2,610**	**—**	2,292	—
Commercial - nonagency	**2,344**	**—**	2,669	—
U.S. Treasury, GSEs and government agencies	**300,022**	**759**	216,467	1,034
Obligations of U.S. states and municipalities	**1,872**	**—**	2,323	—
Non-U.S. government debt	**117,614**	**1,852**	97,400	1,455
Corporate debt securities	**44,495**	**4,033**	39,247	2,025
Asset-backed securities	**4,619**	**—**	2,703	—
Equity securities	**47,462**	**52,345**	25,820	47,628
Total	**$ 603,683**	**$ 58,989**	$ 459,985	$ 52,142

	Remaining contractual maturity of the agreements				
December 31, 2024 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	**$ 308,392**	**$ 171,346**	**$ 19,932**	**$ 104,013**	**$ 603,683**
Total securities loaned and other	**54,066**	**1,463**	**1**	**3,459**	**58,989**

	Remaining contractual maturity of the agreements				
December 31, 2023 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 259,048	$ 102,941	$ 20,960	$ 77,036	$ 459,985
Total securities loaned and other	49,610	1,544	—	988	52,142

Transfers not qualifying for sale accounting

At December 31, 2024 and 2023, the Firm held $805 million and $505 million, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded primarily in short-term borrowings and long-term debt on the Consolidated balance sheets.

Note 12 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained")
- Loans held-for-sale
- Loans at fair value

The following provides a detailed accounting discussion of the Firm's loans by category:

Loans held-for-investment

Originated or purchased loans held-for-investment, including PCD, are recorded at amortized cost, reflecting the principal amount outstanding, net of the following: unamortized deferred loan fees, costs, premiums or discounts; charge-offs; collection of cash; and foreign exchange. Credit card loans also include billed finance charges and fees.

Interest income

Interest income on performing loans held-for-investment is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are recognized in interest income over the contractual life of the loan as an adjustment of yield.

The Firm classifies accrued interest on loans, including accrued but unbilled interest on credit card loans, in accrued interest and accounts receivables on the Consolidated balance sheets. For credit card loans, accrued interest once billed is then recognized in the loan balances, with the related allowance recorded in the allowance for credit losses. Changes in the allowance for credit losses on accrued interest on credit card loans are recognized in the provision for credit losses and charge-offs are recognized by reversing interest income. For other loans, the Firm generally does not recognize an allowance for credit losses on accrued interest receivables, consistent with its policy to write them off no later than 90 days past due by reversing interest income.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full.

Allowance for loan losses

The allowance for loan losses represents the estimated expected credit losses in the held-for-investment loan portfolio at the balance sheet date and is recognized on the balance sheet as a contra asset, which brings the amortized cost to the net carrying value. Changes in the allowance for loan losses resulting from lending-related activity, macroeconomic variables, changes in credit and other inputs are recorded in the provision for credit losses on the Firm's Consolidated statements of income. Refer to Note 13 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans are generally charged off or charged down to the lower of the amortized cost or the net realizable value of the underlying collateral (i.e., fair value less estimated costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the FFIEC. Residential real estate loans, unmodified credit card loans and scored business banking loans are generally charged off no later than 180 days past due. Scored auto and closed-end consumer loans, including modified credit card

accounts placed on a fixed payment plan, are charged off no later than 120 days past due.

Certain consumer loans are charged off or charged down to their net realizable value earlier than the FFIEC charge-off standards in the following circumstances:

- Loans modified to borrowers experiencing financial difficulty that are determined to be collateral-dependent.
- Loans to borrowers who have experienced an event that suggests a loss is either known or highly certain are subject to accelerated charge-off standards (e.g., residential real estate and auto loans are charged off or charged down within 60 days of receiving notification of a bankruptcy filing).
- Auto loans upon repossession of the automobile.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on the government-guaranteed portion of loans.

Wholesale loans are charged off when it is highly certain that a loss has been realized. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the lower of its amortized cost or the estimated net realizable value of the underlying collateral, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is generally estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm utilizes a broker's price opinion, appraisal and/or an automated valuation model of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every 12 months, or more frequently depending on various market factors. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), the Firm generally obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Loans held-for-sale are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees or costs and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Because these loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans. However, loans held-for-sale are subject to the Firm's nonaccrual policies.

Loans at fair value

Loans for which the fair value option has been elected are measured at fair value, with changes in fair value recorded in noninterest revenue.

Interest income on these loans is accrued and recognized based on the contractual rate of interest. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans. However, loans at fair value are subject to the Firm's nonaccrual policies.

Refer to Note 3 for further information on the Firm's elections of fair value accounting under the fair value option. Refer to Note 2 and Note 3 for further information on loans carried at fair value and classified as trading assets.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at amortized cost on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. Refer to Note 13 for a further discussion of the methodologies used in establishing the Firm's allowance for loan losses.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss mitigation activities. Through the modification, JPMorganChase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss and avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, other-than-insignificant payment delays or principal forgiveness.

Loans, except for credit card loans, reported as FDMs are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (i) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (ii) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

The allowance for credit losses associated with FDMs is measured using the Firm's established allowance methodology, which considers the expected default rates for the modified loans. Refer to Note 13 for further discussion.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and other commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less estimated costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

Consumer, excluding credit card	Credit card	Wholesale[(c)(d)]
• Residential real estate[(a)] • Auto and other[(b)]	• Credit card loans	• Secured by real estate • Commercial and industrial • Other[(e)]

(a) Includes scored mortgage and home equity loans held in CCB and AWM, and scored mortgage loans held in CIB.
(b) Includes scored auto, business banking and consumer unsecured loans as well as overdrafts, primarily in CCB.
(c) Includes loans held in CIB, AWM, Corporate, and risk-rated exposure held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.
(d) The wholesale portfolio segment's classes align with loan classifications as defined by the bank regulatory agencies, based on the loan's collateral, purpose, and type of borrower.
(e) Includes loans to financial institutions, SPEs, personal investment companies and trusts, individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB), states and political subdivisions, as well as loans to nonprofits. Refer to Note 14 for more information on SPEs.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2024 (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total[(a)(b)]
Retained	**$ 376,334**	**$ 232,860**	**$ 690,396**	**$ 1,299,590**
Held-for-sale	**945**	**—**	**6,103**	**7,048**
At fair value	**15,531**	**—**	**25,819**	**41,350**
Total	**$ 392,810**	**$ 232,860**	**$ 722,318**	**$ 1,347,988**

December 31, 2023 (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total[(a)(b)]
Retained	$ 397,275	$ 211,123	$ 672,472	$ 1,280,870
Held-for-sale	487	—	3,498	3,985
At fair value	12,331	—	26,520	38,851
Total	$ 410,093	$ 211,123	$ 702,490	$ 1,323,706

(a) Excludes $6.6 billion and $6.8 billion of accrued interest receivable at December 31, 2024 and 2023, respectively. The Firm wrote off accrued interest receivable of $84 million and $49 million for the years ended December 31, 2024 and 2023, respectively.
(b) Loans (other than those for which the fair value option has been elected) are presented net of unamortized discounts and premiums and net deferred loan fees or costs. These amounts were not material as of December 31, 2024 and 2023. For the discount associated with First Republic loans, refer to Note 34 on pages 319–321.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. Loans that were reclassified to held-for-sale and sold in a subsequent period are excluded from the sales line of these tables.

	2024			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 647** [(b)(c)]	**$ —**	**$ 1,432**	**$ 2,079**
Sales	**10,440**	**—**	**45,147**	**55,587**
Retained loans reclassified to held-for-sale[(a)]	**1,656**	**—**	**749**	**2,405**

	2023			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 92,205 [(b)(c)(d)]	$ —	$ 60,300 [(d)]	$ 152,505
Sales	2,202	—	43,949	46,151
Retained loans reclassified to held-for-sale[(a)]	274	—	1,486	1,760

Year ended December 31, (in millions)	2022			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 1,625 [b][c]	$ —	$ 1,088	$ 2,713
Sales	2,884	—	41,934	44,818
Retained loans reclassified to held-for-sale[a]	229	—	1,055	1,284

(a) Reclassifications of loans to held-for-sale are non-cash transactions.
(b) Includes purchases of residential real estate loans, including the Firm's voluntary repurchases of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines for the years ended December 31, 2024, 2023 and 2022. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, FHA, RHS, and/or VA.
(c) Excludes purchases of retained loans of $902 million, $5.1 billion and $12.4 billion for the years ended December 31, 2024, 2023 and 2022, respectively, which are predominantly sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards.
(d) Includes loans acquired in the First Republic acquisition consisting of $91.9 billion in Consumer, excluding credit card and $59.2 billion in Wholesale. Refer to Note 34 for additional information.

Gains and losses on sales of loans

Net gains/(losses) on sales of loans and lending-related commitments (including adjustments to record loans and lending-related commitments held-for-sale at the lower of cost or fair value) recognized in noninterest revenue were $154 million for the year ended December 31, 2024, of which $113 million were related to loans. Net gains/(losses) on sales of loans and lending-related commitments were $56 million for the year ended December 31, 2023, of which $62 million were related to loans. Net gains/(losses) on sales of loans and lending-related commitments were $(186) million for the year ended December 31, 2022, of which $(48) million were related to loans. In addition, the sale of loans may also result in write downs, recoveries or changes in the allowance recognized in the provision for credit losses.

Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of scored residential mortgages, home equity loans and lines of credit, auto and business banking loans, with a focus on serving the prime consumer credit market. These loans include home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans that may result in negative amortization.

The following table provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2024	2023
Residential real estate	**$ 309,513**	$ 326,409
Auto and other	**66,821**	70,866
Total retained loans	**$ 376,334**	$ 397,275

Delinquency rates are the primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear whether the borrower is likely to be unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV ratios can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (less than 660) is considered to be of higher risk than a loan to a borrower with a higher FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto and business banking loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.

Residential real estate

Delinquency is the primary credit quality indicator for retained residential real estate loans. The following tables provide information on delinquency and gross charge-offs.

	December 31, 2024								
	Term loans by origination year[c]						Revolving loans		
(in millions, except ratios)	2024	2023	2022	2021	2020	Prior to 2020	Within the revolving period	Converted to term loans	Total
Loan delinquency[a]									
Current	**$ 12,301**	**$ 17,280**	**$ 61,337**	**$ 79,760**	**$ 52,289**	**$70,270**	**$ 6,974**	**$ 7,088**	**$307,299**
30–149 days past due	**13**	**54**	**139**	**110**	**59**	**747**	**53**	**204**	**1,379**
150 or more days past due	**—**	**11**	**71**	**68**	**49**	**501**	**8**	**127**	**835**
Total retained loans	**$ 12,314**	**$ 17,345**	**$ 61,547**	**$ 79,938**	**$ 52,397**	**$71,518**	**$ 7,035**	**$ 7,419**	**$309,513**
% of 30+ days past due to total retained loans[b]	**0.11 %**	**0.37 %**	**0.34 %**	**0.22 %**	**0.21 %**	**1.72 %**	**0.87 %**	**4.46 %**	**0.71 %**
Gross charge-offs	**$ —**	**$ —**	**$ 1**	**$ 1**	**$ —**	**$ 176**	**$ 21**	**$ 7**	**$ 206**

	December 31, 2023								
	Term loans by origination year[c]						Revolving loans		
(in millions, except ratios)	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	Total
Loan delinquency[a]									
Current	$ 23,216	$ 64,366	$ 84,496	$ 55,546	$ 21,530	$59,563	$ 7,479	$ 8,151	$324,347
30–149 days past due	33	74	89	70	41	801	49	223	1,380
150 or more days past due	1	10	17	8	21	456	5	164	682
Total retained loans	$ 23,250	$ 64,450	$ 84,602	$ 55,624	$ 21,592	$60,820	$ 7,533	$ 8,538	$326,409
% of 30+ days past due to total retained loans[b]	0.15 %	0.13 %	0.13 %	0.14 %	0.29 %	2.04 %	0.72 %	4.53 %	0.63 %
Gross charge-offs	$ —	$ —	$ —	$ —	$ 4	$ 167	$ 26	$ 7	$ 204

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies which were not material at December 31, 2024 and 2023.
(b) Excludes mortgage loans that are 30 or more days past due insured by U.S. government agencies which were not material at December 31, 2024 and 2023. These amounts have been excluded based upon the government guarantee.
(c) Purchased loans are included in the year in which they were originated.

Approximately 38% of the total revolving loans are senior lien loans; the remaining balance are junior lien loans. The lien position the Firm holds is considered in the Firm's allowance for credit losses. Revolving loans that have been converted to term loans have higher delinquency rates than those that are still within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for revolving loans within the revolving period.

Nonaccrual loans and other credit quality indicators

The following table provides information on nonaccrual and other credit quality indicators for retained residential real estate loans.

(in millions, except weighted-average data)	December 31, 2024	December 31, 2023
Nonaccrual loans[a][b][c][d]	$ 2,984	$ 3,466
Current estimated LTV ratios[e][f][g]		
Greater than 125% and refreshed FICO scores:		
Equal to or greater than 660	$ 72	$ 72
Less than 660	3	—
101% to 125% and refreshed FICO scores:		
Equal to or greater than 660	161	223
Less than 660	5	4
80% to 100% and refreshed FICO scores:		
Equal to or greater than 660	4,962	6,491
Less than 660	73	102
Less than 80% and refreshed FICO scores:		
Equal to or greater than 660	294,797	309,251
Less than 660	8,534	9,277
No FICO/LTV available[h]	906	989
Total retained loans	$ 309,513	$ 326,409
Weighted-average LTV ratio[e][i]	47 %	49 %
Weighted-average FICO[f][i]	774	770
Geographic region[h][j]		
California	$ 120,944	$ 127,072
New York	46,854	48,815
Florida	21,820	22,778
Texas	14,531	15,506
Massachusetts	13,511	14,213
Colorado	10,465	10,800
Illinois	9,835	10,856
Washington	9,372	9,923
New Jersey	7,554	8,050
Connecticut	6,854	7,163
All other	47,773	51,233
Total retained loans	$ 309,513	$ 326,409

(a) Includes collateral-dependent residential real estate loans that are charged down to the fair value of the underlying collateral less costs to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual loans, regardless of their delinquency status. At December 31, 2024, approximately 8% of Chapter 7 residential real estate loans were 30 days or more past due.
(b) Mortgage loans insured by U.S. government agencies excluded from nonaccrual loans were not material at December 31, 2024 and 2023.
(c) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.
(d) Interest income on nonaccrual loans recognized on a cash basis was $160 million and $180 million for the years ended December 31, 2024 and 2023, respectively.
(e) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.
(f) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
(g) Includes residential real estate loans, primarily held in LLCs in AWM that did not have a refreshed FICO score. These loans have been included in a FICO band based on management's estimation of the borrower's credit quality.
(h) Included U.S. government-guaranteed loans as of December 31, 2024 and 2023.
(i) Excludes loans with no FICO and/or LTV data available.
(j) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at December 31, 2024.

Loan modifications

The Firm grants certain modifications of residential real estate loans to borrowers experiencing financial difficulty. The Firm's proprietary modification programs as well as government programs, including U.S. GSE programs, that generally provide various modifications to borrowers experiencing financial difficulty including, but not limited to, interest rate reductions, term extensions, other-than-insignificant payment deferral and principal forgiveness that would otherwise have been required under the terms of the original agreement, are considered FDMs.

In addition, the Firm offers trial modifications of residential real estate loans, which generally include a three-month trial payment period during which the borrower makes monthly payments under the proposed modified loan terms. Loans in a trial payment period continue to age and accrue interest in accordance with the original contractual terms. At the completion of a trial period, the loan modification is considered permanent.

Financial effects of FDMs

For the year ended December 31, 2024, retained residential real estate FDMs were $206 million. The financial effects of the FDMs, which were predominantly in the form of term extensions and interest rate reductions, included extending the weighted-average life of the loans by 15 years, and reducing the weighted-average contractual interest rate from 7.53% to 5.44% for the year ended December 31, 2024.

For the year ended December 31, 2023, retained residential real estate FDMs were $136 million. The financial effects of the FDMs, which were predominantly in the form of term extensions and interest rate reductions, included extending the weighted-average life of the loans by 20 years, and reducing the weighted-average contractual interest rate from 7.21% to 4.44% for the year ended December 31, 2023.

As of December 31, 2024 and 2023, there were no additional commitments to lend to borrowers experiencing financial difficulty whose loans have been modified as FDMs.

For the years ended December 31, 2024 and 2023, loans subject to a trial modification, where the terms of the loans have not been permanently modified, and Chapter 7 loans were not material.

Payment status of FDMs

The following table provides information on the payment status of retained residential real estate FDMs during the years ended December 31, 2024 and 2023.

Year ended December 31, (in millions)	Amortized cost basis	
	2024	2023
Current	**$ 139**	$ 107
30-149 days past due	**47**	13
150 or more days past due	**20**	16
Total	**$ 206**	$ 136

Defaults of FDMs

Retained residential real estate FDMs that defaulted during the year ended December 31, 2024 and that were reported as FDMs in the twelve months prior to the default were $93 million. Retained residential real estate FDMs that defaulted during the year ended December 31, 2023 and that were reported as FDMs on or after January 1, 2023, the date that the Firm adopted the changes to the TDR accounting guidance were not material. Refer to Note 1 for further information.

Nature and extent of TDRs

For periods ending prior to January 1, 2023, modifications of residential real estate loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. Loans with short-term or other insignificant modifications that were not considered concessions were not TDRs. For the year ended December 31, 2022, new TDRs were $362 million, and there were no additional commitments to lend to borrowers whose residential real estate loans were modified in TDRs.

The Firm's proprietary modification programs as well as government programs, including U.S. GSE programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and delays of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans were modified in TDRs during the period presented. This table excludes loans with short-term or other insignificant modifications that are not considered concessions.

Year ended December 31,	2022
Number of loans approved for a trial modification	3,902
Number of loans permanently modified	4,182
Concession granted:[(a)]	
Interest rate reduction	54 %
Term or payment extension	67
Principal and/or interest deferred	10
Principal forgiveness	1
Other[(b)]	37

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. Concessions offered on trial modifications are generally consistent with those granted on permanent modifications.

(b) Includes variable interest rate to fixed interest rate modifications and payment delays that meet the definition of a TDR.

Financial effects of TDRs and defaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans and about defaults of certain loans modified in TDRs for the period presented. The following table presents only the financial effects of permanent modifications and does not include temporary concessions offered through trial modifications. This table also excludes loans with short-term or other insignificant modifications that were not considered concessions.

Year ended December 31, (in millions, except weighted - average data)		2022
Weighted-average interest rate of loans with interest rate reductions – before TDR		4.75 %
Weighted-average interest rate of loans with interest rate reductions – after TDR		3.35
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR		22
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR		38
Charge-offs recognized upon permanent modification	$	1
Principal deferred		16
Principal forgiven		2
Balance of loans that defaulted within one year of permanent modification[(a)]	$	147

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted.

Active and suspended foreclosure

At December 31, 2024 and 2023, the Firm had retained residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $576 million and $566 million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Auto and other

Delinquency is the primary credit quality indicator for retained auto and other loans. The following tables provide information on delinquency and gross charge-offs.

	December 31, 2024								
	Term loans by origination year						Revolving loans		
(in millions, except ratios)	2024	2023	2022	2021	2020	Prior to 2020	Within the revolving period	Converted to term loans	Total
Loan delinquency									
Current	**$26,165**	**$15,953**	**$ 9,201**	**$ 7,014**	**$ 2,895**	**$ 624**	**$ 3,714**	**$ 148**	**$65,714**
30–119 days past due	**190**	**283**	**259**	**179**	**53**	**23**	**40**	**34**	**1,061**
120 or more days past due	**1**	**1**	**—**	**5**	**6**	**—**	**3**	**30**	**46**
Total retained loans	**$26,356**	**$16,237**	**$ 9,460**	**$ 7,198**	**$ 2,954**	**$ 647**	**$ 3,757**	**$ 212**	**$66,821**
% of 30+ days past due to total retained loans	**0.72 %**	**1.75 %**	**2.74**	**2.50 %**	**1.76 %**	**3.55 %**	**1.14 %**	**30.19 %**	**1.64 %**
Gross charge-offs	**$ 269**	**$ 348**	**$ 224**	**$ 126**	**$ 37**	**$ 82**	**$ 1**	**$ 6**	**$ 1,093**

	December 31, 2023								
	Term loans by origination year						Revolving loans		
(in millions, except ratios)	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	Total
Loan delinquency									
Current	$30,328	$ 14,797	$ 12,825	$ 6,538	$ 1,777	$ 511	$ 2,984	$ 102	$69,862
30–119 days past due	276	279	231	78	43	17	19	24	967
120 or more days past due	1	1	7	8	—	—	3	17	37
Total retained loans	$30,605	$ 15,077	$ 13,063	$ 6,624	$ 1,820	$ 528	$ 3,006	$ 143	$70,866
% of 30+ days past due to total retained loans	0.91 %	1.86 %	1.75 %	1.15 %	2.36 %	3.22 %	0.73 %	28.67 %	1.39 %
Gross charge-offs	$ 333	$ 297	$ 161	$ 53	$ 35	$ 64	$ —	$ 4	$ 947

Nonaccrual loans and other credit quality indicators
The following table provides information on nonaccrual and geographic region as a credit quality indicator for retained auto and other consumer loans.

(in millions)	Total Auto and other	
	December 31, 2024	December 31, 2023
Nonaccrual loans[a][b]	**$ 249**	$ 177
Geographic region[c]		
California	**$ 10,321**	$ 10,959
Texas	**7,772**	8,502
Florida	**5,428**	5,684
New York	**4,905**	4,938
Illinois	**2,890**	3,147
New Jersey	**2,468**	2,609
Pennsylvania	**2,012**	1,900
Georgia	**1,716**	1,912
Arizona	**1,643**	1,779
North Carolina	**1,597**	1,714
All other	**26,069**	27,722
Total retained loans	**$ 66,821**	$ 70,866

(a) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.
(b) Interest income on nonaccrual loans recognized on a cash basis was not material for the years ended December 31, 2024 and 2023.
(c) The geographic regions presented in this table are ordered based on the magnitude of the corresponding loan balances at December 31, 2024.

Loan modifications

The Firm grants certain modifications of auto and other loans to borrowers experiencing financial difficulty.

For the years ended December 31, 2024 and 2023, retained auto and other FDMs were not material.

As of December 31, 2024 and 2023, there were no additional commitments to lend to borrowers modified as FDMs.

For periods ending prior to January 1, 2023, modifications of auto and other loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. Loans with short-term or other insignificant modifications that were not considered concessions were not TDRs. For the year ended December 31, 2022, auto and other TDRs were not material.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. The distribution of such scores provides a general indicator of credit quality trends within the portfolio; however, the score does not capture all factors that would be predictive of future credit performance. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in other credit quality indicators. FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new credit card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in the credit score calculation.

The following tables provide information on delinquency and gross charge-offs.

	December 31, 2024		
(in millions, except ratios)	Within the revolving period	Converted to term loans	Total
Loan delinquency			
Current and less than 30 days past due and still accruing	**$ 226,532**	**$ 1,284**	**$ 227,816**
30–89 days past due and still accruing	**2,291**	**109**	**2,400**
90 or more days past due and still accruing	**2,591**	**53**	**2,644**
Total retained loans	**$ 231,414**	**$ 1,446**	**$ 232,860**
Loan delinquency ratios			
% of 30+ days past due to total retained loans	**2.11 %**	**11.20 %**	**2.17 %**
% of 90+ days past due to total retained loans	**1.12**	**3.67**	**1.14**
Gross charge-offs	**$ 7,951**	**$ 247**	**$ 8,198**

	December 31, 2023		
(in millions, except ratios)	Within the revolving period	Converted to term loans	Total
Loan delinquency			
Current and less than 30 days past due and still accruing	$ 205,731	$ 882	$ 206,613
30–89 days past due and still accruing	2,217	84	2,301
90 or more days past due and still accruing	2,169	40	2,209
Total retained loans	$ 210,117	$ 1,006	$ 211,123
Loan delinquency ratios			
% of 30+ days past due to total retained loans	2.09 %	12.33 %	2.14 %
% of 90+ days past due to total retained loans	1.03	3.98	1.05
Gross charge-offs	$ 5,325	$ 166	$ 5,491

Other credit quality indicators

The following table provides information on other credit quality indicators for retained credit card loans.

(in millions, except ratios)	December 31, 2024	December 31, 2023
Geographic region[a]		
California	**$ 36,385**	$ 32,652
Texas	**24,423**	22,086
New York	**18,525**	16,915
Florida	**17,236**	15,103
Illinois	**12,442**	11,364
New Jersey	**9,644**	8,688
Ohio	**6,976**	6,424
Colorado	**6,962**	6,307
Pennsylvania	**6,558**	6,088
Arizona	**5,796**	5,209
All other	**87,913**	80,287
Total retained loans	**$ 232,860**	$ 211,123
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**85.5 %**	85.8 %
Less than 660	**14.3**	14.0
No FICO available	**0.2**	0.2

(a) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at December 31, 2024.

Loan modifications

The Firm grants certain modifications of credit card loans to borrowers experiencing financial difficulty. These modifications may involve placing the customer's credit card account on a fixed payment plan, generally for 60 months, which typically includes reducing the interest rate on the credit card account. If the borrower does not make the contractual payments when due under the modified payment terms, the credit card loan continues to age and will be charged-off in accordance with the Firm's standard charge-off policy. In most cases, the Firm does not reinstate the borrower's line of credit.

Financial effects of FDMs

The following table provides information on retained credit card FDMs.

Year ended December 31, (in millions)	Loan modifications	
	2024	2023
Term extension and interest rate reduction[a][b]		
Amortized cost basis	**$ 926**	$ 648
% of total modifications to total retained credit card loans	**0.40 %**	0.31 %
Financial effect of loan modifications	**Term extension with a reduction in the weighted average contractual interest rate from 23.64% to 3.20%**	Term extension with a reduction in the weighted average contractual interest rate from 23.19% to 3.64%

(a) Term extension includes credit card loans whose terms have been modified under long-term programs by placing the customer's credit card account on a fixed payment plan.
(b) The interest rates represent weighted average at the time of modification.

Payment status of FDMs

The following table provides information on the payment status of retained credit card FDMs during the years ended December 31, 2024 and 2023.

Year ended December 31, (in millions)	Amortized cost basis	
	2024	2023
Current and less than 30 days past due and still accruing	**$ 811**	$ 558
30-89 days past due and still accruing	**74**	59
90 or more days past due and still accruing	**41**	31
Total	**$ 926**	$ 648

Defaults of FDMs

Retained credit card FDMs that defaulted during the year ended December 31, 2024 and that were reported as FDMs in the twelve months prior to the default were not material. Retained credit card FDMs that defaulted during the year ended December 31, 2023 and that were reported as FDMs on or after January 1, 2023, the date that the Firm adopted the changes to the TDR accounting guidance were not material. Refer to Note 1 for further information.

For credit card loans modified as FDMs, payment default is deemed to have occurred when the borrower misses two consecutive contractual payments. Defaulted modified credit card loans remain in the modification program and continue to be charged off in accordance with the Firm's standard charge-off policy.

Financial effects of TDRs and defaults

For periods ending prior to January 1, 2023, modifications of credit card loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. The Firm granted concessions for most of the credit card loans under long-term programs. These concessions involved placing the customer's credit card account on a fixed payment plan, generally for 60 months, and typically included reducing the interest rate on the credit card account. Substantially all modifications under the Firm's long-term programs were considered to be TDRs. Loans with short-term or other insignificant modifications that were not considered concessions were not reported as TDRs.

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and defaults for the periods presented. For the period disclosed, new enrollments were less than 1% of total retained credit card loans.

Year ended December 31, (in millions, except weighted-average data)	2022
Balance of new TDRs[(a)]	$ 418
Weighted-average interest rate of loans – before TDR	19.86 %
Weighted-average interest rate of loans – after TDR	4.13
Balance of loans that defaulted within one year of modification[(b)]	$ 34

(a) Represents the outstanding balance prior to modification.
(b) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default was deemed to have occurred when the borrower missed two consecutive contractual payments. Defaulted modified credit card loans remained in the modification program and continued to be charged of in accordance with the Firm's standard charge-off policy.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of clients, ranging from large corporate and institutional clients to small businesses and high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the internal risk rating assigned to each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the PD and the LGD. The PD is the likelihood that a loan will default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate internal risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's internal risk ratings generally align with the qualitative characteristics (e.g., borrower capacity to meet financial commitments and vulnerability to changes in the economic environment) defined by S&P and Moody's, however the quantitative characteristics (e.g., PD and LGD) may differ as they reflect internal historical experiences and assumptions. The Firm generally considers internal ratings with qualitative characteristics equivalent to BBB-/Baa3 or higher as investment grade, and these ratings have a lower PD and/or lower LGD than non-investment grade ratings.

Noninvestment-grade ratings are further classified as noncriticized and criticized, and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher PD than noncriticized loans. The Firm's definition of criticized aligns with the U.S. banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Refer to Note 1 for additional information.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with an actual or potential credit concern. Refer to Note 4 for further detail on industry concentrations.

Internal risk rating is the primary credit quality indicator for retained wholesale loans. The following tables provide information on internal risk rating and gross charge-offs for the year ended December 31, 2024.

December 31, (in millions, except ratios)	Secured by real estate		Commercial and industrial		Other[(a)]		Total retained loans	
	2024	2023	**2024**	2023	**2024**	2023	**2024**	2023
Loans by risk ratings								
Investment-grade	**$ 114,280**	$ 120,405	**$ 70,862**	$ 72,624	**$286,528**	$ 265,809	**$ 471,670**	$ 458,838
Noninvestment-grade:								
Noncriticized	**37,422**	34,241	**83,191**	80,637	**72,743**	75,178	**193,356**	190,056
Criticized performing	**9,291**	7,291	**10,977**	12,684	**1,160**	1,257	**21,428**	21,232
Criticized nonaccrual	**1,439**	401	**1,760**	1,221	**743**	724	**3,942**	2,346
Total noninvestment-grade	**48,152**	41,933	**95,928**	94,542	**74,646**	77,159	**218,726**	213,634
Total retained loans	**$ 162,432**	$ 162,338	**$ 166,790**	$ 167,166	**$ 361,174**	$ 342,968	**$ 690,396**	$ 672,472
% of investment-grade to total retained loans	**70.36 %**	74.17 %	**42.49 %**	43.44 %	**79.33 %**	77.50 %	**68.32 %**	68.23 %
% of total criticized to total retained loans	**6.61**	4.74	**7.64**	8.32	**0.53**	0.58	**3.67**	3.51
% of criticized nonaccrual to total retained loans	**0.89**	0.25	**1.06**	0.73	**0.21**	0.21	**0.57**	0.35

(a) Includes loans to financial institutions, SPEs, personal investment companies and trusts, individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB), states and political subdivisions, as well as loans to nonprofits. As of December 31, 2024, predominantly consisted of $114.8 billion to individuals and individual entities, $94.0 billion to financial institutions, and $92.5 billion to SPEs. Refer to Note 14 for more information on SPEs.

	Secured by real estate								
	December 31, 2024								
	Term loans by origination year						Revolving loans		
(in millions)	2024	2023	2022	2021	2020	Prior to 2020	Within the revolving period	Converted to term loans	Total
Loans by risk ratings									
Investment-grade	**$ 10,002**	**$ 9,834**	**$ 25,284**	**$ 22,796**	**$ 15,548**	**$ 29,488**	**$ 1,328**	**$ —**	**$ 114,280**
Noninvestment-grade	**4,238**	**5,366**	**14,717**	**8,567**	**3,462**	**10,392**	**1,317**	**93**	**48,152**
Total retained loans	**$ 14,240**	**$ 15,200**	**$ 40,001**	**$ 31,363**	**$ 19,010**	**$ 39,880**	**$ 2,645**	**$ 93**	**$ 162,432**
Gross charge-offs	**$ 72**	**$ 18**	**$ 43**	**$ 2**	**$ 109**	**$ 80**	**$ —**	**$ —**	**$ 324**

	Secured by real estate								
	December 31, 2023								
	Term loans by origination year						Revolving loans		
(in millions)	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	Total
Loans by risk ratings									
Investment-grade	$ 10,687	$ 28,874	$ 25,784	$ 16,820	$ 15,677	$ 21,108	$ 1,455	$ —	$ 120,405
Noninvestment-grade	4,477	12,579	7,839	3,840	3,987	7,918	1,291	2	41,933
Total retained loans	$ 15,164	$ 41,453	$ 33,623	$ 20,660	$ 19,664	$ 29,026	$ 2,746	$ 2	$ 162,338
Gross charge-offs	$ 20	$ 48	$ 22	$ —	$ 23	$ 78	$ —	$ 1	$ 192

	Commercial and industrial								
	December 31, 2024								
	Term loans by origination year						Revolving loans		
(in millions)	2024	2023	2022	2021	2020	Prior to 2020	Within the revolving period	Converted to term loans	Total
Loans by risk ratings									
Investment-grade	**$ 11,564**	**$ 6,285**	**$ 6,588**	**$ 3,119**	**$ 1,067**	**$ 1,139**	**$ 41,099**	**$ 1**	**$ 70,862**
Noninvestment-grade	**21,251**	**11,350**	**10,942**	**5,322**	**783**	**975**	**45,181**	**124**	**95,928**
Total retained loans	**$ 32,815**	**$ 17,635**	**$ 17,530**	**$ 8,441**	**$ 1,850**	**$ 2,114**	**$ 86,280**	**$ 125**	**$ 166,790**
Gross charge-offs	**$ 25**	**$ 22**	**$ 128**	**$ 24**	**$ 1**	**$ 50**	**$ 270**	**$ 5**	**$ 525**

	Commercial and industrial								
	December 31, 2023								
	Term loans by origination year						Revolving loans		
(in millions)	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	Total
Loans by risk ratings									
Investment-grade	$ 14,875	$ 10,642	$ 4,276	$ 2,291	$ 1,030	$ 1,115	$ 38,394	$ 1	$ 72,624
Noninvestment-grade	18,890	16,444	9,299	1,989	1,144	1,006	45,696	74	94,542
Total retained loans	$ 33,765	$ 27,086	$ 13,575	$ 4,280	$ 2,174	$ 2,121	$ 84,090	$ 75	$ 167,166
Gross charge-offs	$ 25	$ 8	$ 110	$ 55	$ 2	$ 12	$ 259	$ 8	$ 479

	Other[(a)]								
	December 31, 2024								
	Term loans by origination year						Revolving loans		
(in millions)	2024	2023	2022	2021	2020	Prior to 2020	Within the revolving period	Converted to term loans	Total
Loans by risk ratings									
Investment-grade	**$ 30,484**	**$ 17,039**	**$ 13,272**	**$ 6,288**	**$ 8,632**	**$ 7,382**	**$ 201,949**	**$ 1,482**	**$ 286,528**
Noninvestment-grade	**11,784**	**7,248**	**5,918**	**3,296**	**1,366**	**1,886**	**42,954**	**194**	**74,646**
Total retained loans	**$ 42,268**	**$ 24,287**	**$ 19,190**	**$ 9,584**	**$ 9,998**	**$ 9,268**	**$ 244,903**	**$ 1,676**	**$ 361,174**
Gross charge-offs	**$ —**	**$ 38**	**$ 3**	**$ 36**	**$ 40**	**$ 50**	**$ 6**	**$ —**	**$ 173**

	Other[(a)]								
	December 31, 2023								
	Term loans by origination year						Revolving loans		
(in millions)	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	Total
Loans by risk ratings									
Investment-grade	$ 38,338	$ 18,034	$ 10,033	$ 10,099	$ 3,721	$ 6,662	$ 176,728	$ 2,194	$ 265,809
Noninvestment-grade	14,054	8,092	6,169	2,172	811	2,001	43,801	59	77,159
Total retained loans	$ 52,392	$ 26,126	$ 16,202	$ 12,271	$ 4,532	$ 8,663	$ 220,529	$ 2,253	$ 342,968
Gross charge-offs	$ 5	$ 298	$ 8	$ 8	$ —	$ 8	$ 13	$ —	$ 340

(a) Includes loans to financial institutions, SPEs, personal investment companies and trusts, individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB), states and political subdivisions, as well as loans to nonprofits. Refer to Note 14 for more information on SPEs.

The following table presents additional information on retained loans secured by real estate, which consists of loans secured wholly or substantially by a lien or liens on real property at origination. Multifamily lending includes financing for acquisition, leasing and construction of apartment buildings. Other commercial lending largely includes financing for acquisition, leasing and construction, largely for office, retail and industrial real estate. Included in secured by real estate loans were $12.2 billion and $10.2 billion as of December 31, 2024 and 2023, respectively, of construction and development loans made to finance land development and on-site construction of commercial, industrial, residential, or farm buildings.

December 31, (in millions, except ratios)	Multifamily		Other Commercial		Total retained loans secured by real estate	
	2024	2023	**2024**	2023	**2024**	2023
Retained loans secured by real estate	**$ 101,114**	$100,725	**$ 61,318**	$ 61,613	**$162,432**	$162,338
Criticized	**4,700**	3,596	**6,030**	4,096	**10,730**	7,692
% of criticized to total retained loans secured by real estate	**4.65 %**	3.57 %	**9.83 %**	6.65 %	**6.61 %**	4.74 %
Criticized nonaccrual	**$ 337**	$ 76	**$ 1,102**	$ 325	**$ 1,439**	$ 401
% of criticized nonaccrual loans to total retained loans secured by real estate	**0.33 %**	0.08 %	**1.80 %**	0.53 %	**0.89 %**	0.25 %

Geographic distribution and delinquency

The following table provides information on the geographic distribution and delinquency for retained wholesale loans.

December 31, (in millions)	Secured by real estate		Commercial and industrial		Other		Total retained loans	
	2024	2023	**2024**	2023	**2024**	2023	**2024**	2023
Loans by geographic distribution[a]								
Total U.S.	**$ 159,209**	$ 159,499	**$ 127,626**	$ 127,638	**$278,077**	$ 262,499	**$ 564,912**	$ 549,636
Total non-U.S.	**3,223**	2,839	**39,164**	39,528	**83,097**	80,469	**125,484**	122,836
Total retained loans	**$ 162,432**	$ 162,338	**$166,790**	$ 167,166	**$ 361,174**	$ 342,968	**$690,396**	$ 672,472
Loan delinquency								
Current and less than 30 days past due and still accruing	**$ 159,949**	$ 161,314	**$ 164,104**	$ 164,899	**$ 359,191**	$ 341,128	**$683,244**	$ 667,341
30–89 days past due and still accruing	**918**	473	**868**	884	**1,152**	1,090	**2,938**	2,447
90 or more days past due and still accruing[b]	**126**	150	**58**	162	**88**	26	**272**	338
Criticized nonaccrual	**1,439**	401	**1,760**	1,221	**743**	724	**3,942**	2,346
Total retained loans	**$ 162,432**	$ 162,338	**$166,790**	$ 167,166	**$ 361,174**	$ 342,968	**$690,396**	$ 672,472

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) Represents loans that are considered well-collateralized and therefore still accruing interest.

Nonaccrual loans

The following table provides information on retained wholesale nonaccrual loans.

December 31, (in millions)	Secured by real estate		Commercial and industrial		Other		Total retained loans	
	2024	2023	**2024**	2023	**2024**	2023	**2024**	2023
Nonaccrual loans								
With an allowance	**$ 366**	$ 129	**$ 1,362**	$ 776	**$ 555**	$ 492	**$ 2,283**	$ 1,397
Without an allowance[a]	**1,073**	272	**398**	445	**188**	232	**1,659**	949
Total nonaccrual loans[b]	**$ 1,439**	$ 401	**$ 1,760**	$ 1,221	**$ 743**	$ 724	**$ 3,942**	$ 2,346

(a) When the discounted cash flows or collateral value equals or exceeds the amortized cost of the loan, the loan does not require an allowance. This typically occurs when the loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Interest income on nonaccrual loans recognized on a cash basis was $51 million and $19 million for the years ended December 31, 2024 and 2023, respectively.

Loan modifications

The Firm grants certain modifications of wholesale loans to borrowers experiencing financial difficulty.

Financial effects of FDMs

The following tables provide information on retained wholesale loan modifications considered FDMs.

	Secured by real estate		
	Year ended December 31, 2024		
(in millions, except ratios)	Amortized cost basis	% of loan modifications to total retained Secured by real estate loans	Financial effect of loan modifications
Single modifications			
Term extension	**$ 271**	**0.17 %**	Extended loans by a weighted-average of 21 months
Other-than-insignificant payment deferral	**37**	**0.02**	Provided payment deferrals with delayed amounts re-amortized over the remaining tenor
Multiple modifications			
Other-than-insignificant payment deferral and interest rate reduction	**46**	**0.03**	Provided payment deferrals with delayed amounts recaptured at maturity and reduced weighted-average contractual interest by 162 bps
Total	**$ 354**		

	Secured by real estate		
	Year ended December 31, 2023		
(in millions, except ratios)	Amortized cost basis	% of loan modifications to total retained Secured by real estate loans	Financial effect of loan modifications
Single modifications			
Term extension	$ 149	0.09 %	Extended loans by a weighted-average of 14 months
Other-than-insignificant payment deferral	3	—	Provided payment deferrals with delayed amounts primarily re-amortized over the remaining life of the loan
Multiple modifications			
Other-than-insignificant payment deferral and interest rate reduction	5	—	Provided payment deferrals with delayed amounts primarily recaptured at maturity and reduced weighted-average contractual interest by 184 bps
Other[(a)]	3	—	NM
Total	$ 160		

(a) Includes a loan with multiple modifications.

(in millions, except ratios)	Commercial and industrial Year ended December 31, 2024 Amortized cost basis	% of loan modifications to total retained Commercial and industrial loans	Financial effect of loan modifications
Single modifications			
Term extension	**$ 1,180**	**0.71 %**	Extended loans by a weighted-average of 20 months
Other-than-insignificant payment deferral	**464**	**0.28**	Provided payment deferrals with delayed amounts primarily re-amortized over the remaining tenor
Multiple modifications			
Other-than-insignificant payment deferral and term extension	**175**	**0.10**	Provided payment deferrals with delayed amounts recaptured at maturity and extended loans by a weighted-average of 18 months
Interest rate reduction and term extension	**51**	**0.03**	Reduced weighted-average contractual interest by 434 bps and extended loans by a weighted-average of 36 months
Other[(a)]	**30**	**0.02**	NM
Total	**$ 1,900**		

(a) Includes loans with single and multiple modifications.

(in millions, except ratios)	Commercial and industrial Year ended December 31, 2023 Amortized cost basis	% of loan modifications to total retained Commercial and industrial loans	Financial effect of loan modifications
Single modifications			
Term extension	$ 916	0.55 %	Extended loans by a weighted-average of 17 months
Other-than-insignificant payment deferral	402	0.24	Provided payment deferrals with delayed amounts primarily recaptured at the end of the deferral period
Multiple modifications			
Other-than-insignificant payment deferral and term extension	35	0.02	Provided payment deferrals with delayed amounts primarily re-amortized over the remaining life of the loan and extended loans by a weighted-average of 7 months
Interest rate reduction and term extension	1	—	Reduced weighted average contractual interest rate over the life of the loan as a result of converting from variable to fixed rate and extended loans by a weighted-average of 16 months
Other[(a)]	9	—	NM
Total	$ 1,363		

(a) Include loans with multiple modifications.

(in millions, except ratios)	Other Year ended December 31, 2024 Amortized cost basis	% of loan modifications to total retained Other loans	Financial effect of loan modification
Single modifications			
Term extension	**$ 268**	0.07 %	Extended loans by a weighted-average of 28 months
Multiple modifications			
Other-than-insignificant payment deferral and term extension	**2**	**—**	Provided payment deferrals with delayed amounts recaptured at maturity and extended loans by a weighted-average of 6 months
Other[(a)]	**5**	**—**	NM
Total	**$ 275**		

(a) Includes loans with a single modification.

(in millions, except ratios)	Other Year ended December 31, 2023 Amortized cost basis	% of loan modifications to total retained Other loans	Financial effect of loan modifications
Single modifications			
Term extension	$ 355	0.10 %	Extended loans by a weighted-average of 23 months
Multiple modifications			
Other-than-insignificant payment deferral and term extension	245	0.07	Provided payment deferrals with delayed amounts primarily recaptured at the end of the deferral period and extended loans by a weighted-average of 137 months
Other[(a)]	$ 9	—	NM
Total	$ 609		

(a) Includes a loan with a single modification.

Payment status of FDMs

The following table provides information on the payment status of retained wholesale FDMs during the year ended December 31, 2024 and 2023.

	Amortized cost basis					
	Secured by real estate	Commercial and industrial	Other	Secured by real estate	Commercial and industrial	Other
(in millions)	**Year ended December 31, 2024**			Year ended December 31, 2023		
Current and less than 30 days past due and still accruing	**$ 264**	**$ 1,215**	**$ 240**	$ 118	$ 947	$ 400
30-89 days past due and still accruing	**3**	**13**	**9**	2	42	—
Criticized nonaccrual	**87**	**672**	**26**	40	374	209
Total	**$ 354**	**$ 1,900**	**$ 275**	$ 160	$ 1,363	$ 609

Defaults of FDMs

The following table provides information on retained wholesale FDMs that defaulted during the year ended December 31, 2024 that were reported as FDMs in the twelve months prior to the default, and FDMs that defaulted during the year ended December 31, 2023 that were reported as FDMs on or after January 1, 2023, the date that the Firm adopted the changes to the TDR accounting guidance.

	Amortized cost basis					
	Secured by real estate	Commercial and industrial	Other	Secured by real estate	Commercial and industrial	Other
(in millions)	**Year ended December 31, 2024**			Year ended December 31, 2023		
Term extension	**$ 3**	**$ 92**	**$ 22**	$ 1	$ 49	$ 31
Other-than-insignificant payment deferral	**—**	**118**	**—**	2	—	—
Interest rate reduction and term extension	**—**	**—**	**—**	3	1	—
Total[(a)]	**$ 3**	**$ 210**	**$ 22**	$ 6	$ 50	$ 31

(a) Represents FDMs that were 30 days or more past due.

As of December 31, 2024 and 2023, additional unfunded commitments on modified loans to borrowers experiencing financial difficulty were $1.8 billion at each period in Commercial and industrial, and $69 million and $4 million, respectively, in Other loan class. Additional commitments on modified loans to borrowers experiencing financial difficulty whose loans have been modified as FDMs in Secured by real estate were not material at each period.

Nature and extent of TDRs

Prior to January 1, 2023, certain loan modifications were considered TDRs. These loan modifications provided various concessions to borrower who were experiencing financial difficulty. Loans with short-term or other insignificant modifications that were not considered concessions were not TDRs nor were loans for which the Firm elected to suspend TDR accounting guidance under the option provided by the CARES Act.

For the year ended December 31, 2022, new TDRs were $801 million. New TDRs for the year ended December 31, 2022 reflected extended maturity dates and covenant waivers primarily in the Commercial and Industrial loan class. For the year ended December 31, 2022, the impact of these modifications resulting in new TDRs was not material to the Firm.

As a result of the elimination of the requirement to assess whether a modification is reasonably expected or involves a concession, the population of loans considered FDMs is greater than the population previously considered TDRs.

Note 13 – Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses generally comprises:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated),
- the allowance for lending-related commitments, which is presented on the Consolidated balance sheets in accounts payable and other liabilities, and
- the allowance for credit losses on investment securities, which is reflected in investment securities on the Consolidated balance sheets.

The income statement effect of all changes in the allowance for credit losses is recognized in the provision for credit losses.

Determining the appropriateness of the allowance for credit losses is complex and requires significant judgment by management about the effect of matters that are inherently uncertain. At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm. Subsequent evaluations of credit exposures, considering the macroeconomic conditions, forecasts and other factors then prevailing, may result in significant changes in the allowance for credit losses in future periods.

The Firm's policies used to determine its allowance for loan losses and its allowance for lending-related commitments are described in the following paragraphs. Refer to Note 10 for a description of the policies used to determine the allowance for credit losses on investment securities.

Methodology for allowances for loan losses and lending-related commitments

The allowance for loan losses and allowance for lending-related commitments represents expected credit losses over the remaining expected life of retained loans and lending-related commitments that are not unconditionally cancellable. The Firm does not record an allowance for future draws on unconditionally cancellable lending-related commitments (e.g., credit cards). Expected losses related to accrued interest on credit card loans are considered in the Firm's allowance for loan losses. However, the Firm does not record an allowance on other accrued interest receivables, due to its policy to write these receivables off no later than 90 days past due by reversing interest income.

The expected life of each instrument is determined by considering its contractual term, expected prepayments, cancellation features, and certain extension and call options. The expected life of funded credit card loans is generally estimated by considering expected future payments on the credit card account, and determining how much of those amounts should be allocated to repayments of the funded loan balance (as of the balance sheet date) versus other account activity. This allocation is made using an approach that incorporates the payment application requirements of the Credit Card Accountability Responsibility and Disclosure Act of 2009, generally paying down the highest interest rate balances first.

The estimate of expected credit losses includes expected recoveries of amounts previously charged off or expected to be charged off, even if such recoveries result in a negative allowance.

Collective and Individual Assessments

When calculating the allowance for loan losses and the allowance for lending-related commitments, the Firm assesses whether exposures share similar risk characteristics. If similar risk characteristics exist, the Firm estimates expected credit losses collectively, considering the risk associated with a particular pool and the probability that the exposures within the pool will deteriorate or default. The assessment of risk characteristics is subject to significant management judgment. Emphasizing one characteristic over another or considering additional characteristics could affect the allowance.

- Relevant risk characteristics for the consumer portfolio include product type, delinquency status, current FICO scores, geographic distribution, and, for collateralized loans, current LTV ratios.
- Relevant risk characteristics for the wholesale portfolio include risk rating, delinquency status, tenor, level and type of collateral, LOB, geography, industry, credit enhancement, product type, facility purpose, and payment terms.

The majority of the Firm's credit exposures share risk characteristics with other similar exposures, and as a result are collectively assessed for impairment ("portfolio-based component"). The portfolio-based component covers consumer loans, performing risk-rated loans and certain lending-related commitments.

If an exposure does not share risk characteristics with other exposures, the Firm generally estimates expected credit losses on an individual basis, considering expected repayment and conditions impacting that individual exposure ("asset-specific component"). The asset-specific component covers collateral-dependent loans and risk-rated loans that have been placed on nonaccrual status.

Portfolio-based component

The portfolio-based component begins with a quantitative calculation that considers the likelihood of the borrower changing delinquency status or moving from one risk rating to another. The quantitative calculation covers expected credit losses over an instrument's expected life and is estimated by applying credit loss factors to the Firm's estimated exposure at default. The credit loss factors incorporate the

probability of borrower default as well as loss severity in the event of default. They are derived using a weighted average of five internally developed macroeconomic scenarios over an eight-quarter forecast period, followed by a single year straight-line interpolation to revert to long run historical information for periods beyond the eight-quarter forecast period. The five macroeconomic scenarios consist of a central, relative adverse, extreme adverse, relative upside and extreme upside scenario, and are updated by the Firm's central forecasting team. The scenarios take into consideration the Firm's macroeconomic outlook, internal perspectives from subject matter experts across the Firm, and market consensus and involve a governed process that incorporates feedback from senior management across LOBs, Corporate Finance and Risk Management.

The quantitative calculation is adjusted to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet reflected in the calculation. These adjustments are accomplished in part by analyzing the historical loss experience, including during stressed periods, for each major product or model. Management applies judgment in making this adjustment, including taking into account uncertainties associated with the economic and political conditions, quality of underwriting standards, borrower behavior, credit concentrations or deterioration within an industry, product or portfolio, as well as other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties.

The application of different inputs into the quantitative calculation, and the assumptions used by management to adjust the quantitative calculation, are subject to significant management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses and the allowance for lending-related commitments.

Asset-specific component
To determine the asset-specific component of the allowance, collateral-dependent loans (including those loans for which foreclosure is probable) and nonaccrual risk-rated loans in the wholesale portfolio segment are generally evaluated individually.

For collateral-dependent loans, the fair value of collateral less estimated costs to sell, as applicable, is used to determine the charge-off amount for declines in value (to reduce the amortized cost of the loan to the fair value of collateral) or the amount of negative allowance that should be recognized (for recoveries of prior charge-offs associated with improvements in the fair value of the collateral).

For non-collateral dependent loans, the Firm generally measures the asset-specific allowance as the difference between the amortized cost of the loan and the present value of the cash flows expected to be collected, discounted at the loan's effective interest rate. Subsequent changes in impairment are generally recognized as an adjustment to the allowance for loan losses. The asset-specific component of the allowance for non-collateral dependent loans incorporates the effect of the modification on the loan's expected cash flows including changes in interest rates, principal forgiveness, and other concessions, as well as management's expectation of the borrower's ability to repay under the modified terms.

Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as loss severities, asset valuations, the amounts and timing of interest or principal payments (including any expected prepayments) or other factors that are reflective of current and expected market conditions. These estimates are, in turn, dependent on factors such as the duration of current overall economic conditions, industry, portfolio, or borrower-specific factors, the expected outcome of insolvency proceedings as well as, in certain circumstances, other economic factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Other financial assets
In addition to loans and investment securities, the Firm holds other financial assets that are measured at amortized cost on the Consolidated balance sheets, including credit exposures arising from lending activities subject to collateral maintenance requirements. Management estimates the allowance for other financial assets using various techniques considering historical losses and current economic conditions.

Credit risk arising from lending activities subject to collateral maintenance requirements is generally mitigated by factors such as the short-term nature of the activity, the fair value of collateral held and the Firm's right to call for, and the borrower's obligation to provide additional margin when the fair value of the collateral declines. Because of these mitigating factors, these exposures generally do not require an allowance for credit losses. However, management may also consider other factors such as the borrower's ongoing ability to provide collateral to satisfy margin requirements, or whether collateral is significantly concentrated in an individual issuer or in securities with similar risk characteristics. If in management's judgment, an allowance for credit losses for these exposures is required, the Firm estimates expected credit losses based on the value of the collateral and probability of borrower default.

Allowance for credit losses and related information

The table below summarizes information about the allowances for credit losses and includes a breakdown of loans and lending-related commitments by impairment methodology. Refer to Note 10 for further information on the allowance for credit losses on investment securities.

(Table continued on next page)

Year ended December 31, (in millions)	2024			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 1,856	$ 12,450	$ 8,114	$ 22,420
Cumulative effect of a change in accounting principle[a]	NA	NA	NA	NA
Gross charge-offs	1,299	8,198	1,022	10,519
Gross recoveries collected	(625)	(1,056)	(200)	(1,881)
Net charge-offs	674	7,142	822	8,638
Provision for loan losses	624	9,292	578	10,494
Other	1	—	68	69
Ending balance at December 31,	$ 1,807	$ 14,600	$ 7,938	$ 24,345
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 75	$ —	$ 1,899	$ 1,974
Provision for lending-related commitments	7	—	121	128
Other	—	—	(1)	(1)
Ending balance at December 31,	$ 82	$ —	$ 2,019	$ 2,101
Total allowance for investment securities	NA	NA	NA	$ 152
Total allowance for credit losses[b]	$ 1,889	$ 14,600	$ 9,957	$ 26,598
Allowance for loan losses by impairment methodology				
Asset-specific[c]	$ (728)	$ —	$ 526	$ (202)
Portfolio-based	2,535	14,600	7,412	24,547
Total allowance for loan losses	$ 1,807	$ 14,600	$ 7,938	$ 24,345
Loans by impairment methodology				
Asset-specific[c]	$ 2,805	$ —	$ 3,912	$ 6,717
Portfolio-based	373,529	232,860	686,484	1,292,873
Total retained loans	$ 376,334	$ 232,860	$ 690,396	$ 1,299,590
Collateral-dependent loans				
Net charge-offs	$ 1	$ —	$ 324	$ 325
Loans measured at fair value of collateral less cost to sell	2,696	—	1,834	4,530
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 109	$ 109
Portfolio-based	82	—	1,910	1,992
Total allowance for lending-related commitments[d]	$ 82	$ —	$ 2,019	$ 2,101
Lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 737	$ 737
Portfolio-based[e]	25,608	19	510,254	535,881
Total lending-related commitments	$ 25,608	$ 19	$ 510,991	$ 536,618

(a) Represents the impact to the allowance for loan losses upon the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance. Refer to Note 1 for further information.
(b) At December 31, 2024 and 2023 and 2022, in addition to the allowance for credit losses in the table above, the Firm also had an allowance for credit losses of $268 million, $243 million and $21 million, respectively, associated with certain accounts receivable in CIB.
(c) Includes collateral-dependent loans, including those for which foreclosure is deemed probable, and nonaccrual risk-rated loans.
(d) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.
(e) At December 31, 2024, 2023 and 2022, lending-related commitments excluded $19.2 billion, $17.2 billion and $13.1 billion, respectively, for the consumer, excluding credit card portfolio segment; $1.0 trillion, $915.7 billion and $821.3 billion, respectively, for the credit card portfolio segment; and $20.5 billion, $19.7 billion and $9.8 billion, respectively, for the wholesale portfolio segment, which were not subject to the allowance for lending-related commitments.

(table continued from previous page)

2023				2022			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
$ 2,040	$ 11,200	$ 6,486	$ 19,726	$ 1,765	$ 10,250	$ 4,371	$ 16,386
(489)	(100)	2	(587)	NA	NA	NA	NA
1,151	5,491	1,011	7,653	812	3,192	322	4,326
(519)	(793)	(132)	(1,444)	(543)	(789)	(141)	(1,473)
632	4,698	879	6,209	269	2,403	181	2,853
936	6,048	2,484	9,468	543	3,353	2,293	6,189
1	—	21	22	1	—	3	4
$ 1,856	$ 12,450	$ 8,114	$ 22,420	$ 2,040	$ 11,200	$ 6,486	$ 19,726
$ 76	$ —	$ 2,306	$ 2,382	$ 113	$ —	$ 2,148	$ 2,261
(1)	—	(407)	(408)	(37)	—	157	120
—	—	—	—	—	—	1	1
$ 75	$ —	$ 1,899	$ 1,974	$ 76	$ —	$ 2,306	$ 2,382
NA	NA	NA	$ 128	NA	NA	NA	$ 96
$ 1,931	$ 12,450	$ 10,013	$ 24,522	$ 2,116	$ 11,200	$ 8,792	$ 22,204
$ (876)	$ —	$ 392	$ (484)	$ (624)	$ 223	$ 467	$ 66
2,732	12,450	7,722	22,904	2,664	10,977	6,019	19,660
$ 1,856	$ 12,450	$ 8,114	$ 22,420	$ 2,040	$ 11,200	$ 6,486	$ 19,726
$ 3,287	$ —	$ 2,338	$ 5,625	$ 11,978	$ 796	$ 2,189	$ 14,963
393,988	211,123	670,134	1,275,245	288,775	184,379	601,481	1,074,635
$ 397,275	$ 211,123	$ 672,472	$ 1,280,870	$ 300,753	$ 185,175	$ 603,670	$ 1,089,598
$ 6	$ —	$ 180	$ 186	$ (33)	$ —	$ 16	$ (17)
3,216	—	1,012	4,228	3,585	—	464	4,049
$ —	$ —	$ 89	$ 89	$ —	$ —	$ 90	$ 90
75	—	1,810	1,885	76	—	2,216	2,292
$ 75	$ —	$ 1,899	$ 1,974	$ 76	$ —	$ 2,306	$ 2,382
$ —	$ —	$ 464	$ 464	$ —	$ —	$ 455	$ 455
28,248	—	516,577	544,825	20,423	—	461,688	482,111
$ 28,248	$ —	$ 517,041	$ 545,289	$ 20,423	$ —	$ 462,143	$ 482,566

Discussion of changes in the allowance

The allowance for credit losses as of December 31, 2024 was $26.9 billion, reflecting a net addition of $2.1 billion from December 31, 2023.

The net addition to the allowance for credit losses included:

- $2.1 billion in **consumer**, reflecting:
  - a $2.2 billion net addition in Card Services, predominantly driven by loan growth, reflecting higher revolving balances, including the seasoning of vintages originated in recent years,

  partially offset by

  - a $125 million net reduction in Home Lending in the first quarter of 2024, and
- a net reduction of $30 million in **wholesale**, reflecting:
  - changes in certain macroeconomic variables, an update to loss assumptions on certain loans in Markets, and a reduction due to charge-offs largely from collateral-dependent loans,

  predominantly offset by

  - net downgrade activity, primarily in Real Estate, and the impact of incorporating the First Republic portfolio into the Firm's modeled credit loss estimates in the second quarter of 2024.

The Firm's qualitative adjustments continued to include additional weight placed on the adverse scenarios to reflect ongoing uncertainties and downside risks related to the geopolitical and macroeconomic environment.

The Firm's allowance for credit losses is estimated using a weighted average of five internally developed macroeconomic scenarios. The adverse scenarios incorporate more punitive macroeconomic factors than the central case assumptions provided in the table below, resulting in:

- a weighted average U.S. unemployment rate peaking at 5.5% in the fourth quarter of 2025, and
- a weighted average U.S. real GDP level that is 1.9% lower than the central case at the end of the second quarter of 2026.

The following table presents the Firm's central case assumptions for the periods presented:

	Central case assumptions at December 31, 2024		
	2Q25	**4Q25**	**2Q26**
U.S. unemployment rate[(a)]	**4.5 %**	**4.3 %**	**4.3 %**
YoY growth in U.S. real GDP[(b)]	**2.0 %**	**1.9 %**	**1.8 %**

	Central case assumptions at December 31, 2023		
	2Q24	4Q24	2Q25
U.S. unemployment rate[(a)]	4.1 %	4.4 %	4.1 %
YoY growth in U.S. real GDP[(b)]	1.8 %	0.7 %	1.0 %

(a) Reflects quarterly average of forecasted U.S. unemployment rate.

(b) The year over year growth in U.S. real GDP in the forecast horizon of the central scenario is calculated as the percentage change in U.S. real GDP levels from the prior year.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.

Refer to Note 12 for additional information on the consumer and wholesale credit portfolios.

Refer to Critical Accounting Estimates Used by the Firm on pages 161–164 for further information on the allowance for credit losses and related management judgments.

Note 14 – Variable interest entities

Refer to Note 1 on page 177 for a further description of the Firm's accounting policies regarding consolidation of and involvement with VIEs.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "Firm-sponsored" VIE to include any entity where: (1) JPMorganChase is the primary beneficiary of the structure; (2) the VIE is used by JPMorganChase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorganChase name; or (4) the entity is a JPMorganChase–administered asset-backed commercial paper conduit.

Line of Business	*Transaction Type*	*Activity*	*2024 Form 10-K page references*
CCB	Credit card securitization trusts	Securitization of originated credit card receivables	pages 271–272
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	pages 272–274
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, and other consumer loans	pages 272–274
	Multi-seller conduits	Assisting clients in accessing the financial markets in a cost-efficient manner and structuring transactions to meet investor needs	page 274
	Municipal bond vehicles	Financing of municipal bond investments	pages 274–275

The Firm's other business segments and Corporate are also involved with VIEs (both third-party and Firm-sponsored), but to a lesser extent, as follows:

- Asset & Wealth Management: AWM sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AWM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AWM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Corporate: Corporate is involved with entities that may meet the definition of VIEs; however these entities are generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs. In addition, Treasury and CIO invest in securities generally issued by third parties which may meet the definition of VIEs (e.g., issuers of asset-backed securities). In general, the Firm does not have the power to direct the significant activities of these entities and therefore does not consolidate these entities. Refer to Note 10 for further information on the Firm's investment securities portfolio.

In addition, CIB also invests in and provides financing, lending-related services and other services to VIEs sponsored by third parties. Refer to page 276 of this Note for more information on the VIEs sponsored by third parties.

Significant Firm-sponsored VIEs

Credit card securitizations

CCB's Card Services business may securitize originated credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm consolidates the assets and liabilities of its sponsored credit card trusts as it is considered to be the primary beneficiary of these securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (generally 5%). As of December 31, 2024 and 2023, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $6.6 billion and $4.9 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by

those trusts of approximately 45% and 65% for the years ended December 31, 2024 and 2023, respectively. The Firm did not retain any senior securities and retained $1.5 billion of subordinated securities in certain of its credit card securitization trusts at both December 31, 2024 and 2023. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following tables present the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests (including amounts required to be held pursuant to credit risk retention rules), recourse or guarantee arrangements, and derivative contracts. In certain instances, the Firm's only continuing involvement is servicing the loans. The Firm's maximum loss exposure from retained and purchased interests is the carrying value of these interests. Refer to page 279 of this Note for information on the securitization-related loan delinquencies and liquidation losses.

	Principal amount outstanding			JPMorganChase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
December 31, 2024 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	Investment securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related[a]							
Residential mortgage:							
Prime/Alt-A and option ARMs	**$ 71,085**	**$ 615**	**$ 50,846**	**$ 613**	**$ 1,850**	**$ 614**	**$ 3,077**
Subprime	**8,824**	**—**	**1,847**	**44**	**19**	**—**	**63**
Commercial and other[b]	**186,293**	**243**	**125,510**	**530**	**5,768**	**1,074**	**7,372**
Total	**$ 266,202**	**$ 858**	**$ 178,203**	**$ 1,187**	**$ 7,637**	**$ 1,688**	**$ 10,512**

	Principal amount outstanding			JPMorganChase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
December 31, 2023 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	Investment securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related[a]							
Residential mortgage:							
Prime/Alt-A and option ARMs	$ 58,570	$ 675	$ 39,319	$ 595	$ 1,981	$ 60	$ 2,636
Subprime	8,881	—	1,312	3	—	—	3
Commercial and other[b]	168,042	—	120,262	831	5,638	1,354	7,823
Total	$ 235,493	$ 675	$ 160,893	$ 1,429	$ 7,619	$ 1,414	$ 10,462

(a) Excludes U.S. GSEs and government agency securitizations and re-securitizations, which are not Firm-sponsored.
(b) Consists of securities backed by commercial real estate loans and non-mortgage-related consumer receivables.
(c) Excludes the following: retained servicing; securities retained from loan sales and securitization activity related to U.S. GSEs and government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities; senior securities of $256 million and $52 million at December 31, 2024 and 2023, respectively, and subordinated securities which were not material at December 31, 2024 and 2023, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) At both December 31, 2024 and 2023, 77% of the Firm's retained securitization interests, which are predominantly carried at fair value and include amounts required to be held pursuant to credit risk retention rules, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $2.9 billion and $2.5 billion of investment-grade retained interests at December 31, 2024 and 2023, respectively, and $216 million and $88 million of noninvestment-grade retained interests at December 31, 2024 and 2023, respectively. The retained interests in commercial and other securitization trusts consisted of $6.0 billion and $6.1 billion of investment-grade retained interests, and $1.4 billion and $1.7 billion of noninvestment-grade retained interests at December 31, 2024 and 2023, respectively.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans it originated or purchased, and for certain mortgage loans purchased by CIB. For securitizations of loans serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests and amounts required to be held pursuant to credit risk retention rules) in residential mortgage securitizations at the time of securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by Treasury and CIO or CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts.

The Firm does not consolidate residential mortgage securitizations (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust.

Commercial mortgages and other consumer securitizations

CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests (including amounts required to be held pursuant to credit risk retention rules) in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. Treasury and CIO may choose to invest in these securitizations as well. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). The Firm generally does not retain an interest in the controlling class in its sponsored commercial mortgage securitization transactions.

Re-securitizations

The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both U.S. GSEs and government agency sponsored VIEs, which are backed by residential mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts.

The following table presents the principal amount of securities transferred to re-securitization VIEs.

Year ended December 31, (in millions)	**2024**	2023	2022
Transfers of securities to VIEs			
U.S. GSEs and government agencies	**$ 44,456**	$ 18,864	$ 16,128

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

The Firm did not transfer any private label securities to re-securitization VIEs during 2024, 2023 and 2022, and retained interests in any such Firm-sponsored VIEs as of December 31, 2024 and 2023 were not material.

Additionally, the Firm may invest in beneficial interests of third-party-sponsored re-securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it was not involved in the initial design of the trust, or the Firm was involved with an independent third-party sponsor and demonstrated shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

The following table presents information on the Firm's interests in nonconsolidated re-securitization VIEs.

December 31, (in millions)	Nonconsolidated re-securitization VIEs	
	2024	2023
U.S. GSEs and government agencies		
Interest in VIEs	**$ 3,219**	$ 3,371

As of December 31, 2024 and 2023, the Firm did not consolidate any U.S. GSE and government agency re-securitization VIEs or any Firm-sponsored private-label re-securitization VIEs.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that provide secured financing, collateralized by pools of receivables and other financial assets, to customers of the Firm. The conduits fund their financing facilities through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to provide financing to customers in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance of commercial paper.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits.

In the normal course of business, JPMorganChase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $2.9 billion and $9.8 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2024 and 2023, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $10.3 billion and $10.8 billion at December 31, 2024 and 2023, respectively, and are reported as off-balance sheet lending-related commitments in other unfunded commitments to extend credit. Refer to Note 28 for more information on off-balance sheet lending-related commitments.

Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow institutions to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("floaters") and (2) inverse floating-rate residual interests ("residuals"). The floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The residuals are retained by the investor seeking to finance its municipal bond investment. TOB transactions where the residual is held by a third-party investor are typically known as customer TOB trusts, and non-customer TOB trusts are transactions where the Residual is retained by the Firm. Customer TOB trusts are sponsored by a third party. The Firm serves as sponsor for all non-customer TOB transactions. The Firm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.

J.P. Morgan Securities LLC may serve as a remarketing agent on the floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the floaters, conducting the initial

placement and remarketing tendered floaters. The remarketing agent may, but is not obligated to, make markets in floaters. Floaters held by the Firm were not material during 2024 and 2023.

JPMorgan Chase Bank, N.A. or J.P. Morgan Securities LLC often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the floaters may "put," or tender, their floaters to the TOB trust. If the remarketing agent cannot successfully remarket the floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the TOB trust's purchase of the floaters, or it directly purchases the tendered floaters.

TOB trusts are considered to be variable interest entities. The Firm consolidates non-customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and it has the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2024 and 2023.

	Assets				Liabilities		
December 31, 2024 (in millions)	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ —**	**$ 13,531**	**$ 168**	**$ 13,699**	**$ 5,312**	**$ 10**	**$ 5,322**
Firm-administered multi-seller conduits	**1**	**20,383**	**133**	**20,517**	**18,228**	**26**	**18,254**
Municipal bond vehicles	**3,388**	**—**	**22**	**3,410**	**3,617**	**15**	**3,632**
Mortgage securitization entities[a]	**—**	**630**	**8**	**638**	**115**	**48**	**163**
Other	**496**	**1,966**[b]	**350**	**2,812**	**51**	**355**	**406**
Total	**$ 3,885**	**$ 36,510**	**$ 681**	**$ 41,076**	**$ 27,323**	**$ 454**	**$ 27,777**

	Assets				Liabilities		
December 31, 2023 (in millions)	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ —	$ 9,460	$ 117	$ 9,577	$ 2,998	$ 6	$ 3,004
Firm-administered multi-seller conduits	1	27,372	194	27,567	17,781	30	17,811
Municipal bond vehicles	2,056	—	22	2,078	2,116	11	2,127
Mortgage securitization entities[a]	—	693	8	701	125	57	182
Other	113	86	250	449	—	159	159
Total	$ 2,170	$ 37,611	$ 591	$ 40,372	$ 23,020	$ 263	$ 23,283

(a) Includes residential mortgage securitizations.
(b) Primarily includes consumer loans in CIB.
(c) Includes assets classified as cash and other assets on the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The assets and liabilities include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified on the Consolidated balance sheets as "Beneficial interests issued by consolidated VIEs". The holders of these beneficial interests generally do not have recourse to the general credit of JPMorganChase. Included in beneficial interests in VIE assets are long-term beneficial interests of $5.5 billion and $3.1 billion at December 31, 2024 and 2023, respectively.
(f) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm generally does not consolidate the VIE, but it records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

Tax credit vehicles

The Firm holds investments in unconsolidated tax credit vehicles, which are limited partnerships and similar entities that own and operate affordable housing, alternative energy, and other projects. These entities are primarily considered VIEs. A third party is typically the general partner or managing member and has control over the significant activities of the tax credit vehicles, and accordingly the Firm does not consolidate tax credit vehicles. The Firm generally invests in these partnerships as a limited partner and earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure, represented by equity investments and funding commitments, was $35.2 billion and $35.1 billion, of which $15.0 billion and $14.7 billion was unfunded at December 31, 2024 and 2023, respectively. The Firm assesses each project and to reduce the risk of loss, may withhold varying amounts of its capital investment until the project qualifies for tax credits. Refer to Note 28 for more information on off-balance sheet lending-related commitments.

Effective January 1, 2024, the Firm adopted updates to the Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method guidance which expanded the types of tax-oriented investments, beyond affordable housing tax credit investments, that the Firm can elect on a program by program basis, to be accounted for using the proportional amortization method. Refer to Notes 1, 6 and 25 for further information.

The proportional amortization method requires the cost of eligible investments, within an elected program, be amortized in proportion to the tax benefits received with the resulting amortization reported directly in income tax expense, which aligns with the associated tax credits and other tax benefits. Investments must meet certain criteria to be eligible, including that substantially all of the return is from income tax credits and other income tax benefits.

In addition, under this method deferred taxes are generally not recorded as the investment is now amortized in proportion to the income tax credits and other income tax benefits received. Delayed equity contributions that are unconditional and legally binding or conditional and probable of occurring are recorded in other liabilities with a corresponding increase in the carrying value of the investment. The guidance also requires a reevaluation of eligible investments when significant modifications or events occur that result in a change in the nature of the investment or a change in the Firm's relationship with the underlying project. During the period, there were no significant modifications or events that resulted in a change in the nature of an eligible investment or a change in the Firm's relationship with the underlying project.

The following table provides information on tax-oriented investments for which the Firm elected to apply the proportional amortization method.

Year ended December 31, (in millions)	Alternative energy and affordable housing programs[d]		
	2024	2023	2022
Programs for which the Firm elected proportional amortization:			
Carrying value[a]	**$ 31,978**	$ 14,644	$ 12,052
Tax credits and other tax benefits[b]	**6,379**	2,044	1,786
Investments that qualify to be accounted for using proportional amortization:			
Amortization losses recognized as a component of income tax expense	**(5,018)**	(1,561)	(1,353)
Non-income-tax-related gains/ (losses) and other returns received that are recognized outside of income tax expense[c]	**142**	(1)	(1)

(a) Recorded in Other assets on the Consolidated balance sheets. Excludes programs to which the Firm does not apply the proportional amortization method, such as historic tax credit and new market tax credit programs.
(b) Reflected in Income tax expense on the Consolidated statements of income and Operating activities on the Consolidated statements of cash flows.
(c) Recorded in Other income on the Consolidated statements of income and Operating activities on the Consolidated statements of cash flows.
(d) As of December 31, 2023 and 2022 represents eligible affordable housing investments.

Customer municipal bond vehicles (TOB trusts)
The Firm may provide various services to customer TOB trusts, including remarketing agent, liquidity or tender option provider. In certain customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. In those transactions, upon the termination of the vehicle, the Firm has recourse to the third-party Residual holders for any shortfall. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds. The Firm does not consolidate customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle.

The Firm's maximum exposure as a liquidity provider to customer TOB trusts at December 31, 2024 and 2023, was $5.8 billion and $5.1 billion, respectively. The fair value of assets held by such VIEs at December 31, 2024 and 2023 was $8.1 billion and $7.3 billion, respectively.

Loan securitizations
The Firm has securitized and sold a variety of loans, including residential mortgages, credit card receivables, commercial mortgages and other consumer loans. The purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when all of the following accounting criteria for a sale are met: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2024, 2023 and 2022, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved at the time of the securitization.

Year ended December 31, (in millions)	2024		2023		2022	
	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]
Principal securitized	**$ 19,988**	**$ 17,683**	$ 7,678	$ 3,901	$ 10,218	$ 9,036
All cash flows during the period:[a]						
Proceeds received from loan sales as financial instruments[b][c]	**$ 19,870**	**$ 17,346**	$ 7,251	$ 3,896	$ 9,783	$ 8,921
Servicing fees collected	**35**	**35**	24	5	62	2
Cash flows received on interests	**405**	**1,303**	325	425	489	285

(a) Excludes re-securitization transactions.
(b) Primarily includes Level 2 assets.
(c) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.
(d) Represents prime mortgages. Excludes loan securitization activity related to U.S. GSEs and government agencies.
(e) Includes commercial mortgages and auto loans.

Key assumptions used to value retained interests originated during the year are shown in the table below.

Year ended December 31,	2024	2023	2022
Residential mortgage retained interest:			
Weighted-average life (in years)	**4.3**	9.6	10.8
Weighted-average discount rate	**7.1 %**	4.8 %	4.0 %
Commercial and other retained interest:			
Weighted-average life (in years)	**4.5**	3.0	5.9
Weighted-average discount rate	**6.2 %**	4.6 %	2.9 %

Loans and excess MSRs sold to U.S. government-sponsored enterprises and loans in securitization transactions pursuant to Ginnie Mae guidelines

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. Refer to Note 28 for additional information about the Firm's loan sales- and securitization-related indemnifications and Note 15 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, and loans in securitization transactions pursuant to Ginnie Mae guidelines.

Year ended December 31, (in millions)	2024	2023	2022
Carrying value of loans sold	**$ 25,765**	$ 19,906	$ 48,891
Proceeds received from loan sales as cash	**$ 2,380**	$ 300	$ 22
Proceeds from loan sales as securities[a][b]	**23,178**	19,389	48,096
Total proceeds received from loan sales[c]	**$ 25,558**	$ 19,689	$ 48,118
Gains/(losses) on loan sales[d][e]	**$ —**	$ —	$ (25)

(a) Includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt or retained as part of the Firm's investment securities portfolio.
(b) Included in level 2 assets.
(c) Excludes the value of MSRs retained upon the sale of loans.
(d) Gains/(losses) on loan sales include the value of MSRs.
(e) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 28, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. Refer to Note 12 for additional information.

The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage loans recognized on the Firm's Consolidated balance sheets as of December 31, 2024 and 2023. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

December 31, (in millions)	**2024**	2023
Loans repurchased or option to repurchase[(a)]	**$ 577**	$ 597
Real estate owned	**6**	8
Foreclosed government-guaranteed residential mortgage loans[(b)]	**10**	22

(a) Primarily all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.
(b) Relates to voluntary repurchases of loans, which are included in accrued interest and accounts receivable.

Loan delinquencies and liquidation losses

The table below includes information about components of and delinquencies related to nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement as of December 31, 2024 and 2023. For loans sold or securitized where servicing is the Firm's only form of continuing involvement, the Firm generally experiences a loss only if the Firm was required to repurchase a delinquent loan or foreclosed asset due to a breach in representations and warranties associated with its loan sale or servicing contracts.

As of or for the year ended December 31, (in millions)	Securitized assets		90 days past due		Net liquidation losses / (recoveries)	
	2024	2023	**2024**	2023	**2024**	2023
Securitized loans						
Residential mortgage:						
Prime/ Alt-A & option ARMs	**$ 50,846**	$ 39,319	**$ 501**	$ 440	**$ 10**	$ 14
Subprime	**1,847**	1,312	**113**	131	**2**	5
Commercial and other	**125,510**	120,262	**1,715**	2,874	**77**	60
Total loans securitized	**$ 178,203**	$ 160,893	**$ 2,329**	$ 3,445	**$ 89**	$ 79

Note 15 – Goodwill, mortgage servicing rights, and other intangible assets

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired, and can be adjusted up to one year from the acquisition date as additional information pertaining to facts and circumstances that existed as of the acquisition date is obtained about the fair value of assets acquired and liabilities assumed. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate that there may be an impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are generally determined based on how the Firm's businesses are managed and how they are reviewed. The following table presents goodwill attributed to the reportable business segments and Corporate.

December 31, (in millions)	**2024**	2023	2022
Consumer & Community Banking	**$ 32,116**	$ 32,116	$ 32,121
Commercial & Investment Bank	**11,236**	11,251	10,993
Asset & Wealth Management	**8,521**	8,582	7,902
Corporate	**692**	685	646
Total goodwill	**$ 52,565**	$ 52,634	$ 51,662

The following table presents changes in the carrying amount of goodwill.

(in millions)	**2024**	2023	2022
Balance at beginning of period	**$ 52,634**	$ 51,662	$ 50,315
Changes during the period from:			
Business combinations[(a)]	**29**	917	1,426
Other[(b)]	**(98)**	55	(79)
Balance at December 31,	**$ 52,565**	$ 52,634	$ 51,662

(a) For 2024, includes estimated goodwill associated with the acquisition of LayerOne Financial in CIB. For 2023, predominantly represents estimated goodwill associated with the acquisition of the remaining 51% interest in CIFM in AWM and the acquisition of Aumni Inc., predominantly in CIB. For 2022, represents estimated goodwill associated with the acquisitions of Global Shares PLC in AWM, Frosch Travel Group, LLC and Figg, Inc. in CCB, and Renovite Technologies, Inc. and Volkswagen Payments S.A. in CIB.

(b) Primarily foreign currency adjustments.

Goodwill impairment testing

The Firm's goodwill was not impaired at December 31, 2024, 2023 and 2022.

The goodwill impairment test is generally performed by comparing the current fair value of each reporting unit with its carrying value. If the fair value is in excess of the carrying value, then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value, then an impairment is recognized for the amount by which the reporting unit's carrying value exceeds its fair value, up to the amount of goodwill allocated to that reporting unit.

The Firm uses the reporting units' allocated capital plus goodwill and other intangible assets as a proxy for the carrying values of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of capital to the LOBs which takes into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. LOB's allocated capital levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors and Operating Committee.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. This approach projects cash flows for the forecast period and uses the perpetuity growth method to calculate terminal values. These cash flows and terminal values, which are based on the reporting units' annual budgets and forecasts are then discounted using an appropriate discount rate. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit, management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firm's overall estimated cost of equity for reasonableness. The valuations derived from the discounted cash flow analysis are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the overall reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that

naturally exist between the Firm's businesses and competitor institutions.

The Firm also takes into consideration a comparison between the aggregate fair values of the Firm's reporting units and JPMorganChase's market capitalization. In evaluating this comparison, the Firm considers several factors, including (i) a control premium that would exist in a market transaction, (ii) factors related to the level of execution risk that would exist at the Firmwide level that do not exist at the reporting unit level and (iii) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

Unanticipated declines in business performance, increases in credit losses, increases in capital requirements, as well as deterioration in economic or market conditions, adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units to decline in the future, which could result in a material impairment loss to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), and certain derivatives (e.g., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorganChase uses combinations of derivatives and securities to manage the risk of changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2024, 2023 and 2022.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2024	2023	2022
Fair value at beginning of period	**$ 8,522**	$ 7,973	$ 5,494
MSR activity:			
Originations of MSRs	**325**	253	798
Purchase of MSRs[(a)]	**601**	1,028	1,400
Disposition of MSRs[(b)]	**(21)**	(188)	(822)
Net additions/(dispositions)	**905**	1,093	1,376
Changes due to collection/realization of expected cash flows	**(1,068)**	(1,011)	(936)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[(c)]	**670**	424	2,022
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)	**102**	(22)	14
Discount rates	**14**	14	—
Prepayment model changes and other[(d)]	**(24)**	51	3
Total changes in valuation due to other inputs and assumptions	**92**	43	17
Total changes in valuation due to inputs and assumptions	**762**	467	2,039
Fair value at December 31,	**$ 9,121**	$ 8,522	$ 7,973
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ 762**	$ 467	$ 2,039
Contractual service fees, late fees and other ancillary fees included in income	**1,606**	1,590	1,535
Third-party mortgage loans serviced at December 31, (in billions)	**652**	632	584
Servicer advances, net of an allowance for uncollectible amounts, at December 31[(e)]	**577**	659	758

(a) Includes purchase price adjustments associated with MSRs purchased, primarily as a result of loans that prepaid within 90 days of settlement, allowing the Firm to recover the purchase price.
(b) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage-backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.
(c) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.
(d) Represents changes in prepayments other than those attributable to changes in market interest rates.
(e) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2024, 2023 and 2022.

Year ended December 31, (in millions)	2024	2023	2022
CCB mortgage fees and related income			
Production revenue	**$ 627**	$ 421	$ 497
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**1,659**	1,634	1,582
Changes in MSR asset fair value due to collection/ realization of expected cash flows	**(1,067)**	(1,011)	(936)
Total operating revenue	**592**	623	646
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**670**	424	2,022
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**92**	43	17
Change in derivative fair value and other	**(603)**	(336)	(1,946)
Total risk management	**159**	131	93
Total net mortgage servicing revenue	**751**	754	739
Total CCB mortgage fees and related income	**1,378**	1,175	1,236
All other	**23**	1	14
Mortgage fees and related income	**$ 1,401**	$ 1,176	$ 1,250

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

Changes in fair value based on variations in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In the following table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2024 and 2023, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2024	2023
Weighted-average prepayment speed assumption (constant prepayment rate)	**6.19 %**	6.29 %
Impact on fair value of 10% adverse change	**$ (209)**	$ (206)
Impact on fair value of 20% adverse change	**(406)**	(401)
Weighted-average option adjusted spread[(a)]	**5.97 %**	6.10 %
Impact on fair value of 100 basis points adverse change	**$ (391)**	$ (369)
Impact on fair value of 200 basis points adverse change	**(751)**	(709)

(a) Includes the impact of operational risk and regulatory capital.

Other intangible assets

The Firm's finite-lived and indefinite-lived other intangible assets are initially recorded at their fair value primarily upon completion of a business combination. Subsequently, the Firm's finite-lived intangible assets, including core deposit intangibles, customer relationship intangibles, and certain other intangible assets, are amortized over their useful lives, estimated based on the expected future economic benefits to the Firm of the intangible asset. The Firm's intangible assets with indefinite lives, such as asset management contracts, are not subject to amortization and are assessed periodically for impairment.

As of December 31, 2024 and 2023, the gross carrying values of other intangible assets were $3.8 billion and $4.2 billion, respectively, and the accumulated amortization was $879 million and $994 million, respectively.

As of December 31, 2024 and 2023, the net carrying values consist of finite-lived intangible assets of $1.7 billion and $2.0 billion, respectively, as well as indefinite-lived intangible assets, which are not subject to amortization, of $1.2 billion at both periods.

As of December 31, 2024, other intangible assets reflected core deposit and certain wealth management customer relationship intangibles related to the First Republic acquisition, and asset management contracts related to the Firm's acquisition of the remaining 51% interest in CIFM. Refer to Note 34 for additional information on the First Republic acquisition.

For the years ended December 31, 2024 and 2023, amortization expense was $339 million and $315 million, respectively.

The following table presents estimated future amortization expense.

December 31, (in millions)	Finite-lived intangible assets
2025	$ 288
2026	285
2027	284
2028	267
2029	261

Impairment testing

The Firm's finite-lived and indefinite-lived other intangible assets are assessed for impairment annually or more often if events or changes in circumstances indicate that the asset might be impaired. Once the Firm determines that an impairment exists for an intangible asset, the impairment is recognized in other expense.

Note 16 – Premises and equipment

Premises and equipment includes land carried at cost, as well as buildings, leasehold improvements, internal-use software and furniture and equipment carried at cost less accumulated depreciation and amortization. The Firm's operating lease right-of-use assets are also included in Premises and equipment. Refer to Note 18 for a further discussion of the Firm's right-of-use assets.

The following table presents certain components of Premises and equipment.

December 31, (in millions)	2024	2023
Land, buildings and leasehold improvements	**$ 16,874**	$ 14,862
Right-of-use assets[(a)]	**7,930**	7,917
Other premises and equipment[(b)]	**7,419**	7,378
Total premises and equipment	**$ 32,223**	$ 30,157

(a) Excluded $564 million and $514 million of right-of-use assets that were recorded in Other assets at December 31, 2024 and 2023, respectively.
(b) Other premises and equipment is comprised of internal-use software and furniture and equipment.

JPMorganChase computes depreciation using the straight-line method over the estimated useful life for buildings and furniture and equipment. The Firm depreciates leasehold improvements over the lesser of the remainder of the lease term or the estimated useful life. The Firm also capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life. The estimated useful lives range from 10 to 50 years for buildings and leasehold improvements, and 3 to 10 years for internal-use software and furniture and equipment.

Impairment is assessed when events or changes in circumstances indicate that the carrying value of an asset may not be fully recoverable.

Note 17 – Deposits

As of December 31, 2024 and 2023, noninterest-bearing and interest-bearing deposits were as follows:

December 31, (in millions)	2024	2023
U.S. offices		
Noninterest-bearing (included **$28,904** and $75,393 at fair value)[(a)]	**$ 592,500**	$ 643,748
Interest-bearing (included **$1,101** and $573 at fair value)[(a)]	**1,345,914**	1,303,100
Total deposits in U.S. offices	**1,938,414**	1,946,848
Non-U.S. offices		
Noninterest-bearing (included **$2,255** and $1,737 at fair value)[(a)]	**26,806**	23,097
Interest-bearing (included **$1,508** and $681 at fair value)[(a)]	**440,812**	430,743
Total deposits in non-U.S. offices	**467,618**	453,840
Total deposits	**$2,406,032**	$ 2,400,688

(a) Includes structured notes classified as deposits for which the fair value option has been elected. Refer to Note 3 for further discussion.

As of December 31, 2024 and 2023, time deposits in denominations that met or exceeded the insured limit were as follows:

December 31, (in millions)	2024	2023
U.S. offices	**$ 149,239**	$ 132,654
Non-U.S. offices[(a)]	**92,639**	90,187
Total	**$ 241,878**	$ 222,841

(a) Represents all time deposits in non-U.S. offices as these deposits typically exceed the insured limit.

As of December 31, 2024, the remaining maturities of interest-bearing time deposits were as follows:

December 31, (in millions)	U.S.	Non-U.S.	Total
2025	$222,676	$ 89,427	$ 312,103
2026	749	87	836
2027	482	2	484
2028	149	18	167
2029	314	721	1,035
After 5 years	162	129	291
Total	$224,532	$ 90,384	$ 314,916

Note 18 - Leases

Firm as lessee

At December 31, 2024, JPMorganChase and its subsidiaries were obligated under a number of noncancellable leases, predominantly operating leases for premises and equipment used primarily for business purposes. These leases generally have terms of 20 years or less, determined based on the contractual maturity of the lease, and include periods covered by options to extend or terminate the lease when the Firm is reasonably certain that it will exercise those options. All leases with lease terms greater than twelve months are reported as a lease liability with a corresponding right-of-use ("ROU") asset. None of these lease agreements impose restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements. Certain of these leases contain escalation clauses that will increase rental payments based on maintenance, utility and tax increases, which are non-lease components. The Firm elected not to separate lease and non-lease components of a contract for its real estate leases. As such, real estate lease payments represent payments on both lease and non-lease components.

Operating lease liabilities and ROU assets are recognized at the lease commencement date based on the present value of the future minimum lease payments over the lease term. The future lease payments are discounted at a rate that estimates the Firm's collateralized borrowing rate for financing instruments of a similar term and are included in accounts payable and other liabilities. The operating lease ROU assets, predominantly included in premises and equipment, also include any lease prepayments made, plus initial direct costs incurred, less any lease incentives received. Rental expense associated with operating leases is recognized on a straight-line basis over the lease term, and generally included in occupancy expense in the Consolidated statements of income.

The carrying values of the Firm's operating leases were as follows:

December 31, (in millions, except where otherwise noted)	2024	2023
Right-of-use assets	**$ 8,494**	$ 8,431
Lease liabilities	**8,900**	8,833
Weighted average remaining lease term (in years)	**8.3**	8.4
Weighted average discount rate	**4.24 %**	4.01 %
Supplemental cash flow information		
Cash paid for amounts included in the measurement of lease liabilities - operating cash flows	**$ 1,734**	$ 1,662
Supplemental non-cash information		
Right-of-use assets obtained in exchange for operating lease obligations	**$ 1,565**	$ 2,094

Year ended December 31, (in millions)	2024	2023
Rental expense		
Gross rental expense	**$ 2,231**	$ 2,079
Sublease rental income	**(41)**	(72)
Net rental expense	**$ 2,190**	$ 2,007

The following table presents future payments under operating leases as of December 31, 2024.

Year ended December 31, (in millions)	
2025	1,709
2026	1,553
2027	1,412
2028	1,248
2029	1,048
After 2029	3,721
Total future minimum lease payments	10,691
Less: Imputed interest	(1,791)
Total	$ 8,900

In addition to the table above, as of December 31, 2024, the Firm had additional future operating lease commitments of $887 million that were signed but had not yet commenced. These operating leases will commence between 2025 and 2027 with lease terms up to 21 years.

Firm as lessor

The Firm provides auto and equipment lease financing to its customers through lease arrangements with lease terms that may contain renewal, termination and/or purchase options. The Firm's lease financings are predominantly auto operating leases. These assets subject to operating leases are recognized in other assets on the Firm's Consolidated balance sheets and are depreciated on a straight-line basis over the lease term to reduce the asset to its estimated residual value. Depreciation expense is included in technology, communications and equipment expense in the Consolidated statements of income. The Firm's lease income is generally recognized on a straight-line basis over the lease term and is included in other income in the Consolidated statements of income.

On a periodic basis, the Firm assesses leased assets for impairment, and if the carrying amount of the leased asset exceeds the undiscounted cash flows from the lease payments and the estimated residual value upon disposition of the leased asset, an impairment is recognized.

The risk of loss on auto and equipment leased assets relating to the residual value of the leased assets is monitored through projections of the asset residual values at lease origination and periodic review of residual values, and is mitigated through arrangements with certain manufacturers or lessees.

The following table presents the carrying value of assets subject to leases reported on the Consolidated balance sheets.

December 31, (in millions)	**2024**	2023
Carrying value of assets subject to operating leases, net of accumulated depreciation	**$ 12,988**	$ 10,663
Accumulated depreciation	**2,509**	3,288

The following table presents the Firm's operating lease income and the related depreciation expense on the Consolidated statements of income.

Year ended December 31, (in millions)	**2024**	2023	2022
Operating lease income	**$ 2,795**	$ 2,843	$ 3,654
Depreciation expense	**1,685**	1,778	2,475

The following table presents future receipts under operating leases as of December 31, 2024.

Year ended December 31, (in millions)	
2025	$ 2,381
2026	1,707
2027	704
2028	47
2029	5
After 2029	4
Total future minimum lease receipts	$ 4,848

Note 19 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of brokerage payables, which include payables to customers and payables related to security purchases that did not settle, as well as other accrued expenses, such as compensation accruals, credit card rewards liability, merchant servicing payables, operating lease liabilities, accrued interest payables, income tax payables and litigation reserves.

The following table presents the components of accounts payable and other liabilities.

December 31, (in millions)	2024	2023
Brokerage payables	**$ 153,153**	$ 161,960
Other payables and liabilities[(a)]	**127,519**	128,347
Total accounts payable and other liabilities	**$ 280,672**	$ 290,307

(a) Includes credit card rewards liability of $14.4 billion and $13.2 billion at December 31, 2024 and 2023, respectively.

The credit card rewards liability represents the estimated cost of rewards points earned and expected to be redeemed by cardholders. The liability is accrued as the cardholder earns the benefit and is reduced when the cardholder redeems points. The redemption rate and cost per point assumptions are key assumptions to estimate the liability and the current period impact is recognized in Card Income.

Refer to Notes 7, 18, 25 and 30 for additional information on accrued interest, operating lease liabilities, income taxes and litigation reserves, respectively.

Note 20 – Long-term debt

JPMorganChase issues long-term debt denominated in various currencies, predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income, except for unrealized gains/(losses) due to DVA which are recorded in OCI. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2024.

By remaining maturity at December 31, (in millions, except rates)		2024				2023
		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 7,112**	**$ 90,132**	**$ 117,667**	**$ 214,911**	$ 200,984
	Variable rate	**255**	**6,838**	**1,562**	**8,655**	8,105
	Interest rates[f]	**3.04 %**	**3.40 %**	**4.02 %**	**3.71 %**	3.32 %
Subordinated debt:	Fixed rate	**$ 302**	**$ 5,582**	**$ 8,573**	**$ 14,457**	$ 17,725
	Variable rate	**—**	**—**	**—**	**—**	—
	Interest rates[f]	**7.75 %**	**4.72 %**	**4.69 %**	**4.76 %**	4.62 %
	Subtotal	**$ 7,669**	**$ 102,552**	**$ 127,802**	**$ 238,023**	$ 226,814
Subsidiaries						
Federal Home Loan Banks advances:	Fixed rate	**$ 7,582**	**$ 1,651**	**$ 24**	**$ 9,257**	$ 23,246
	Variable rate	**4,000**	**16,000**	**—**	**20,000**	18,000
	Interest rates[f]	**4.42 %**	**4.84 %**	**5.91 %**	**4.67 %**	4.89 %
Purchase Money Note[a]:	Fixed rate	**$ —**	**$ 49,208**	**$ —**	**$ 49,208**	$ 48,989
	Interest rates[f]	**— %**	**3.40 %**	**— %**	**3.40 %**	3.40 %
Senior debt:	Fixed rate	**$ 2,361**	**$ 16,695**	**$ 7,489**	**$ 26,545**	$ 20,745
	Variable rate	**19,350**	**30,981**	**6,451**	**56,782**	52,048
	Interest rates[f]	**5.39 %**	**5.18%**	**1.44 %**	**3.81 %**	3.91 %
Subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ —**	**$ —**	$ 255
	Variable rate	**—**	**—**	**—**	**—**	—
	Interest rates[f]	**— %**	**— %**	**— %**	**— %**	8.25 %
	Subtotal	**$ 33,293**	**$ 114,535**	**$ 13,964**	**$ 161,792**	$ 163,283
Junior subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ 488**	**$ 488**	$ 518
	Variable rate	**—**	**421**	**694**	**1,115**	1,210
	Interest rates[f]	**— %**	**5.35 %**	**7.01 %**	**6.58 %**	7.14 %
	Subtotal	**$ —**	**$ 421**	**$ 1,182**	**$ 1,603**	$ 1,728
Total long-term debt[b][c][d]		**$ 40,962**	**$ 217,508**	**$ 142,948**	**$ 401,418** [g][h]	$ 391,825
Long-term beneficial interests:	Fixed rate	**$ 999**	**$ 4,313**	**$ —**	**$ 5,312**	$ 2,998
	Variable rate	**—**	**27**	**139**	**166**	125
	Interest rates[f]	**3.97 %**	**4.82 %**	**2.92 %**	**4.62 %**	4.69 %
Total long-term beneficial interests[e]		**$ 999**	**$ 4,340**	**$ 139**	**$ 5,478**	$ 3,123

(a) Reflects the Purchase Money Note associated with First Republic. Refer to Note 34 for additional information.
(b) Included long-term debt of $80.9 billion and $93.0 billion secured by assets totaling $185.5 billion and $218.5 billion at December 31, 2024 and 2023, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.
(c) Included $100.8 billion and $87.9 billion of long-term debt accounted for at fair value at December 31, 2024 and 2023, respectively.
(d) Included $13.5 billion and $12.5 billion of outstanding zero-coupon notes at December 31, 2024 and 2023, respectively. The aggregate principal amount of these notes at their respective maturities is $50.2 billion and $47.9 billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.
(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included amounts accounted for at fair value which were not material as of December 31, 2024 and 2023. Excluded short-term commercial paper and other short-term beneficial interests of $21.8 billion and $19.9 billion at December 31, 2024 and 2023, respectively.
(f) The interest rates shown are the weighted average of contractual rates in effect at December 31, 2024 and 2023, respectively, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The interest rates shown exclude structured notes accounted for at fair value.
(g) As of December 31, 2024, long-term debt in the aggregate of $297.1 billion was redeemable at the option of JPMorganChase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.
(h) The aggregate carrying values of debt that matures in each of the five years subsequent to 2024 is $41.0 billion in 2025, $64.5 billion in 2026, $32.7 billion in 2027, $93.4 billion in 2028 and $26.9 billion in 2029.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 3.82% and 3.65% as of December 31, 2024 and 2023, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorganChase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issuances. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 5.15% and 5.20% as of December 31, 2024 and 2023, respectively.

JPMorgan Chase & Co. has guaranteed certain long-term debt of its subsidiaries, including structured notes. These guarantees rank pari passu with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt and structured notes was $41.2 billion and $41.1 billion at December 31, 2024 and 2023, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Note 21 – Preferred stock

At December 31, 2024 and 2023, JPMorganChase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share. In the event of a liquidation or dissolution of the Firm, JPMorganChase's preferred stock then outstanding takes precedence over the Firm's common stock with respect to the payment of dividends and the distribution of assets.

The following is a summary of JPMorganChase's non-cumulative preferred stock outstanding as of December 31, 2024 and 2023, and the quarterly dividend declarations for the years ended December 31, 2024, 2023 and 2022.

	Shares[a]		Carrying value (in millions)			Contractual rate in effect at December 31,	Earliest redemption date[b]	Floating annualized rate[c]	Dividend declared per share[d]		
	December 31,		December 31,						Year ended December 31,		
	2024	2023	2024	2023	Issue date	2024			2024	2023	2022
Fixed-rate:											
Series DD	**169,625**	169,625	**1,696**	1,696	9/21/2018	**5.750**	12/1/2023	NA	**575.00**	575.00	575.00
Series EE	**185,000**	185,000	**1,850**	1,850	1/24/2019	**6.000**	3/1/2024	NA	**600.00**	600.00	600.00
Series GG	**90,000**	90,000	**900**	900	11/7/2019	**4.750**	12/1/2024	NA	**475.00**	475.00	475.00
Series JJ	**150,000**	150,000	**1,500**	1,500	3/17/2021	**4.550**	6/1/2026	NA	**455.00**	455.00	455.00
Series LL	**185,000**	185,000	**1,850**	1,850	5/20/2021	**4.625**	6/1/2026	NA	**462.52**	462.52	462.52
Series MM	**200,000**	200,000	**2,000**	2,000	7/29/2021	**4.200**	9/1/2026	NA	**420.00**	420.00	420.00
Fixed-to-floating rate:											
Series I	**—**	—	**$ —**	$ —	4/23/2008	**— %**	4/30/2018	— %	**$ —**	$ —	$ 375.03
Series Q	**—**	150,000	**—**	1,500	4/23/2013	**—**	5/1/2023	SOFR + 3.25	**220.45**	801.41 [g]	515.00
Series R	**—**	150,000	**—**	1,500	7/29/2013	**—**	8/1/2023	SOFR + 3.30	**221.70**	756.73 [h]	600.00
Series S	**—**	200,000	**—**	2,000	1/22/2014	**—**	2/1/2024	SOFR + 3.78	**233.70** [e]	675.00	675.00
Series U	**—**	100,000	**—**	1,000	3/10/2014	**—**	4/30/2024	SOFR + 3.33	**153.13**	612.50	612.50
Series V	**—**	—	**—**	—	6/9/2014	**—**	7/1/2019	—	**—**	—	340.91
Series X	**—**	160,000	**—**	1,600	9/23/2014	**—**	10/1/2024	SOFR + 3.33	**457.50**	610.00	610.00
Series CC	**125,750**	125,750	**1,258**	1,258	10/20/2017	**SOFR + 2.58**	11/1/2022	SOFR + 2.58	**812.73**	804.08	526.27 [i]
Series FF	**—**	225,000	**—**	2,250	7/31/2019	**—**	8/1/2024	SOFR + 3.38	**250.00**	500.00	500.00
Series HH	**300,000**	300,000	**3,000**	3,000	1/23/2020	**4.600**	2/1/2025	SOFR + 3.125	**460.00**	460.00	460.00
Series II	**150,000**	150,000	**1,500**	1,500	2/24/2020	**4.000**	4/1/2025	SOFR + 2.745	**400.00**	400.00	400.00
Series KK	**200,000**	200,000	**2,000**	2,000	5/12/2021	**3.650**	6/1/2026	CMT + 2.85	**365.00**	365.00	365.00
Series NN	**250,000**	NA	**2,496**	NA	3/12/2024	**6.875**	6/1/2029	CMT + 2.737	**494.63** [f]	NA	NA
Total preferred stock	**2,005,375**	2,740,375	**$20,050**	$ 27,404							

(a) Represented by depositary shares.
(b) Each series of fixed-to-floating rate preferred stock converts to a floating rate at the earliest redemption date.
(c) Effective June 30, 2023, CME Term SOFR became the replacement reference rate for fixed-to-floating rate preferred stock issued by the Firm that formerly referenced U.S. dollar LIBOR. References in the table to "SOFR" mean a floating annualized rate equal to three-month term SOFR (plus a spread adjustment of 0.26% per annum) plus the spreads noted. References to "CMT" mean a floating annualized rate equal to the five-year Constant Maturity Treasury ("CMT") rate plus the spreads noted.
(d) Dividends on preferred stock are discretionary and non-cumulative. When declared, dividends are declared quarterly. Dividends are payable quarterly on fixed-rate preferred stock. Dividends are payable semiannually on fixed-to-floating rate preferred stock while at a fixed rate, and payable quarterly after converting to a floating rate.
(e) The dividend rate for Series S preferred stock became floating and payable quarterly starting on February 1, 2024; prior to which the dividend rate was fixed at 6.75% or $337.50 per share payable semiannually. The dividend rate for each quarterly dividend period commencing on February 1, 2024 was three-month term SOFR (plus a spread adjustment of 0.26% per annum) plus the spread of 3.78%.
(f) The initial dividend declared was prorated based on the number of days outstanding for the period. Dividends were declared quarterly thereafter at the contractual rate.
(g) The dividend rate for Series Q preferred stock became floating and payable quarterly starting on May 1, 2023; prior to which the dividend rate was fixed at 5.15% or $257.50 per share payable semiannually. The dividend rate for each quarterly dividend period commencing on August 1, 2023 was three-month term SOFR (plus a spread adjustment of 0.26% per annum) plus the spread of 3.25%.
(h) The dividend rate for Series R preferred stock became floating and payable quarterly starting on August 1, 2023; prior to which the dividend rate was fixed at 6.00% or $300.00 per share payable semiannually. The dividend rate for each quarterly dividend period commencing on August 1, 2023 was three-month term SOFR (plus a spread adjustment of 0.26% per annum) plus the spread of 3.30%.
(i) The dividend rate for Series CC preferred stock became floating and payable quarterly starting on November 1, 2022; prior to which the dividend rate was fixed at 4.625% or $231.25 per share payable semiannually. The dividend rate for each quarterly dividend period commencing on August 1, 2023 was three-month term SOFR (plus a spread adjustment of 0.26% per annum) plus the spread of 2.58%.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus accrued but unpaid dividends. The aggregate liquidation value was $20.2 billion at December 31, 2024.

Issuances

On February 4, 2025, the Firm issued $3.0 billion of fixed-rate reset non-cumulative preferred stock, Series OO.

On March 12, 2024, the Firm issued $2.5 billion of fixed-rate reset non-cumulative preferred stock, Series NN.

Redemptions

On February 1, 2025, the Firm redeemed all $3.0 billion of its fixed-to-floating rate non-cumulative preferred stock, Series HH.

On October 1, 2024, the Firm redeemed all $1.6 billion of its fixed-to-floating rate non-cumulative preferred stock, Series X.

On August 1, 2024, the Firm redeemed all $2.3 billion of its fixed-to-floating rate non-cumulative preferred stock, Series FF.

On May 1, 2024, the Firm redeemed all $5.0 billion of its fixed-to-floating rate non-cumulative preferred stock, Series Q, Series R and Series S.

On April 30, 2024, the Firm redeemed all $1.0 billion of its fixed-to-floating rate non-cumulative preferred stock, Series U.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series may also be redeemed following a "capital treatment event," as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Board of Governors of the Federal Reserve System (the "Federal Reserve").

Note 22 – Common stock

At December 31, 2024 and 2023, JPMorganChase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued which were reissued from treasury by the Firm during the years ended December 31, 2024, 2023 and 2022 were as follows.

Year ended December 31, (in millions)	**2024**	2023	2022
Total issued – balance at January 1	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(1,228.3)**	(1,170.7)	(1,160.8)
Repurchase	**(91.7)**	(69.5)	(23.1)
Reissuance:			
Employee benefits and compensation plans	**11.9**	10.9	12.0
Employee stock purchase plans	**0.8**	1.0	1.2
Total reissuance	**12.7**	11.9	13.2
Total treasury – balance at December 31	**(1,307.3)**	(1,228.3)	(1,170.7)
Outstanding at December 31	**2,797.6**	2,876.6	2,934.2

On June 28, 2024, the Firm announced that its Board of Directors had authorized a new $30 billion common share repurchase program, effective July 1, 2024. Through June 30, 2024, the Firm was authorized to purchase up to $30 billion of common shares under its previously-approved common share repurchase program that was announced on April 13, 2022.

The following table sets forth the Firm's repurchases of common stock for the years ended December 31, 2024, 2023 and 2022.

Year ended December 31, (in millions)	**2024**	2023	2022[(b)]
Total number of shares of common stock repurchased	**91.7**	69.5	23.1
Aggregate purchase price of common stock repurchases[(a)]	**$18,841**	$ 9,898	$ 3,122

(a) Excludes excise tax and commissions. As part of the Inflation Reduction Act of 2022, a 1% excise tax is imposed on net share repurchases commencing January 1, 2023.

(b) In the second half of 2022, the Firm temporarily suspended share repurchases, which it resumed in the first quarter of 2023 under its common share repurchase program.

The Board of Directors' authorization to repurchase common shares is utilized at management's discretion. The $30 billion common share repurchase program approved by the Board of Directors does not establish specific price targets or timetables. Management determines the amount and timing of common share repurchases based on various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); organic capital generation; current and proposed future capital requirements; and other investment opportunities. The amount of common shares that the Firm repurchases in any period may be substantially more or less than the amounts estimated or actually repurchased in prior periods, reflecting the dynamic nature of the decision-making process. The Firm's common share repurchases may be suspended by management at any time; and may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 plans, which are written trading plans that the Firm may enter into from time to time under Rule 10b5-1 of the Securities Exchange Act of 1934 and which allow the Firm to repurchase its common shares during periods when it may otherwise not be repurchasing common shares — for example, during internal trading blackout periods.

As of December 31, 2024, approximately 58.8 million shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, and directors' compensation plans.

Note 23 – Earnings per share

Basic earnings per share ("EPS") is calculated using the two-class method. Under the two-class method, all earnings (distributed and undistributed) are allocated to common stock and participating securities. JPMorganChase grants RSUs under its share-based compensation programs, predominantly all of which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to dividends paid to holders of the Firm's common stock. These unvested RSUs meet the definition of participating securities based on their respective rights to receive nonforfeitable dividends, and they are treated as a separate class of securities in computing basic EPS. Participating securities are not included as incremental shares in computing diluted EPS; refer to Note 9 for additional information.

Diluted EPS incorporates the potential impact of contingently issuable shares, including awards which require future service as a condition of delivery of the underlying common stock. Diluted EPS is calculated under both the two-class and treasury stock methods, and the more dilutive amount is reported. For each of the periods presented in the table below, diluted EPS calculated under the two-class method was more dilutive.

The following table presents the calculation of net income applicable to common stockholders and basic and diluted EPS for the years ended December 31, 2024, 2023 and 2022.

Year ended December 31, (in millions, except per share amounts)	**2024**	2023	2022
Basic earnings per share			
Net income	**$ 58,471**	$ 49,552	$ 37,676
Less: Preferred stock dividends	**1,259**	1,501	1,595
Net income applicable to common equity	**57,212**	48,051	36,081
Less: Dividends and undistributed earnings allocated to participating securities	**344**	291	189
Net income applicable to common stockholders	**$ 56,868**	$ 47,760	$ 35,892
Total weighted-average basic shares outstanding	**2,873.9**	2,938.6	2,965.8
Net income per share	**$ 19.79**	$ 16.25	$ 12.10
Diluted earnings per share			
Net income applicable to common stockholders	**$ 56,868**	$ 47,760	$ 35,892
Total weighted-average basic shares outstanding	**2,873.9**	2,938.6	2,965.8
Add: Dilutive impact of unvested PSUs, nondividend-earning RSUs and SARs	**5.1**	4.5	4.2
Total weighted-average diluted shares outstanding	**2,879.0**	2,943.1	2,970.0
Net income per share	**$ 19.75**	$ 16.23	$ 12.09

Note 24 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), fair value changes of excluded components on fair value hedges, cash flow hedging activities, net gain/(loss) related to the Firm's defined benefit pension and OPEB plans, and fair value option-elected liabilities arising from changes in the Firm's own credit risk (DVA).

Year ended December 31, (in millions)	Unrealized gains/(losses) on investment securities	Translation adjustments, net of hedges	Fair value hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at December 31, 2021	$ 2,640	$ (934)	$ (131)	$ (296)	$ (210)	$ (1,153)	$ (84)
Net change	(11,764)	(611)	98	(5,360)	(1,241)	1,621	(17,257)
Balance at December 31, 2022	$ (9,124) [a]	$ (1,545)	$ (33)	$ (5,656)	$ (1,451)	$ 468	$ (17,341)
Net change	5,381	329	(101)	1,724	373	(808)	6,898
Balance at December 31, 2023	$ (3,743) [a]	$ (1,216)	$ (134)	$ (3,932)	$ (1,078)	$ (340)	$ (10,443)
Net change	(87)	(858)	(87)	(882)	(63)	(36)	(2,013)
Balance at December 31, 2024	**$ (3,830)** [a]	**$ (2,074)**	**$ (221)**	**$ (4,814)**	**$ (1,141)**	**$ (376)**	**$ (12,456)**

(a) Included after-tax net unamortized unrealized gains/(losses) of $(651) million, $(895) million, and $(1.3) billion for the years ended 2024, 2023 and 2022, respectively, related to AFS securities that have been transferred to HTM. As of December 31, 2023 included after-tax net unamortized unrealized gains/(losses) of $(29) million related to HTM securities that have been transferred to AFS as permitted by the new hedge accounting guidance adopted on January 1, 2023. Refer to Note 10 for further information.

The following table presents the pre-tax and after-tax changes in the components of OCI.

	2024			2023			2022		
Year ended December 31, (in millions)	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$ (1,135)**	**$ 274**	**$ (861)**	$ 3,891	$ (922)	$ 2,969	$ (17,862)	$ 4,290	$ (13,572)
Reclassification adjustment for realized (gains)/ losses included in net income[a]	**1,021**	**(247)**	**774**	3,180	(768)	2,412	2,380	(572)	1,808
Net change	**(114)**	**27**	**(87)**	7,071	(1,690)	5,381	(15,482)	3,718	(11,764)
Translation adjustments[b]:									
Translation	**(4,385)**	**250**	**(4,135)**	1,714	(95)	1,619	(3,574)	265	(3,309)
Hedges	**4,322**	**(1,045)**	**3,277**	(1,697)	407	(1,290)	3,553	(855)	2,698
Net change	**(63)**	**(795)**	**(858)**	17	312	329	(21)	(590)	(611)
Fair value hedges, net change[c]	**(115)**	**28**	**(87)**	(134)	33	(101)	130	(32)	98
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**(3,742)**	**904**	**(2,838)**	483	(114)	369	(7,473)	1,794	(5,679)
Reclassification adjustment for realized (gains)/ losses included in net income[d]	**2,579**	**(623)**	**1,956**	1,775	(420)	1,355	420	(101)	319
Net change	**(1,163)**	**281**	**(882)**	2,258	(534)	1,724	(7,053)	1,693	(5,360)
Defined benefit pension and OPEB plans, net change[e]	**(131)**	**68**	**(63)**	421	(48)	373	(1,459)	218	(1,241)
DVA on fair value option elected liabilities, net change	**(45)**	**9**	**(36)**	(1,066)	258	(808)	2,141	(520)	1,621
Total other comprehensive income/(loss)	**$ (1,631)**	**$ (382)**	**$ (2,013)**	$ 8,567	$ (1,669)	$ 6,898	$ (21,744)	$ 4,487	$ (17,257)

(a) The pre-tax amount is reported in Investment securities gains/(losses) in the Consolidated statements of income.

(b) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. During the year ended December 31, 2024, the Firm reclassified a net pre-tax gain of $7 million to other income/expense, of which $89 million gain related to net investment hedges and $(82) million loss related to cumulative translation adjustments. During the year ended December 31, 2023, the Firm reclassified a net pre-tax loss of $(3) million. During the year ended December 31, 2022, the Firm reclassified a net pre-tax loss of $(8) million.

(c) Represents changes in fair value of cross-currency swaps attributable to changes in cross-currency basis spreads, which are excluded from the assessment of hedge effectiveness and recorded in other comprehensive income. The initial cost of cross-currency basis spreads is recognized in earnings as part of the accrual of interest on the cross-currency swaps.

(d) The pre-tax amounts are primarily recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.

(e) During the year ended December 31, 2022, a remeasurement of the Firm's U.S. principal defined benefit plan in the third quarter, was required as a result of a pension settlement. The remeasurement resulted in a net decrease of $1.4 billion in pre-tax AOCI.

Note 25 – Income taxes

JPMorganChase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorganChase uses the asset and liability method to provide for income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorganChase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorganChase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

Effective January 1, 2024, the Firm adopted updates to the Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method guidance, under the modified retrospective method. Refer to Notes 1, 6 and 14 for additional information.

Effective tax rate and expense

The following table presents a reconciliation of the applicable statutory U.S. federal income tax rate to the effective tax rate.

Effective tax rate

Year ended December 31,	2024	2023	2022
Statutory U.S. federal tax rate	**21.0 %**	21.0 %	21.0 %
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**3.1**	2.8	3.5
Tax-exempt income	**(0.7)**	(0.9)	(0.9)
Non-U.S. earnings	**1.4**	1.5	0.4
Business tax credits	**(2.4)**	(4.4)	(5.4)
Other, net	**(0.3)**	(0.4)	(0.2)
Effective tax rate	**22.1 %**	19.6 % [(a)]	18.4 %

(a) Income tax expense associated with the First Republic acquisition was reflected in the estimated bargain purchase gain, which resulted in a reduction in the Firm's effective tax rate.

The following table reflects the components of income tax expense/(benefit) included in the Consolidated statements of income.

Income tax expense/(benefit)

Year ended December 31, (in millions)	2024	2023	2022
Current income tax expense/(benefit)			
U.S. federal	**$ 7,091**	$ 8,973	$ 5,606
Non-U.S.	**4,753**	4,355	2,992
U.S. state and local	**2,762**	3,266	2,630
Total current income tax expense/ (benefit)	**14,606**	16,594	11,228
Deferred income tax expense/(benefit)			
U.S. federal	**1,771**	(3,475)	(2,004)
Non-U.S.	**72**	35	(154)
U.S. state and local	**161**	(1,094)	(580)
Total deferred income tax expense/(benefit)	**2,004**	(4,534)	(2,738)
Total income tax expense	**$ 16,610**	$ 12,060	$ 8,490

Total income tax expense includes $314 million, $68 million and $331 million of tax benefits in 2024, 2023, and 2022, respectively, resulting from the resolution of tax audits.

Tax effect of items recorded in stockholders' equity

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity, which are predominantly reflected in OCI as disclosed in Note 24. For the year ended December 31, 2024, stockholders' equity reflected the tax effect associated with the Firm's adoption of the Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method guidance. For the year ended December 31, 2023, stockholders' equity reflected the tax effect associated with the Firm's adoption of the TDR accounting guidance. Both of the respective adoptions were recognized in retained earnings. Refer to Note 1, 6 and 14 for further information.

Results from U.S. and non-U.S. earnings

The following table presents the U.S. and non-U.S. components of income before income tax expense.

Year ended December 31, (in millions)	2024	2023	2022
U.S.	**$ 59,472**	$46,868	$34,626
Non-U.S.[(a)]	**15,609**	14,744	11,540
Income before income tax expense	**$ 75,081**	$ 61,612	$46,166

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

The Firm will recognize any U.S. income tax expense it may incur on global intangible low tax income as income tax expense in the period in which the tax is incurred.

Deferred taxes

Deferred income tax expense/(benefit) reflects the differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table, the net deferred tax assets are reflected in other assets on the Firm's Consolidated balance sheets.

December 31, (in millions)	2024	2023	
Deferred tax assets			
Allowance for loan losses	**$ 6,117**	$ 5,809	
Employee benefits	**1,165**	1,247	
Accrued expenses and other	**8,881**	9,887	(a)
Depreciation and amortization	**386**	—	
Non-U.S. operations	**948**	860	
Tax attribute carryforwards	**352**	290	
Gross deferred tax assets	**17,849**	18,093	
Valuation allowance	**(249)**	(183)	
Deferred tax assets, net of valuation allowance	**$ 17,600**	$ 17,910	
Deferred tax liabilities			
Depreciation and amortization	**$ —**	$ 779	
Mortgage servicing rights, net of hedges	**1,912**	1,794	
Leasing transactions	**2,249**	2,254	
Other, net	**1,264**	2,935	
Gross deferred tax liabilities	**5,425**	7,762	
Net deferred tax assets	**$ 12,175**	$ 10,148	

(a) Includes the estimated net deferred tax asset associated with the First Republic acquisition.

JPMorganChase has recorded deferred tax assets of $352 million at December 31, 2024 in connection with tax attribute carryforwards. State and local capital loss carryforwards were $914 million, U.S. federal NOL carryforwards were $496 million, non-U.S. NOL carryforwards were $958 million, and other U.S. federal tax attributes were $111 million. If not utilized, a portion of the U.S. federal NOL carryforwards and other U.S. federal tax attributes will expire between 2026 and 2036 whereas others have an unlimited carryforward period. Similarly, certain non-U.S. NOL carryforwards will expire between 2026 and 2041 whereas others have an unlimited carryforward period. The state and local capital loss carryforwards will expire in 2026.

The valuation allowance at December 31, 2024, was predominantly driven by certain non-U.S. deferred tax assets, including NOL carryforwards.

Unrecognized tax benefits

At December 31, 2024, 2023 and 2022, JPMorganChase's unrecognized tax benefits, excluding related interest expense and penalties, were $6.2 billion, $5.4 billion and $5.0 billion, respectively, of which $4.4 billion, $3.9 billion and $3.8 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorganChase evaluates the need for changes in unrecognized tax benefits based on its anticipated tax return filing positions as part of its U.S. federal and state and local tax returns. In addition, the Firm is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service, as summarized in the Tax examination status table below. The evaluation of unrecognized tax benefits as well as the potential for audit settlements make it reasonably possible that over the next 12 months the gross balance of unrecognized tax benefits may increase or decrease by as much as approximately $2.4 billion. The change in the unrecognized tax benefit would result in a payment or income statement recognition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits.

(in millions)	**2024**	2023	2022
Balance at January 1,	**$ 5,401**	$ 5,043	$ 4,636
Increases based on tax positions related to the current period	**1,721**	1,440	1,234
Increases based on tax positions related to prior periods	**92**	37	123
Decreases based on tax positions related to prior periods	**(907)**	(1,110)	(824)
Decreases related to cash settlements with taxing authorities	**(148)**	(9)	(126)
Balance at December 31,	**$ 6,159**	$ 5,401	$ 5,043

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $288 million, $229 million and $141 million in 2024, 2023 and 2022, respectively.

At December 31, 2024 and 2023, in addition to the liability for unrecognized tax benefits, the Firm had accrued $1.7 billion and $1.6 billion, respectively, for income tax-related interest and penalties.

Tax examination status

JPMorganChase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many state and local jurisdictions throughout the U.S. The following table summarizes the status of tax years that remain subject to income tax examination of JPMorganChase and its consolidated subsidiaries by significant jurisdictions as of December 31, 2024.

	Periods under examination	Status
JPMorganChase – U.S.	2011 – 2013	Field examination of amended returns; certain matters at Appellate level
JPMorganChase – U.S.	2014 - 2020	Field examination of original and amended returns; certain matters at Appellate level
JPMorganChase – New York City	2015 - 2018	Field Examination
JPMorganChase – U.K.	2017 – 2022	Field examination of certain select entities

Note 26 – Restricted cash, other restricted assets and intercompany funds transfers

Restricted cash and other restricted assets

Certain of the Firm's cash and other assets are restricted as to withdrawal or usage. These restrictions are imposed by various regulatory authorities based on the particular activities of the Firm's subsidiaries.

The business of JPMorgan Chase Bank, N.A. is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC, subject to applicable limits.

The Firm is required to maintain cash reserves at certain non-US central banks.

The Firm is also subject to rules and regulations established by other U.S. and non U.S. regulators. As part of its compliance with the respective regulatory requirements, the Firm's broker-dealer activities are subject to certain restrictions on cash and other assets.

The following table presents the components of the Firm's restricted cash:

December 31, (in billions)	2024	2023
Segregated for the benefit of securities and cleared derivative customers	**18.7**	10.3
Cash reserves at non-U.S. central banks and held for other general purposes	**8.8**	9.3
Total restricted cash[(a)]	**$ 27.5**	$ 19.6

(a) Comprises $26.1 billion and $18.2 billion in deposits with banks, and $1.4 billion and $1.4 billion in cash and due from banks on the Consolidated balance sheets as of December 31, 2024 and 2023, respectively.

Also, as of December 31, 2024 and 2023, the Firm had the following other restricted assets:

- Cash and securities pledged with clearing organizations for the benefit of customers of $40.7 billion and $40.5 billion, respectively.
- Securities with a fair value of $26.8 billion and $20.5 billion, respectively, were also restricted in relation to customer activity.

Intercompany funds transfers

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase Bank, N.A., and its subsidiaries, from lending to JPMorgan Chase & Co. ("Parent Company") and certain of its affiliates unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to the Parent Company or to any particular affiliate, together with certain other transactions with such affiliate (collectively referred to as "covered transactions"), must be made on terms and conditions that are consistent with safe and sound banking practices. In addition, unless collateralized with cash or US Government debt obligations, covered transactions are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of covered transactions between any banking subsidiary and all of its affiliates is limited to 20% of the banking subsidiary's total capital.

The Parent Company's two principal subsidiaries are JPMorgan Chase Bank, N.A. and JPMorgan Chase Holdings LLC, an intermediate holding company (the "IHC"). The IHC generally holds the stock of JPMorganChase's subsidiaries other than JPMorgan Chase Bank, N.A. and its subsidiaries. The IHC also owns other assets and provides intercompany loans to the Parent Company. The Parent Company is obligated to contribute to the IHC substantially all the net proceeds received from securities issuances (including issuances of senior and subordinated debt securities and of preferred and common stock).

The principal sources of income and funding for the Parent Company are dividends from JPMorgan Chase Bank, N.A. and dividends and extensions of credit from the IHC. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including the Parent Company and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. The IHC is prohibited from paying dividends or extending credit to the Parent Company if certain capital or liquidity "thresholds" are breached or if limits are otherwise imposed by the Parent Company's management or Board of Directors.

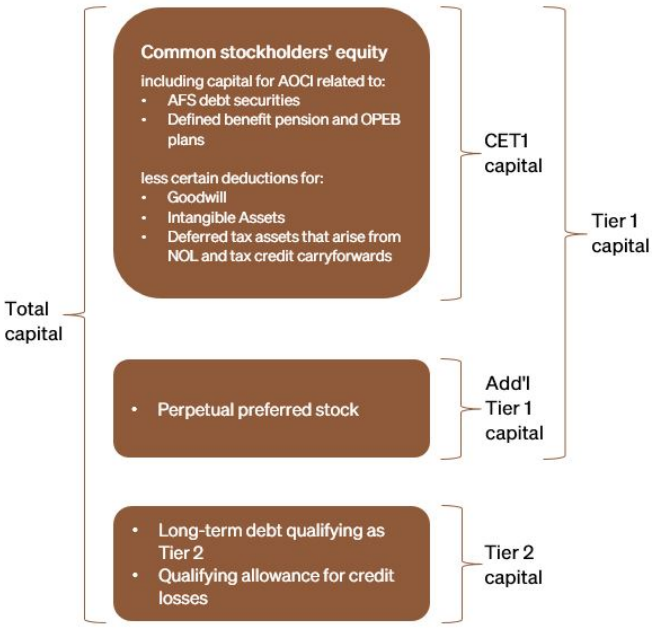
At January 1, 2025, the Parent Company's banking subsidiaries could pay, in the aggregate, approximately $15.5 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2025 will be supplemented by the banking subsidiaries' earnings during the year.

Note 27 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the Firm as a consolidated financial holding company. The OCC establishes similar minimum capital requirements and standards for the Firm's principal IDI subsidiary, JPMorgan Chase Bank, N.A.

The capital rules under Basel III establish minimum capital ratios and overall capital adequacy standards for large and internationally active U.S. bank holding companies and banks, including the Firm and JPMorgan Chase Bank, N.A. Under the rules currently in effect, two comprehensive approaches are prescribed for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). For each of these risk-based capital ratios, the capital adequacy of the Firm and JPMorgan Chase Bank, N.A. is evaluated against the lower of the Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements.

The three components of regulatory capital under the Basel III rules and their primary drivers are as illustrated below:



Under the risk-based capital and leverage-based guidelines of the Federal Reserve, JPMorgan Chase & Co. is required to maintain minimum ratios for CET1 capital, Tier 1 capital, Total capital, Tier 1 leverage and the SLR. Failure to meet these minimum requirements could cause the Federal Reserve to take action. JPMorgan Chase Bank, N.A. is also subject to these capital requirements established by its primary regulators.

The following table presents the risk-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and JPMorgan Chase Bank, N.A. were subject as of December 31, 2024 and 2023.

	Standardized capital ratio requirements		Advanced capital ratio requirements		Well-capitalized ratios	
	BHC[(a)(b)]	IDI[(c)]	BHC[(a)(b)]	IDI[(c)]	BHC[(d)]	IDI[(e)]
Risk-based capital ratios						
CET1 capital	12.3 %	7.0 %	11.5 %	7.0 %	NA	6.5 %
Tier 1 capital	13.8	8.5	13.0	8.5	6.0 %	8.0
Total capital	15.8	10.5	15.0	10.5	10.0	10.0

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and JPMorgan Chase Bank, N.A. are subject.

(a) Represents the regulatory capital ratio requirements applicable to the Firm. The CET1, Tier 1 and Total capital ratio requirements each include a respective minimum requirement plus a GSIB surcharge of 4.5% as calculated under Method 2; plus a 3.3% SCB for Basel III Standardized ratios and a fixed 2.5% capital conservation buffer for Basel III Advanced ratios. The countercyclical buffer is currently set to 0% by the federal banking agencies.

(b) For the period ended December 31, 2023, the CET1, Tier 1, and Total capital ratio requirements under Basel III Standardized applicable to the Firm were 11.4%, 12.9%, and 14.9%, respectively; the Basel III Advanced CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were 11.0%, 12.5%, and 14.5%, respectively.

(c) Represents requirements for JPMorgan Chase Bank, N.A. The CET1, Tier 1 and Total capital ratio requirements include a fixed capital conservation buffer requirement of 2.5% that is applicable to JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. is not subject to the GSIB surcharge.

(d) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.

(e) Represents requirements for JPMorgan Chase Bank, N.A. pursuant to regulations issued under the FDIC Improvement Act.

The following table presents the leverage-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and JPMorgan Chase Bank, N.A. were subject as of December 31, 2024 and 2023.

	Capital ratio requirements[(a)]		Well-capitalized ratios	
	BHC	IDI	BHC[(b)]	IDI
Leverage-based capital ratios				
Tier 1 leverage	4.0 %	4.0 %	NA	5.0 %
SLR	5.0	6.0	NA	6.0

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and JPMorgan Chase Bank, N.A. are subject.

(a) Represents minimum SLR requirement of 3.0%, as well as supplementary leverage buffer requirements of 2.0% and 3.0% for BHC and JPMorgan Chase Bank, N.A., respectively.

(b) The Federal Reserve's regulations do not establish well-capitalized thresholds for these measures for BHCs.

CECL Regulatory Capital Transition

Beginning January 1, 2022, the $2.9 billion CECL capital benefit, provided by the Federal Reserve in response to the COVID-19 pandemic, is being phased out at 25% per year over a three-year period. As of December 31, 2024 and 2023, the Firm's CET1 capital reflected the remaining benefit of $720 million and $1.4 billion, respectively, associated with the CECL capital transition provisions.

Similarly, as of January 1, 2024, the Firm has phased out 75% of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.

The following tables present risk-based capital metrics under both the Basel III Standardized and Basel III Advanced approaches and leverage-based capital metrics for JPMorgan Chase & Co. and JPMorgan Chase Bank, N.A. As of December 31, 2024 and 2023, JPMorgan Chase & Co. and JPMorgan Chase Bank, N.A. were well-capitalized and met all capital requirements to which each was subject.

	Basel III Standardized		**Basel III Advanced**	
December 31, 2024 (in millions, except ratios)	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Risk-based capital metrics:[a]				
CET1 capital	**$ 275,513**	**$ 275,732**	**$ 275,513**	**$ 275,732**
Tier 1 capital	**294,881**	**275,737**	**294,881**	**275,737**
Total capital	**325,589**	**296,041**	**311,898** [b]	**282,328** [b]
Risk-weighted assets	**1,757,460**	**1,718,777**	**1,740,429** [b]	**1,594,072** [b]
CET1 capital ratio	**15.7 %**	**16.0 %**	**15.8 %**	**17.3 %**
Tier 1 capital ratio	**16.8**	**16.0**	**16.9**	**17.3**
Total capital ratio	**18.5**	**17.2**	**17.9**	**17.7**

	Basel III Standardized		Basel III Advanced	
December 31, 2023 (in millions, except ratios)	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Risk-based capital metrics: [a]				
CET1 capital	$ 250,585	$ 262,030	$ 250,585	$ 262,030
Tier 1 capital	277,306	262,032	277,306	262,032
Total capital	308,497	281,308	295,417 [b]	268,392 [b]
Risk-weighted assets	1,671,995	1,621,789	1,669,156 [b]	1,526,952 [b]
CET1 capital ratio	15.0 %	16.2 %	15.0 %	17.2 %
Tier 1 capital ratio	16.6	16.2	16.6	17.2
Total capital ratio	18.5	17.3	17.7	17.6

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Includes the impacts of certain assets associated with First Republic to which the Standardized approach has been applied as permitted by the transition provisions in the U.S. capital rules.

	December 31, 2024		December 31, 2023	
Three months ended (in millions, except ratios)	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Leverage-based capital metrics: [a]				
Adjusted average assets[b]	**$ 4,070,499**	**$ 3,491,283**	$ 3,831,200	$ 3,337,842
Tier 1 leverage ratio	**7.2 %**	**7.9 %**	7.2 %	7.9 %
Total leverage exposure	**$ 4,837,568**	**$ 4,246,516**	$ 4,540,465	$ 4,038,739
SLR	**6.1 %**	**6.5 %**	6.1 %	6.5 %

(a) The capital metrics reflect the CECL capital transition provisions.
(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.

Note 28 – Off–balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorganChase provides lending-related financial instruments (e.g., commitments and guarantees) to address the financing needs of its customers and clients. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the customer or client draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the customer or client subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements.

To provide for expected credit losses in wholesale and certain consumer lending-related commitments, an allowance for credit losses on lending-related commitments is maintained. Refer to Note 13 for further information regarding the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2024 and 2023. The amounts in the table below for credit card, home equity and certain scored business banking lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these commitments will be utilized at the same time. The Firm can reduce or cancel these commitments, in accordance with the contract, or to the extent otherwise permitted by law, including when there has been a demonstrable decline in the creditworthiness of the borrower or significant decrease in the value of underlying property.

Off–balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity as of December 31, (in millions)	Contractual amount						Carrying value[h][i]	
	2024					2023	2024	2023
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Residential Real Estate[a]	**$ 10,838**	**$ 7,240**	**$ 4,601**	**$ 7,670**	**$ 30,349**	$ 30,125	**$ 534** [j]	$ 678 [j]
Auto and other	**10,833**	**14**	**5**	**3,643**	**14,495**	15,278	**37** [j]	148 [j]
Total consumer, excluding credit card	**21,671**	**7,254**	**4,606**	**11,313**	**44,844**	45,403	**571**	826
Credit card[b]	**1,001,311**	**—**	**—**	**—**	**1,001,311**	915,658	**—**	—
Total consumer[c]	**1,022,982**	**7,254**	**4,606**	**11,313**	**1,046,155**	961,061	**571**	826
Wholesale:								
Other unfunded commitments to extend credit[d]	**101,500**	**199,878**	**172,066**	**24,993**	**498,437**	503,526	**2,608** [j]	2,797 [j]
Standby letters of credit and other financial guarantees[d]	**15,825**	**8,506**	**3,780**	**565**	**28,676**	28,872	**473**	479
Other letters of credit[d]	**3,958**	**278**	**21**	**97**	**4,354**	4,388	**37**	37
Total wholesale[c]	**121,283**	**208,662**	**175,867**	**25,655**	**531,467**	536,786	**3,118**	3,313
Total lending-related	**$1,144,265**	**$ 215,916**	**$ 180,473**	**$ 36,968**	**$1,577,622**	$1,497,847	**$ 3,689**	$ 4,139
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[e]	**$ 310,046**	**$ —**	**$ —**	**$ —**	**$ 310,046**	$ 283,664	**$ —**	$ —
Derivatives qualifying as guarantees	**902**	**343**	**9,890**	**38,493**	**49,628**	54,562	**113**	89
Unsettled resale and securities borrowed agreements	**115,939**	**—**	**—**	**—**	**115,939**	95,106	**2**	—
Unsettled repurchase and securities loaned agreements	**66,986**	**—**	**—**	**—**	**66,986**	60,724	**(2)**	—
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**45**	76
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**1,189**	803	**23**	24
Exchange & clearing house guarantees and commitments[f]	**401,486**	**—**	**—**	**—**	**401,486**	265,887	**—**	—
Other guarantees and commitments[g]	**10,652**	**425**	**435**	**884**	**12,396**	15,074	**28**	38

(a) Includes certain commitments to purchase loans from correspondents.
(b) Also includes commercial card lending-related commitments primarily in CIB.
(c) Predominantly all consumer and wholesale lending-related commitments are in the U.S.
(d) As of December 31, 2024 and 2023, reflected the contractual amount net of risk participations totaling $85 million and $88 million, respectively, for other unfunded commitments to extend credit; $9.5 billion and $8.2 billion, respectively, for standby letters of credit and other financial guarantees; and $556 million and $589 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(e) As of December 31, 2024 and 2023, collateral held by the Firm in support of securities lending indemnification agreements was $328.7 billion and $300.3 billion, respectively. Securities lending collateral primarily consists of cash, G7 government securities, and securities issued by U.S. GSEs and government agencies.
(f) As of December 31, 2024 and 2023, includes guarantees to the Fixed Income Clearing Corporation under the sponsored member repo program and commitments and guarantees associated with the Firm's membership in certain clearing houses.
(g) As of December 31, 2024 and 2023, primarily includes unfunded commitments to purchase secondary market loans, other equity investment commitments, and unfunded commitments related to certain tax-oriented equity investments, and reflects the impact of adopting updates to the Accounting for Investments in Tax Credit Structures guidance effective January 1, 2024.
(h) For lending-related products, the carrying value includes the allowance for lending-related commitments and the guarantee liability; for derivative-related products, and lending-related commitments for which the fair value option was elected, the carrying value represents the fair value.
(i) For lending-related commitments, the carrying value also includes fees and any purchase discounts or premiums that are deferred and recognized in accounts payable and other liabilities on the Consolidated balance sheets. Deferred amounts for revolving commitments and commitments not expected to fund, are amortized to lending- and deposit-related fees on a straight line basis over the commitment period. For all other commitments the deferred amounts remain deferred until the commitment funds or is sold.
(j) As of December 31, 2024 and 2023, includes fair value adjustments associated with First Republic for residential real estate lending-related commitments totaling $459 million and $630 million, respectively; for auto and other lending-related commitments totaling $37 million and $148 million, respectively; and for other unfunded commitments to extend credit totaling $699 million and $1.1 billion, respectively. Refer to Note 34 for additional information.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay the guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off–balance sheet arrangements to be guarantees under U.S. GAAP: standby letters of credit and other financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements, certain derivative contracts and the guarantees under the sponsored member repo program.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the non-contingent obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For these obligations, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. The lending-related contingent obligation is recognized based on expected credit losses in addition to, and separate from, any non-contingent obligation.

Non-lending-related contingent obligations are recognized when the liability becomes probable and reasonably estimable. These obligations are not recognized if the estimated amount is less than the carrying amount of any non-contingent liability recognized at inception (adjusted for any amortization). Examples of non-lending-related contingent obligations include indemnifications provided in sales agreements, where a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires).

The contractual amount and carrying value of guarantees and indemnifications are included in the table on page 303.

For additional information on the guarantees, see below.

Standby letters of credit and other financial guarantees

Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a client or customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade financings and similar transactions.

The following table summarizes the contractual amount and carrying value of standby letters of credit and other financial guarantees and other letters of credit arrangements as of December 31, 2024 and 2023.

Standby letters of credit, other financial guarantees and other letters of credit

	2024		2023	
December 31, (in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[(a)]	**$ 20,443**	**$ 3,380**	$ 19,694	$ 3,552
Noninvestment-grade[(a)]	**8,233**	**974**	9,178	836
Total contractual amount	**$ 28,676**	**$ 4,354**	$ 28,872	$ 4,388
Allowance for lending-related commitments	**$ 94**	**$ 37**	$ 110	$ 37
Guarantee liability	**379**	**—**	369	—
Total carrying value	**$ 473**	**$ 37**	$ 479	$ 37
Commitments with collateral	**$ 16,805**	**$ 357**	$ 16,861	$ 539

(a) The ratings scale is based on the Firm's internal risk ratings. Refer to Note 12 for further information on internal risk ratings.

Securities lending indemnifications
Through the Firm's securities lending program, counterparties' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending client or counterparty with the cash equivalent thereof.

The cash collateral held by the Firm may be invested on behalf of the client in indemnified resale agreements, whereby the Firm indemnifies the client against the loss of principal invested. To minimize its liability under these agreements, the Firm obtains collateral with a market value exceeding 100% of the principal invested.

Derivatives qualifying as guarantees
The Firm transacts in certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less.

Derivatives deemed to be guarantees also includes stable value contracts, commonly referred to as "stable value products", that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value products are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio. These contracts are typically longer-term or may have no stated maturity, but allow the Firm to elect to terminate the contract under certain conditions.

The notional value of derivative guarantees generally represents the Firm's maximum exposure. However, exposure to certain stable value products is contractually limited to a substantially lower percentage of the notional amount.

The fair value of derivative guarantees reflects the probability, in the Firm's view, of whether the Firm will be required to perform under the contract. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

The following table summarizes the derivatives qualifying as guarantees as of December 31, 2024 and 2023.

(in millions)	December 31, 2024	December 31, 2023
Notional amounts		
Derivative guarantees	**$ 49,628**	$ 54,562
Stable value contracts with contractually limited exposure	**32,939**	32,488
Maximum exposure of stable value contracts with contractually limited exposure	**1,740**	1,652
Fair value		
Derivative payables	**113**	89

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. Refer to Note 5 for a further discussion of credit derivatives.

Unsettled securities financing agreements

In the normal course of business, the Firm enters into resale and securities borrowed agreements. At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty. The Firm also enters into repurchase and securities loaned agreements. At settlement, these commitments result in the Firm receiving cash from and providing securities collateral to the counterparty. Such agreements settle at a future date. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date. These agreements predominantly have regular-way settlement terms. Refer to Note 11 for a further discussion of securities financing agreements.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability
In connection with the Firm's mortgage loan sale and securitization activities with U.S. GSEs the Firm has made representations and warranties that the loans sold meet certain requirements, and that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser if such representations and warranties are breached by the Firm.

Private label securitizations
The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

Refer to Note 30 for additional information regarding litigation.

Loans sold with recourse
The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. The unpaid principal balance of loans sold with recourse as well as the carrying value of the related liability that the Firm has recorded in accounts payable and other liabilities on the Consolidated balance sheets, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, are disclosed in the table on page 303.

Other off-balance sheet arrangements
Indemnification agreements – general
In connection with issuing securities to investors outside the U.S., the Firm may agree to pay additional amounts to the holders of the securities in the event that, due to a change in tax law, certain types of withholding taxes are imposed on payments on the securities. The terms of the securities may also give the Firm the right to redeem the securities if such additional amounts are payable. The Firm may also enter into indemnification clauses such as in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Merchant charge-backs
Under the rules of payment networks, in its role as a merchant acquirer, the Firm's Merchant Services business in CIB Payments, retains a contingent liability for disputed processed credit and debit card transactions that result in a charge-back to the merchant. If a dispute is resolved in the cardholder's favor, the Firm will (through the cardholder's issuing bank) credit or refund the amount to the cardholder and will charge back the transaction to the merchant. If the Firm is unable to collect the amount from the merchant, the Firm will bear the loss for the amount credited or refunded to the cardholder. The Firm mitigates this risk by withholding future settlements, retaining cash reserve accounts or obtaining other collateral. In addition, the Firm recognizes a valuation allowance that covers the payment or performance risk related to charge-backs.

Clearing Services – Client Credit Risk
The Firm provides clearing services for clients by entering into securities purchases and sales and derivative contracts with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin: variation margin is posted on a daily basis based on the value of clients' derivative contracts and initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As a clearing member, the Firm is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of nonperformance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member.

The Firm reflects its exposure to nonperformance risk of the client through the recognition of margin receivables from clients and margin payables to CCPs; the clients' underlying securities or derivative contracts are not reflected in the Firm's Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

Refer to Note 5 for information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements.

Exchange & Clearing House Memberships
The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services to its clients. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may also include a pro rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses that may result from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. In certain cases, it is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to the Firm to be remote. Where the Firm's maximum possible exposure can be estimated, the amount is disclosed in the table on page 303, in the Exchange & clearing house guarantees and commitments line.

Sponsored member repo program
The Firm acts as a sponsoring member to clear eligible overnight and term resale and repurchase agreements through the Government Securities Division of the Fixed Income Clearing Corporation ("FICC") on behalf of clients that become sponsored members under the FICC's rules. The Firm also guarantees to the FICC the prompt and full payment and performance of its sponsored member clients' respective obligations under the FICC's rules. The Firm minimizes its liability under these guarantees by obtaining a security interest in the cash or high-quality securities collateral that the clients place with the clearing house; therefore, the Firm expects the risk of loss to be remote. The Firm's maximum possible exposure, without taking into consideration the associated collateral, is included in the Exchange & clearing house guarantees and commitments line on page 303. Refer to Note 11 for additional information on credit risk mitigation practices on resale agreements and the types of collateral pledged under repurchase agreements.

Guarantees of subsidiaries
In the normal course of business, the Parent Company may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company and no other subsidiary of the Parent Company guarantees these securities. These guarantees, which rank pari passu with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 303 of this Note. Refer to Note 20 for additional information.

Note 29 – Pledged assets and collateral

Pledged assets

The Firm pledges financial assets that it owns to maintain potential borrowing capacity at discount windows with Federal Reserve banks, various other central banks and FHLBs. Additionally, the Firm pledges assets for other purposes, including to collateralize repurchase and other securities financing agreements, to cover short sales and to collateralize derivative contracts and deposits. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are parenthetically identified on the Consolidated balance sheets as assets pledged.

The following table presents the carrying value of the Firm's pledged assets.

December 31, (in billions)	2024	2023
Assets that may be sold or repledged or otherwise used by secured parties	**$ 152.5**	$ 145.0
Assets that may not be sold or repledged or otherwise used by secured parties	**297.9**	244.2
Assets pledged at Federal Reserve banks and FHLBs	**724.0**	675.6
Total pledged assets	**$ 1,174.4**	$ 1,064.8

Total pledged assets do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. Refer to Note 14 for additional information on assets and liabilities of consolidated VIEs. Refer to Note 11 for additional information on the Firm's securities financing activities. Refer to Note 20 for additional information on the Firm's long-term debt. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	2024	2023
Investment securities	**$ 89.6**	$ 108.6
Loans	**740.9**	681.7
Trading assets and other	**343.9**	274.5
Total pledged assets	**$ 1,174.4**	$ 1,064.8

Collateral

The Firm accepts financial assets as collateral that it is permitted to sell or repledge, deliver or otherwise use. This collateral is generally obtained under resale and other securities financing agreements, prime brokerage-related held-for-investment customer receivables and derivative contracts. Collateral is generally used under repurchase and other securities financing agreements, to cover short sales, and to collateralize derivative contracts and deposits.

The following table presents the fair value of collateral accepted.

December 31, (in billions)	2024	2023
Collateral permitted to be sold or repledged, delivered, or otherwise used	**$ 1,544.0**	$ 1,303.9
Collateral sold, repledged, delivered or otherwise used	**1,210.7**	982.8

Note 30 – Litigation

Contingencies

As of December 31, 2024, the Firm and its subsidiaries and affiliates are defendants or respondents in numerous evolving legal proceedings, including private proceedings, public proceedings, government investigations, regulatory enforcement matters, and the matters described below. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations and regulatory enforcement matters involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and several geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $1.4 billion at December 31, 2024. This estimated aggregate range of reasonably possible losses was based upon information available as of that date for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given:

- the number, variety and varying stages of the proceedings, including the fact that many are in preliminary stages,
- the existence in many such proceedings of multiple defendants, including the Firm, whose share of liability (if any) has yet to be determined,
- the numerous yet-unresolved issues in many of the proceedings, including issues regarding class certification and the scope of many of the claims, and
- the uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect.

In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

1MDB Litigation. J.P. Morgan (Suisse) SA was named as a defendant in a civil litigation filed in May 2021 in Malaysia by 1Malaysia Development Berhad ("1MDB"), a Malaysian state-owned and controlled investment fund. The claim alleges "dishonest assistance" against J.P. Morgan (Suisse) SA in relation to payments of $300 million and $500 million, from 2009 and 2010, respectively, received from 1MDB and paid into an account at J.P. Morgan (Suisse) SA held by 1MDB PetroSaudi Limited, a joint venture company between 1MDB and PetroSaudi Holdings (Cayman) Limited. In March 2024, the Court upheld the Firm's challenge to the validity of service and the Malaysian Court's jurisdiction to hear the claim. That decision has been appealed by 1MDB. In August 2023, the Court denied an application by 1MDB to discontinue its claim with permission to re-file a new claim in the future. That decision was appealed by both 1MDB and the Firm, and an appeals court is scheduled to hear both appeals in November 2025. In its appeal, the Firm seeks to prevent any claim from continuing.

In addition, in November 2023, the Federal Office of the Attorney General (OAG) in Switzerland notified J.P. Morgan (Suisse) SA that it is conducting an investigation into possible criminal liability in connection with transactions arising from J.P. Morgan (Suisse) SA's relationship with the 1MDB PetroSaudi joint venture and its related persons for the period September 2009 through August 2015. The OAG investigation is ongoing.

Amrapali. India's Enforcement Directorate ("ED") is investigating J.P. Morgan India Private Limited in connection with investments made in 2010 and 2012 by two offshore funds formerly managed by JPMorganChase entities into residential housing projects developed by the Amrapali Group ("Amrapali") relating to delays in delivering or failure to deliver residential units. In August 2021, the ED issued an order fining J.P. Morgan India Private Limited approximately $31.5 million, and the Firm is appealing that order. Relatedly, in July 2019, the Supreme Court of India issued an order making preliminary findings that Amrapali and other parties, including unspecified JPMorganChase entities and the offshore funds that had invested in the projects, violated certain criminal currency control and money laundering provisions, and ordered the ED to conduct a further inquiry. The Firm is responding to and cooperating with the inquiry.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. Among those resolutions, in May 2015, the Firm pleaded guilty to a single violation of federal antitrust law. The Department of Labor ("DOL") granted the Firm exemptions that permit the Firm and its

affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA") through the ten-year disqualification period following the antitrust plea. The only remaining FX-related governmental inquiry is a South Africa Competition Commission matter which is currently pending before the South Africa Competition Tribunal.

With respect to civil litigation matters, some FX-related individual and putative class actions filed outside the U.S., including in the U.K., Israel, the Netherlands, Brazil and Australia, remain. In July 2023, the U.K. Court of Appeal overturned the Competition Appeal Tribunal's earlier denial of a request for class certification on an opt-out basis. The defendants have appealed this decision to the U.K. Supreme Court. In Israel, a settlement in principle has been reached on the putative class action, which remains subject to court approval.

Interchange Litigation. Groups of merchants and retail associations filed a series of class action complaints alleging that Visa and Mastercard, as well as certain banks, conspired to set the price of credit and debit card interchange fees and enacted related rules in violation of antitrust laws.

In September 2018, the parties settled the class action seeking monetary relief, with the defendants collectively contributing approximately $6.2 billion. The settlement has been approved by the United States District Court for the Eastern District of New York and affirmed on appeal. Based on the percentage of merchants that opted out of the settlement, $700 million has been returned to the defendants from the settlement escrow. A separate class action seeking injunctive relief continues, and in September 2021, the District Court granted plaintiffs' motion for class certification in part, and denied the motion in part. In June 2024, the District Court denied preliminary approval of a settlement of the injunctive class action in which Visa and Mastercard agreed to certain changes to their respective network rules and system-wide reductions in interchange rates for U.S.-based merchants. The parties are considering next steps.

Of the merchants who opted out of the damages class settlement, certain merchants filed individual actions raising similar allegations against Visa and Mastercard, as well as against the Firm and other banks. While some of those actions remain pending, the defendants have reached settlements with the merchants who opted out representing over 70% of the combined Mastercard-branded and Visa-branded payment card sales volume.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorganChase has responded to inquiries from various governmental agencies and entities around the world relating primarily to the British Bankers Association's ("BBA") London Interbank Offered Rate ("LIBOR") for various currencies and the European Banking Federation's Euro Interbank Offered Rate ("EURIBOR"). The Swiss Competition Commission's investigation relating to EURIBOR, to which the Firm and one other bank remain subject, continues. The Firm appealed a December 2016 decision by the European Commission against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. In December 2023, the European General Court annulled the fine imposed by the European Commission, but exercised its discretion to re-impose a fine in an identical amount. In March 2024, the Firm filed an appeal of this decision with the Court of Justice of the European Union.

In addition, the Firm has been named as a defendant along with other banks in various individual and putative class actions related to benchmark rates, including U.S. dollar LIBOR. In actions related to U.S. dollar LIBOR during the period that it was administered by the BBA, the United States District Court for the Southern District of New York granted class certification of antitrust claims related to bonds and interest rate swaps sold directly by the defendants, including the Firm. The Firm has obtained dismissal of certain actions and resolved certain other actions, and as to all remaining actions has moved for summary judgment. In addition, a lawsuit filed by a group of individual plaintiffs asserting antitrust claims, alleging that the Firm and other defendants were engaged in an unlawful agreement to set U.S. dollar LIBOR and conspired to monopolize the market for LIBOR-based consumer loans and credit cards was dismissed in October 2023 and affirmed on appeal by the United States Court of Appeals for the Ninth Circuit in December 2024. The Firm has resolved all non-U.S. dollar LIBOR actions.

Russian Litigation. The Firm is obligated to comply with international sanctions laws, which mandate the blocking of certain assets. These laws apply when assets associated with individuals, companies, products or services are within the scope of the sanctions. The Firm has faced actual and threatened litigation in Russia seeking payments that the Firm cannot make under, and is contractually excused from paying as a result of, relevant sanctions laws. In claims involving the Firm and claims filed against other financial institutions, Russian courts have disregarded the parties' contractual agreements concerning forum selection and did not recognize foreign sanctions laws as a basis for not making payment. Russian courts have entered judgment against the Firm in a number of claims, including one for $439 million, and a judgment has been executed against assets held onshore by the Firm in Russia. The total amount of the judgments exceeds the total amount of available assets that the Firm holds in Russia. The Firm continues to appeal the Russian courts' decisions, and judgments may not be executed while on appeal. Russian courts have also ordered interim freezes of Firm assets in Russia (including, among other things, funds in bank accounts, securities, shares in authorized capital, and certain trademarks, of the named defendants) pending a determination of

certain underlying claims against the Firm. The Firm has challenged claims being pursued in the Russian courts and related freeze orders in other jurisdictions provided for by the parties' contractual forum selections. If further claims are enforced despite the actions taken by the Firm to challenge the claims and orders and to seek the proper application of law, the Firm's assets in Russia could be seized in full, and certain client assets could also be seized, or the Firm could be prevented from complying with its obligations.

SEC Inquiries. In October 2024, the Firm entered into settlements with the SEC to resolve inquiries related to, among other things, conflict disclosures concerning the selection of portfolio managers and the timing of the Firm's liquidation of shares distributed in-kind to certain investment vehicles that invest in third-party managed private funds and certain other matters. The resolutions required the Firm to pay a combined $151 million in civil penalties and voluntary payments to customers. The Firm continues to cooperate in connection with SEC inquiries concerning the aggregation of accounts for fee billing and various other matters.

Shareholder Litigation. Several shareholder putative class actions, as well as shareholder derivative actions purporting to act on behalf of the Firm, have been filed against the Firm, its Board of Directors and certain of its current and former officers.

Certain of these shareholder suits relate to historical trading practices by former employees in the precious metals and U.S. treasuries markets and related conduct which were the subject of the Firm's resolutions with the DOJ, CFTC and SEC in September 2020, and fiduciary activities that were separately the subject of a resolution between JPMorgan Chase Bank, N.A. and the OCC in November 2020. One of these shareholder derivative suits was filed in the Supreme Court of the State of New York in May 2022, asserting breach of fiduciary duty and unjust enrichment claims relating to the historical trading practices and related conduct and fiduciary activities which were the subject of the resolutions described above. In December 2022, the court granted defendants' motion to dismiss this action in full, and in July 2023, the plaintiff filed an appeal, which remains pending.

A second shareholder derivative action relating to the historical trading practices and related conduct was filed in the United States District Court for the Eastern District of New York in December 2022. Defendants have moved to dismiss the complaint.

Zelle Network Litigation. In December 2024, the Consumer Financial Protection Bureau ("CFPB") filed a complaint against Early Warning Services, LLC ("EWS"), Bank of America, N.A., Wells Fargo Bank, N.A. and JPMorgan Chase Bank, N.A. in the United States District Court for the District of Arizona. The CFPB alleges that EWS and the defendant banks have failed to take sufficient efforts to prevent fraud on the Zelle network. The defendants will file a response to the complaint.

* * *

In addition to the various legal proceedings discussed above, JPMorganChase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upward or downward, as appropriate, based on management's best judgment after consultation with counsel. The Firm's legal expense was $740 million, $1.4 billion and $266 million for the years ended December 31, 2024, 2023 and 2022, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or consequences related to those matters. JPMorganChase believes, based upon its current knowledge and after consultation with counsel, consideration of the material legal proceedings described above and after taking into account its current litigation reserves and its estimated aggregate range of possible losses, that the other legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorganChase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorganChase's income for that period.

Note 31 – International operations

The following table presents income statement and balance sheet-related information for JPMorganChase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, booking location or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 32.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2024						
Europe/Middle East/Africa	**$ 22,353**	**$ 12,843**	**$ 9,510**	**$ 6,713**	**$ 552,407**	[d]
Asia-Pacific	**11,995**	**6,922**	**5,073**	**3,615**	**296,430**	
Latin America/Caribbean	**3,885**	**1,895**	**1,990**	**1,512**	**73,631**	
Total international	**38,233**	**21,660**	**16,573**	**11,840**	**922,468**	
North America[a]	**139,323**	**80,815**	**58,508**	**46,631**	**3,080,346**	
Total	**$ 177,556**	**$ 102,475**	**$ 75,081**	**$ 58,471**	**$ 4,002,814**	
2023						
Europe/Middle East/Africa	$ 20,974	$ 11,947	$ 9,027	$ 6,402	$ 529,335	[d]
Asia-Pacific	10,605	6,550	4,055	2,709	251,588	
Latin America/Caribbean	3,294	1,971	1,323	994	83,003	
Total international	34,873	20,468	14,405	10,105	863,926	
North America[a]	123,231	76,024	47,207	39,447	3,011,467	
Total	$ 158,104	$ 96,492	$ 61,612	$ 49,552	$ 3,875,393	
2022						
Europe/Middle East/Africa	$ 18,765	$ 11,754	$ 7,011	$ 5,158	$ 558,430	[d]
Asia-Pacific	10,025	6,763	3,262	2,119	281,479	
Latin America/Caribbean	3,178	1,697	1,481	1,156	78,673	
Total international	31,968	20,214	11,754	8,433	918,582	
North America[a]	96,727	62,315	34,412	29,243	2,747,161	
Total	$ 128,695	$ 82,529	$ 46,166	$ 37,676	$ 3,665,743	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $369 billion, $352 billion and $357 billion at December 31, 2024, 2023 and 2022, respectively.

Note 32 – Business segments & Corporate

Business segment reorganization: Effective in the second quarter of 2024, the Firm reorganized its reportable business segments by combining the former Corporate & Investment Bank and Commercial Banking business segments to form one reportable segment, the Commercial & Investment Bank. As a result of the reorganization, the Firm has three reportable business segments – Consumer & Community Banking, Commercial & Investment Bank, and Asset & Wealth Management – with the remaining activities in Corporate.

Adoption of accounting standard — Segment Reporting — Improvements to Reportable Segment Disclosures: This guidance was adopted retrospectively for the Firm's annual Consolidated Financial Statements for the year ended December 31, 2024. The adoption of this guidance requires additional reportable segment disclosures, primarily relating to significant segment expenses and the chief operating decision maker ("CODM"). Adoption of this guidance did not result in changes to the identification of the Firm's reportable business segments, or of its CODM.
The Firm is managed on an LOB basis. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is evaluated by the Firm's Operating Committee, whose members act collectively as the Firm's CODM. Segment results are presented on a managed basis. Refer to Segment & Corporate results in this footnote for a further discussion of JPMorganChase's reportable business segments and Corporate.

The following is a description of each of the Firm's reportable business segments, and the products and services that they provide to their respective client bases, as well as a description of Corporate activities.

Consumer & Community Banking

Consumer & Community Banking offers products and services to consumers and small businesses through bank branches, ATMs, digital (including mobile and online) and telephone banking. CCB is organized into Banking & Wealth Management (including Consumer Banking, Business Banking and J.P. Morgan Wealth Management), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card Services & Auto. Banking & Wealth Management offers deposit, investment and lending products, cash management, payments and services. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card Services issues credit cards and offers travel services. Auto originates and services auto loans and leases.

Commercial & Investment Bank

The Commercial & Investment Bank is comprised of the Banking & Payments and Markets & Securities Services businesses. These businesses offer investment banking, lending, payments, market-making, financing, custody and securities products and services to a global base of corporate and institutional clients. Banking & Payments offers products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, and loan origination and syndication. Banking & Payments also provides services that enable clients to manage payments globally across liquidity and account solutions, commerce solutions, clearing, trade, and working capital. Markets & Securities Services includes Markets, which is a global market-maker across products, including cash and derivative instruments, and also offers sophisticated risk management solutions, lending, prime brokerage, clearing and research. Markets & Securities Services also includes Securities Services, a leading global custodian that provides custody, fund services, liquidity and trading services, and data solutions products.

Asset & Wealth Management

Asset & Wealth Management, with client assets of $5.9 trillion, is a global leader in investment and wealth management.

Asset Management
Offers multi-asset investment management solutions across equities, fixed income, alternatives and money market funds to institutional and retail investors providing for a broad range of clients' investment needs.

Global Private Bank
Provides retirement products and services, brokerage, custody, estate planning, lending, deposits and investment management to high net worth clients.

The majority of AWM's client assets are in actively managed portfolios.

Corporate

Corporate consists of Treasury and Chief Investment Office ("CIO") and Other Corporate. Treasury and CIO is predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding, capital, structural interest rate and foreign exchange risks.

Other Corporate includes staff functions and expense that is centrally managed as well as certain Firm initiatives and activities not solely aligned to a specific LOB. The major Other Corporate functions include Real Estate, Technology, Legal, Corporate Finance, Human Resources, Internal Audit, Risk Management, Compliance, Control Management, Corporate Responsibility and various Other Corporate groups.

Description of business segment reporting methodology

Results of the reportable business segments are intended to present each segment as if it were a stand-alone business. The management reporting process that derives business segment results includes the allocation of certain income and expense items. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and therefore further refinements may be implemented in future periods. The Firm also assesses the level of capital required for each LOB on at least an annual basis. The Firm's LOBs also provide various business metrics which are utilized by the Firm and its investors and analysts in assessing performance.

Revenue sharing

When business segments or businesses within each segment join efforts to sell products and services to the Firm's clients and customers, the participating businesses may agree to share revenue from those transactions. Revenue is generally recognized in the segment responsible for the related product or service, with allocations to the other segments or businesses involved in the transaction. The segment and business results reflect these revenue-sharing agreements.

Expense allocation

Where business segments use services provided by Corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on the actual cost and use of services provided. In contrast, certain costs and investments related to Corporate that are not currently utilized by any LOB are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes costs that would not be incurred if the segments were stand-alone businesses, and other items not solely aligned with a particular reportable business segment.

Funds transfer pricing

Funds transfer pricing ("FTP") is the process by which the Firm allocates interest income and expense to the LOBs and Other Corporate and transfers the primary interest rate risk and liquidity risk to Treasury and CIO.

The funds transfer pricing process considers the interest rate and liquidity risk characteristics of assets and liabilities and off-balance sheet products.

Periodically, the methodology and assumptions utilized in the FTP process are adjusted to reflect economic conditions and other factors, which may impact the allocation of net interest income to the segments. Effective in the fourth quarter of 2024, the Firm updated its FTP with respect to consumer deposits, which resulted in an increase in the funding benefit reflected within CCB's net interest income that is fully offset in Corporate, with no effect on the Firm's net interest income.

Foreign exchange risk

Foreign exchange risk is transferred from the LOBs and Other Corporate to Treasury and CIO for certain revenues and expenses. Treasury and CIO manages these risks centrally and reports the impact of foreign exchange rate movements related to the transferred risk in its results.

Debt expense and preferred stock dividend allocation

As part of the FTP process, almost all of the cost of the credit spread component of outstanding unsecured long-term debt and preferred stock dividends is allocated to the reportable business segments, while the balance of the cost is retained in Corporate. The methodology to allocate the cost of unsecured long-term debt and preferred stock dividends to the business segments is aligned with the relevant regulatory capital requirements and funding needs of the LOBs, as applicable. The allocated cost of unsecured long-term debt is included in a business segment's net interest income, and net income is reduced by preferred stock dividends, to arrive at a business segment's net income applicable to common equity.

Capital allocation

Each LOB and Corporate is allocated capital by taking into consideration a variety of factors including capital levels of similarly rated peers and applicable regulatory capital requirements. ROE is measured and internal targets for expected returns are established as key measures of an LOB's performance.

The Firm's current equity allocation methodology incorporates Basel III Standardized RWA and the GSIB surcharge, both under rules currently in effect, as well as a simulation of capital depletion in a severe stress environment. At least annually, the assumptions, judgments and methodologies used to allocate capital are reassessed and, as a result, the capital allocated to the LOBs and Corporate may change.

Segment & Corporate results

The following table provides a summary of results for the Firm's reportable business segments and Corporate activities as of or for the years ended December 31, 2024, 2023 and 2022, on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm as a whole (and for each of the reportable business segments and Corporate) on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This allows management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit). These adjustments have no impact on net income as reported by the Firm as a whole or by the each of the LOBs and Corporate.

The Operating Committee reviews segment results including net interest income, noninterest revenue, noninterest expense, provision for credit losses and net income on a managed basis. The Operating Committee uses these measures to evaluate segment performance and to make key operating decisions, including resource and capital allocations.

Segment & Corporate results and reconciliation[(a)]

(Table continued on next page)

As of or for the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Commercial & Investment Bank			Asset & Wealth Management		
	2024	2023	2022	**2024**	2023	2022	**2024**	2023	2022
Noninterest revenue	**$ 16,649**	$ 15,118	$ 14,886 [(e)]	**$ 48,253**	$ 43,809	$ 39,538 [(b)]	**$ 15,023**	$ 13,560	$ 12,507
Net interest income	**54,858**	55,030	39,928	**21,861**	20,544	20,097	**6,555**	6,267	5,241
Total net revenue	**71,507**	70,148	54,814	**70,114**	64,353	59,635	**21,578**	19,827	17,748
Provision for credit losses	**9,974**	6,899	3,813	**762**	2,091	2,426	**(68)**	159	128
Compensation expense[(b)]	**17,045**	15,171	13,092	**18,191**	17,105	16,214	**7,984**	7,115	6,336
Noncompensation expense[(c)(d)]	**20,991**	19,648	18,116	**17,162**	16,867	15,855	**6,430**	5,665	5,493
Total noninterest expense	**38,036**	34,819	31,208 [(e)]	**35,353**	33,972	32,069 [(b)]	**14,414**	12,780	11,829
Income/(loss) before income tax expense/(benefit)	**23,497**	28,430	19,793	**33,999**	28,290	25,140	**7,232**	6,888	5,791
Income tax expense/(benefit)	**5,894**	7,198	4,877 [(e)]	**9,153**	8,018	6,002 [(b)]	**1,811**	1,661	1,426
Net income/(loss)	**$ 17,603**	$ 21,232	$ 14,916	**$ 24,846**	$ 20,272	$ 19,138	**$ 5,421**	$ 5,227	$ 4,365
Average equity	**$ 54,500**	$ 54,349	$ 50,000	**$ 132,000**	$ 137,507	$ 128,000	**$ 15,500**	$ 16,671	$ 17,000
Total assets	**650,268**	642,951	514,085	**1,773,194**	1,638,493	1,591,402	**255,385**	245,512	232,037
Return on equity	**32 %**	38 %	29 %	**18 %**	14 %	14 %	**34 %**	31 %	25 %
Overhead ratio	**53**	50	57	**50**	53	54	**67**	64	67

(Table continued from previous page)

As of or for the year ended December 31, (in millions, except ratios)	Corporate			Reconciling Items[a]			Total		
	2024	2023	2022	**2024**	2023	2022	**2024**	2023	2022
Noninterest revenue	**$ 7,608** [f]	$ 132	$ (1,798)	**$ (2,560)**	$ (3,782)	$ (3,148)	**$ 84,973** [f]	$ 68,837	$ 61,985
Net interest income	**9,786**	7,906	1,878	**(477)**	(480)	(434)	**92,583**	89,267	66,710
Total net revenue	**17,394**	8,038	80	**(3,037)**	(4,262)	(3,582)	**177,556**	158,104	128,695
Provision for credit losses	**10**	171	22	**—**	—	—	**10,678**	9,320	6,389
Total noninterest expense[d]	**3,994** [g]	5,601	1,034	**—**	—	—	**91,797** [g]	87,172	76,140
Income/(loss) before income tax expense/(benefit)	**13,390**	2,266	(976)	**(3,037)**	(4,262)	(3,582)	**75,081**	61,612	46,166
Income tax expense/(benefit)	**2,789**	(555)	(233)	**(3,037)**	(4,262)	(3,582)	**16,610**	12,060	8,490
Net income/(loss)	**$ 10,601**	$ 2,821	$ (743)	**$ —**	$ —	$ —	**$ 58,471**	$ 49,552	$ 37,676
Average equity	**$ 110,370**	$ 73,529	$ 58,068	**$ —**	$ —	$ —	**$ 312,370**	$ 282,056	$ 253,068
Total assets	**1,323,967**	1,348,437	1,328,219	**NA**	NA	NA	**4,002,814**	3,875,393	3,665,743
Return on equity	**NM**	NM	NM	**NM**	NM	NM	**18 %**	17 %	14 %
Overhead ratio	**NM**	NM	NM	**NM**	NM	NM	**52**	55	59

(a) Segment results on a managed basis reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results. In addition, effective January 1, 2024, the Firm adopted updates to the Accounting for Investments in Tax Credit Structures guidance, under the modified retrospective method. Refer to Notes 1, 6, 14 and 25 for additional information.
(b) Excludes expense related to services provided by Corporate support units, which is allocated from Corporate to each respective reportable business segment, as applicable, through noncompensation expense.
(c) Reflects occupancy; technology, communications and equipment; professional and outside services; marketing; and other expense. Refer to Note 6 for additional information on other expense.
(d) Certain services are provided by Corporate and used by each of the reportable business segments. The costs of these services, including compensation-related costs, are allocated from Corporate to the respective reportable business segments, with the allocations recorded in noncompensation expense.
(e) In the first quarter of 2023, the allocations of revenue and expense to CCB associated with a Merchant Services revenue sharing agreement were discontinued and are now retained in Payments in CIB. Prior-period amounts have been revised to conform with the current presentation.
(f) Included a $7.9 billion net gain related to Visa shares recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.
(g) Included a $1.0 billion contribution of Visa shares to the JPMorgan Chase Foundation recorded in the second quarter of 2024. Refer to Notes 2 and 6 for additional information.

Note 33 – Parent Company

The following tables present Parent Company-only financial statements.

Statements of income and comprehensive income

Year ended December 31, (in millions)	2024	2023	2022
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	**$ 37,000**	$ 61,000	$ 40,500
Non-bank	**—**	—	—
Interest income from subsidiaries	**1,228**	1,166	498
Other income/(expense) from subsidiaries:			
Bank and bank holding company	**555**	1,801	(3,497)
Non-bank	**172**	250	335
Other income/(expense)	**1,252**	(654)	5,271
Total income	**40,207**	63,563	43,107
Expense			
Interest expense/(income) to subsidiaries and affiliates[(a)]	**7,433**	2,258	22,731
Other interest expense/(income)[(a)]	**8,068**	11,714	(14,658)
Noninterest expense	**3,280**	3,431	2,817
Total expense	**18,781**	17,403	10,890
Income before income tax benefit and undistributed net income of subsidiaries	**21,426**	46,160	32,217
Income tax benefit	**1,264**	1,525	1,260
Equity in undistributed net income of subsidiaries	**35,781**	1,867	4,199
Net income	**$ 58,471**	$ 49,552	$ 37,676
Other comprehensive income/(loss), net	**(2,013)**	6,898	(17,257)
Comprehensive income	**$ 56,458**	$ 56,450	$ 20,419

Balance sheets

December 31, (in millions)	2024	2023
Assets		
Cash and due from banks	**$ 38**	$ 42
Deposits with banking subsidiaries	**9,762**	9,804
Trading assets	**43,214**	3,198
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	**142**	152
Non-bank	**79**	21
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	**603,044**	568,472
Non-bank	**1,238**	1,045
Other assets	**12,097**	8,962
Total assets	**$669,614**	$ 591,696
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates	**$ 72,881**	$ 22,777
Short-term borrowings	**—**	999
Other liabilities	**12,349**	11,500
Long-term debt[(b)(c)]	**239,626**	228,542
Total liabilities[(c)]	**324,856**	263,818
Total stockholders' equity	**344,758**	327,878
Total liabilities and stockholders' equity	**$669,614**	$ 591,696

Statements of cash flows

Year ended December 31, (in millions)	2024	2023	2022
Operating activities			
Net income	**$ 58,471**	$ 49,552	$ 37,676
Less: Net income of subsidiaries and affiliates	**72,781**	62,868	44,699
Parent company net loss	**(14,310)**	(13,316)	(7,023)
Cash dividends from subsidiaries and affiliates	**37,000**	61,000	40,500
Other operating adjustments	**(44,671)**	9,412	(23,747)
Net cash provided by/(used in) operating activities	**(21,981)**	57,096	9,730
Investing activities			
Net change in:			
Advances to and investments in subsidiaries and affiliates, net	**—**	(25,000)	—
All other investing activities, net	**21**	25	31
Net cash provided by/(used in) investing activities	**21**	(24,975)	31
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates	**49,902**	(2,249)	(4,491)
Short-term borrowings	**(999)**	—	—
Proceeds from long-term borrowings	**44,997**	19,398	41,389
Payments of long-term borrowings	**(29,753)**	(25,105)	(18,294)
Proceeds from issuance of preferred stock	**2,500**	—	—
Redemption of preferred stock	**(9,850)**	—	(7,434)
Treasury stock repurchased	**(18,830)**	(9,824)	(3,162)
Dividends paid	**(14,783)**	(13,463)	(13,562)
All other financing activities, net	**(1,270)**	(879)	(1,205)
Net cash provided by/(used in) financing activities	**21,914**	(32,122)	(6,759)
Net increase/(decrease) in cash and due from banks and deposits with banking subsidiaries	**(46)**	(1)	3,002
Cash and due from banks and deposits with banking subsidiaries at the beginning of the year	**9,846**	9,847	6,845
Cash and due from banks and deposits with banking subsidiaries at the end of the year	**$ 9,800**	$ 9,846	$ 9,847
Cash interest paid	**$ 14,851**	$ 13,742	$ 7,462
Cash income taxes paid, net[(d)]	**6,252**	10,291	6,941

(a) Includes interest expense for intercompany derivative hedges on the Firm's LTD and related fair value adjustments, which is offset by related amounts in Other interest expense/(income).

(b) At December 31, 2024, long-term debt that contractually matures in 2025 through 2029 totaled $7.7 billion, $29.3 billion, $20.2 billion, $35.0 billion, and $18.5 billion, respectively.

(c) Refer to Notes 20 and 28 for information regarding the Parent Company's guarantees of its subsidiaries' obligations.

(d) Represents payments, net of refunds, made by the Parent Company to various taxing authorities and includes taxes paid on behalf of certain of its subsidiaries that are subsequently reimbursed. The reimbursements were $5.0 billion, $13.2 billion, and $11.3 billion for the years ended December 31, 2024, 2023 and 2022, respectively.

Note 34 – Business combinations

On May 1, 2023, JPMorganChase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation (“FDIC”), as receiver. The acquisition resulted in a bargain purchase gain, which represents the excess of the estimated fair value of the net assets acquired above the purchase price.

The Firm has determined that this acquisition constitutes a business combination under U.S. GAAP. Accordingly, the initial recognition of the assets acquired and liabilities assumed were generally measured at their estimated fair values as of May 1, 2023. The determination of those fair values required management to make certain market-based assumptions about expected future cash flows, discount rates and other valuation inputs at the time of the acquisition. The Firm believes that the fair value estimates of the assets acquired and liabilities assumed provide a reasonable basis for determining the estimated bargain purchase gain.

The First Republic acquisition resulted in a preliminary estimated bargain purchase gain of $2.7 billion. The final bargain purchase gain of $2.9 billion reflects adjustments of $103 million and $63 million for the years ended December 31, 2024 and 2023, respectively, made during the one-year measurement period, as permitted by U.S. GAAP, to finalize management's fair value estimates for the assets acquired and liabilities assumed. As of December 31, 2024, certain matters related to the final settlement remained outstanding between the Firm and the FDIC.

On January 17, 2025, the Firm reached an agreement with the FDIC with respect to certain outstanding items. As a result of the agreement, the Firm made a payment of $609 million to the FDIC on January 31, 2025 and reduced its additional payable to the FDIC, which will result in a gain of approximately $600 million to be recorded in other income in the first quarter of 2025.

In connection with the First Republic acquisition, the Firm and the FDIC entered into two shared-loss agreements with respect to certain loans and lending-related commitments (the "shared-loss assets"): the Commercial Shared-Loss Agreement ("CSLA") and the Single-Family Shared-Loss Agreement (“SFSLA”). The CSLA covers 80% of credit losses, on a pari passu basis, over 5 years with a subsequent 3-year recovery period for certain acquired commercial loans and other real estate exposure. The SFSLA covers 80% of credit losses, on a pari passu basis, for 7 years for certain acquired loans secured by mortgages on real property or shares in cooperative property constituting a primary residence. The indemnification assets, which represent the fair value of the CSLA and SFSLA on the acquisition date, are reflected in the total assets acquired.

As part of the consideration paid, JPMorganChase issued a five-year, $50 billion secured note to the FDIC (the "Purchase Money Note"). The Purchase Money Note bears interest at a fixed rate of 3.4% and is secured by certain of the acquired loans. The Purchase Money Note is prepayable upon notice to the holder.

The Firm had placed a $5 billion deposit with First Republic Bank on March 16, 2023, as part of $30 billion of deposits provided by a consortium of large U.S. banks. The Firm's $5 billion deposit was effectively settled as part of the acquisition and the associated allowance for credit losses was released upon closing. The Firm subsequently repaid the remaining $25 billion of deposits to the consortium of banks, including accrued interest through the payment date on May 9, 2023.

The computation of the purchase price, the fair values of the assets acquired and liabilities assumed as part of the First Republic acquisition and the related bargain purchase gain are presented below, which reflects adjustments made during the measurement period to the acquisition-date fair value of the net assets acquired. The measurement period ended on April 30, 2024.

(in millions)		Fair value purchase price allocation as of May 1, 2023
Purchase price consideration		
Amounts paid/due to the FDIC, net of cash acquired[(a)]	$	13,555
Purchase Money Note (at fair value)[(b)]		48,848
Settlement of First Republic deposit and other related party transactions[(c)]		5,447
Contingent consideration - Shared-loss agreements		15
Purchase price consideration	$	67,865
Assets		
Securities	$	30,285
Loans		153,242
Core deposit and customer relationship intangibles		1,455
Indemnification assets - Shared-loss agreements		675
Accounts receivable and other assets[(d)]		6,740
Total assets acquired	$	192,397
Liabilities		
Deposits	$	87,572
FHLB advances		27,919
Lending-related commitments		2,614
Accounts payable and other liabilities[(d)]		2,792
Deferred tax liabilities		757
Total liabilities assumed	$	121,654
Fair value of net assets acquired	$	70,743
Gain on acquisition, after income taxes	$	2,878

(a) Net of cash acquired of $680 million, and including disputed amounts with the FDIC as of April 30, 2024.
(b) As part of the consideration paid, JPMorganChase issued a five-year, $50 billion secured note to the FDIC (the "Purchase Money Note").
(c) Includes $447 million of securities financing transactions with First Republic Bank that were effectively settled on the acquisition date.
(d) Other assets include $1.2 billion in tax-oriented investments and $683 million of lease right-of-use assets. Other liabilities include the related tax-oriented investment liabilities of $669 million and lease liabilities of $748 million.

The following describes the accounting policies and fair value methodologies generally used by the Firm for the following assets acquired and liabilities assumed: core deposit and customer relationship intangibles, shared-loss agreements and the related indemnification assets, Purchase Money Note, and FHLB advances.

For further discussion of the Firm's accounting policies and valuation methodologies, refer to Notes 2 and 3 for fair value measurement, Note 10 for investment securities, Note 12 for loans, Note 17 for deposits, and Note 28 for lending-related commitments.

Core deposit and customer relationship intangibles

Core deposit and certain wealth management customer relationship intangibles were acquired as part of the First Republic acquisition. The core deposit intangible of $1.3 billion was valued by discounting estimated after-tax cost savings over the remaining useful life of the deposits using the favorable source of funds method. The after-tax cost savings were estimated based on the difference between the cost of maintaining the core deposit base relative to the cost of next best alternative funding sources available to market participants. The customer relationship intangibles of $180 million were valued by discounting estimated after-tax earnings over their remaining useful lives using the multi-period excess earnings method. Both intangible asset valuations utilized assumptions that the Firm believes a market participant would use to estimate fair values, such as growth and attrition rates, projected fee income as well as related costs to service the relationships, and discount rates. The core deposit and customer relationship intangibles are amortized over a projected period of future cash flows of approximately 7 years. Refer to Note 15 for further discussion on other intangible assets.

Indemnification assets - Shared-loss agreements

The indemnification assets represent forecasted recoveries from the FDIC associated with the shared-loss assets over the respective shared-loss recovery periods. The indemnification assets were recorded at fair value in other assets on the Consolidated balance sheets on the acquisition date. The fair values of the indemnification assets were estimated based on the timing of the forecasted losses underlying the related allowance for credit losses. The subsequent quarterly remeasurement of the indemnification assets is based on changes in the amount and timing of forecasted losses in the allowance for credit losses associated with the shared-loss assets and is recorded in other income. Under certain circumstances, the Firm may be required to make a payment to the FDIC upon termination of the shared-loss agreements based on the level of actual losses and recoveries on the shared-loss assets. The estimated potential future payment is reflected as contingent consideration as part of the purchase price consideration.

Purchase Money Note and FHLB advances

The Purchase Money Note is recorded in long-term debt on the Consolidated balance sheets. The fair value of the Purchase Money Note was estimated based on a discounted cash flow methodology and incorporated estimated market discount rates.

The FHLB advances assumed in the acquisition are recorded in short-term borrowings and in long-term debt. The fair values of the FHLB advances were based on a discounted cash flow methodology and considered the observed FHLB advance issuance rates.

Loans

The following table presents the unpaid principal balance ("UPB") and fair values of the loans acquired as of May 1, 2023, and reflects adjustments made during the measurement period to the acquisition-date fair value of the loans acquired.

	May 1, 2023	
(in millions)	UPB	Fair value
Residential real estate	**$ 106,240**	**$ 92,053**
Auto and other	**3,093**	**2,030**
Total consumer	**109,333**	**94,083**
Secured by real estate	**37,117**	**33,602**
Commercial & industrial	**4,332**	**3,932**
Other	**23,499**	**21,625**
Total wholesale	**64,948**	**59,159**
Total loans	**$ 174,281**	**$ 153,242**

Unaudited pro forma condensed combined financial information

The following table presents certain unaudited pro forma financial information for the year ended December 31, 2023 and 2022 as if the First Republic acquisition had occurred on January 1, 2022, including recognition of the estimated bargain purchase gain of $2.8 billion and the provision for credit losses of $1.2 billion. Additional adjustments include the interest on the Purchase Money Note and the impact of amortizing and accreting certain estimated fair value adjustments related to intangible assets, loans and lending-related commitments.

The Firm expects to achieve operating cost savings and other business synergies resulting from the acquisition that are not reflected in the pro forma amounts. The pro forma information is not necessarily indicative of the historical results of operations had the acquisition occurred on January 1, 2022, nor is it indicative of the results of operations in future periods.

	Year ended December 31,	
(in millions)	2023	2022
Noninterest revenue	**$ 65,816**	$ 66,510
Net interest income	**90,856**	71,005
Net income	**48,665**	41,089

Supplementary Information: Distribution of assets, liabilities and stockholders' equity; interest rates and interest differentials

Consolidated average balance sheets, interest and rates

Provided below is a summary of JPMorganChase's consolidated average balances, interest and rates on a taxable-equivalent basis for the years 2022 through 2024. Income computed on a taxable-equivalent basis is the income reported in the Consolidated statements of income, adjusted to present interest income and rates earned on assets exempt from income taxes (i.e., federal taxes) on a basis comparable with other taxable investments. The incremental tax rate used for calculating the taxable-equivalent adjustment was approximately 24% in 2024, 2023 and 2022.

(Table continued on next page)

(Unaudited)	2024		
Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	Average balance[f]	Interest[f]	Rate
Assets			
Deposits with banks	$ 490,205	$ 22,297	4.55 %
Federal funds sold and securities purchased under resale agreements	359,197	18,299	5.09
Securities borrowed	209,744	9,208	4.39
Trading assets – debt instruments	456,029	20,373	4.47
Taxable securities	583,329	21,947	3.76
Non-taxable securities[a]	27,912	1,393	4.99
Total investment securities	611,241	23,340	3.82 [i]
Loans	1,322,425	92,588 [h]	7.00
All other interest-earning assets[b][c]	88,726	8,305	9.36
Total interest-earning assets	3,537,567	194,410	5.50
Allowance for loan losses	(22,877)		
Cash and due from banks	22,591		
Trading assets – equity and other instruments	208,534		
Trading assets – derivative receivables	57,005		
Goodwill, MSRs and other intangible assets	64,393		
All other noninterest-earning assets	218,709		
Total assets	$ 4,085,922		
Liabilities			
Interest-bearing deposits	$ 1,748,050	$ 49,559	2.84 %
Federal funds purchased and securities loaned or sold under repurchase agreements	363,820	19,149	5.26
Short-term borrowings	39,593	2,101	5.31
Trading liabilities – debt and all other interest-bearing liabilities[d][e]	314,054	10,238	3.26
Beneficial interests issued by consolidated VIEs	26,515	1,383	5.22
Long-term debt	344,346	18,920	5.49
Total interest-bearing liabilities	2,836,378	101,350	3.57
Noninterest-bearing deposits	638,592		
Trading liabilities – equity and other instruments[e]	32,025		
Trading liabilities – derivative payables	39,497		
All other liabilities, including the allowance for lending-related commitments	203,006		
Total liabilities	3,749,498		
Stockholders' equity			
Preferred stock	24,054		
Common stockholders' equity	312,370		
Total stockholders' equity	336,424 [g]		
Total liabilities and stockholders' equity	$ 4,085,922		
Interest rate spread			1.93 %
Net interest income and net yield on interest-earning assets		$ 93,060	2.63

(a) Represents securities that are tax-exempt for U.S. federal income tax purposes.
(b) Includes brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated Balance Sheets.
(c) The rates reflect the impact of interest earned on cash collateral where the cash collateral has been netted against certain derivative payables.
(d) All other interest-bearing liabilities include brokerage-related customer payables.
(e) The combined balance of trading liabilities – debt and equity instruments was $185.4 billion, $153.3 billion and $138.1 billion for the years ended December 31, 2024, 2023 and 2022, respectively.
(f) Includes the effect of derivatives that qualify for hedge accounting where applicable. Taxable-equivalent amounts are used, also where applicable. Refer to Note 5 for additional information on hedge accounting.

(Table continued from previous page)

	2023			2022		
	Average balance[f]	Interest[f]	Rate	Average balance[f]	Interest[f]	Rate
	$ 499,396	$ 21,797	4.36 %	$ 670,773	$ 9,039	1.35 %
	317,159	15,079	4.75	307,150	4,632	1.51
	193,228	7,983	4.13	205,516	2,237	1.09
	376,928	16,001	4.25	283,108	9,097	3.21
	573,914	17,390	3.03	626,122	10,372	1.66
	30,886	1,560	5.05	27,863	1,224	4.39
	604,800	18,950	3.13 [i]	653,985	11,596	1.77 [i]
	1,248,076	83,589 [h]	6.70	1,100,318	52,877 [h]	4.81
	86,121	7,669	8.90	128,229	3,763	2.93
	3,325,708	171,068	5.14	3,349,079	93,241	2.78
	(20,762)			(17,399)		
	24,853			27,601		
	160,087			140,778		
	64,227			78,606		
	63,212			59,467		
	204,899			215,408		
	$ 3,822,224			$ 3,853,540		
	$ 1,698,529	$ 40,016	2.36 %	$ 1,748,666	$ 10,082	0.58 %
	256,086	13,259	5.18	242,762	3,721	1.53
	37,468	1,894	5.05	46,063	747	1.62
	286,605	9,396	3.28	268,019	3,246	1.21
	18,648	953	5.11	11,208	226	2.02
	296,433	15,803	5.33	250,080	8,075	3.23
	2,593,769	81,321	3.14	2,566,798	26,097	1.02
	660,538			719,249		
	30,501			39,155		
	46,355			57,388		
	181,601			185,989		
	3,512,764			3,568,579		
	27,404			31,893		
	282,056			253,068		
	309,460 [g]			284,961 [g]		
	$ 3,822,224			$ 3,853,540		
			2.00 %			1.76 %
		$ 89,747	2.70		$ 67,144	2.00

(g) The ratio of average stockholders' equity to average assets was 8.2%, 8.1% and 7.4% for the years ended December 31, 2024, 2023 and 2022, respectively. The return on average stockholders' equity, based on net income, was 17.4%, 16.0% and 13.2% for the years ended December 31, 2024, 2023 and 2022, respectively.

(h) Included fees and commissions on loans of $3.6 billion, $2.2 billion and $1.8 billion for the years ended December 31, 2024, 2023 and 2022, respectively.

(i) The annualized rate for securities based on amortized cost was 3.79%, 3.09% and 1.75% for the years ended December 31, 2024, 2023 and 2022, respectively, and does not give effect to changes in fair value that are reflected in AOCI.

Within the Consolidated average balance sheets, interest and rates summary, the principal amounts of nonaccrual loans have been included in the average loan balances used to determine the average interest rate earned on loans. Refer to Note 12 for additional information on nonaccrual loans, including interest accrued.

Interest rates and interest differential analysis of net interest income – U.S. and non-U.S.

Presented below is a summary of interest and rates segregated between U.S. and non-U.S. operations for the years 2022 through 2024. The segregation of U.S. and non-U.S. components is based on the location of the office recording the transaction.

(Table continued on next page)

(Unaudited) Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2024		
	Average balance	Interest	Rate
Interest-earning assets			
Deposits with banks:			
U.S.	$ 284,913	$ 15,157	5.32 %
Non-U.S.	205,292	7,140	3.48
Federal funds sold and securities purchased under resale agreements:			
U.S.	193,210	10,686	5.53
Non-U.S.	165,987	7,613	4.59
Securities borrowed:			
U.S.	150,251	7,330	4.88
Non-U.S.	59,493	1,878	3.16
Trading assets – debt instruments:			
U.S.	309,568	13,579	4.39
Non-U.S.	146,461	6,794	4.64
Investment securities:			
U.S.	567,784	21,458	3.78
Non-U.S.	43,457	1,882	4.33
Loans:			
U.S.	1,211,978	85,621	7.06
Non-U.S.	110,447	6,967	6.31
All other interest-earning assets, predominantly U.S.[(a)]	88,726	8,305	9.36
Total interest-earning assets	3,537,567	194,410	5.50
Interest-bearing liabilities			
Interest-bearing deposits:			
U.S.	1,307,000	33,173	2.54
Non-U.S.	441,050	16,386	3.72
Federal funds purchased and securities loaned or sold under repurchase agreements:			
U.S.	294,476	15,949	5.42
Non-U.S.	69,344	3,200	4.61
Trading liabilities – debt, short-term and all other interest-bearing liabilities:			
U.S.	222,710	8,289	3.72
Non-U.S.	130,937	4,050	3.09
Beneficial interests issued by consolidated VIEs, predominantly U.S.	26,515	1,383	5.22
Long-term debt:			
U.S.	338,166	18,760	5.55
Non-U.S.	6,180	160	2.59
Total interest-bearing liabilities	2,836,378	101,350	3.57
Noninterest-bearing liabilities[(b)]	701,189		
Total investable funds	$ 3,537,567	$ 101,350	2.86 %
Net interest income and net yield:		$ 93,060	2.63 %
U.S.		80,913	2.92
Non-U.S.		12,147	1.58
Percentage of total assets and liabilities attributable to non-U.S. operations:			
Assets			24.3
Liabilities			20.5

(a) The rates reflect the impact of interest earned on cash collateral where that cash collateral has been netted against certain derivative payables.
(b) Represents the amount of noninterest-bearing liabilities funding interest-earning assets.

Refer to the "Net interest income" discussion in Consolidated Results of Operations on pages 59–62 for further information.

(Table continued from previous page)

2023			2022		
Average balance	Interest	Rate	Average balance	Interest	Rate
$ 296,784	$ 15,348	5.17 %	$ 456,366	$ 7,418	1.63 %
202,612	6,449	3.18	214,407	1,621	0.76
155,304	8,330	5.36	130,213	2,191	1.68
161,855	6,749	4.17	176,937	2,441	1.38
133,805	6,239	4.66	142,736	1,811	1.27
59,423	1,744	2.93	62,780	426	0.68
248,541	10,721	4.31	170,975	5,414	3.17
128,387	5,280	4.11	112,133	3,683	3.28
568,505	17,469	3.07	623,285	10,994	1.76
36,295	1,481	4.08	30,700	602	1.96
1,137,162	76,884	6.76	985,187	48,953	4.97
110,914	6,705	6.05	115,131	3,924	3.41
86,121	7,669	8.90	128,229	3,763	2.93
3,325,708	171,068	5.14	3,349,079	93,241	2.78
1,290,110	26,253	2.03	1,358,322	7,026	0.52
408,419	13,763	3.37	390,344	3,056	0.78
197,049	10,639	5.40	173,016	3,083	1.78
59,037	2,620	4.44	69,746	638	0.91
205,388	7,774	3.79	194,570	2,384	1.23
118,685	3,516	2.96	119,512	1,609	1.35
18,648	953	5.11	11,208	226	2.02
293,218	15,749	5.37	246,670	8,026	3.25
3,215	54	1.68	3,410	49	1.44
2,593,769	81,321	3.14	2,566,798	26,097	1.02
731,939			782,281		
$ 3,325,708	$ 81,321	2.45 %	$ 3,349,079	$ 26,097	0.78 %
	$ 89,747	2.70 %		$ 67,144	2.00 %
	77,923	3.01		58,950	2.27
	11,824	1.61		8,194	1.09
		24.7			24.9
		20.2			20.6

Changes in net interest income, volume and rate analysis

The table below presents an attribution of net interest income between volume and rate. The attribution between volume and rate is calculated using annual average balances for each category of assets and liabilities shown in the table and the corresponding annual rates (refer to pages 322-325 for more information on average balances and rates). In this analysis, when the change cannot be isolated to either volume or rate, it has been allocated to volume. The annual rates include the impact of changes in market rates, as well as the impact of any change in composition of the various products within each category of asset or liability. This analysis is calculated separately for each category without consideration of the relationship between categories (for example, the net spread between the rates earned on assets and the rates paid on liabilities that fund those assets). As a result, changes in the granularity or groupings considered in this analysis would produce a different attribution result, and due to the complexities involved, precise allocation of changes in interest rates between volume and rates is inherently complex and judgmental.

	2024 versus 2023			2023 versus 2022		
(Unaudited)	Increase/(decrease) due to change in:			Increase/(decrease) due to change in:		
Year ended December 31, (On a taxable-equivalent basis; in millions)	Volume	Rate	Net change	Volume	Rate	Net change
Interest-earning assets						
Deposits with banks:						
U.S.	**$ (636)**	**$ 445**	**$ (191)**	$ (8,225)	$ 16,155	$ 7,930
Non-U.S.	**83**	**608**	**691**	(361)	5,189	4,828
Federal funds sold and securities purchased under resale agreements:						
U.S.	**2,092**	**264**	**2,356**	1,347	4,792	6,139
Non-U.S.	**184**	**680**	**864**	(629)	4,937	4,308
Securities borrowed:						
U.S.	**797**	**294**	**1,091**	(411)	4,839	4,428
Non-U.S.	**(3)**	**137**	**134**	(95)	1,413	1,318
Trading assets – debt instruments:						
U.S.	**2,659**	**199**	**2,858**	3,358	1,949	5,307
Non-U.S.	**834**	**680**	**1,514**	666	931	1,597
Investment securities:						
U.S.	**(47)**	**4,036**	**3,989**	(1,690)	8,165	6,475
Non-U.S.	**310**	**91**	**401**	228	651	879
Loans:						
U.S.	**5,326**	**3,411**	**8,737**	10,296	17,635	27,931
Non-U.S.	**(26)**	**288**	**262**	(258)	3,039	2,781
All other interest-earning assets, predominantly U.S.	**240**	**396**	**636**	(3,749)	7,655	3,906
Change in interest income	**11,813**	**11,529**	**23,342**	477	77,350	77,827
Interest-bearing liabilities						
Interest-bearing deposits:						
U.S.	**340**	**6,580**	**6,920**	(1,284)	20,511	19,227
Non-U.S.	**1,194**	**1,429**	**2,623**	597	10,110	10,707
Federal funds purchased and securities loaned or sold under repurchase agreements:						
U.S.	**5,271**	**39**	**5,310**	1,293	6,263	7,556
Non-U.S.	**480**	**100**	**580**	(480)	2,462	1,982
Trading liabilities – debt, short-term and all other interest-bearing liabilities:						
U.S.	**659**	**(144)**	**515**	409	4,981	5,390
Non-U.S.	**380**	**154**	**534**	(17)	1,924	1,907
Beneficial interests issued by consolidated VIEs, predominantly U.S.	**409**	**21**	**430**	381	346	727
Long-term debt:						
U.S.	**2,483**	**528**	**3,011**	2,494	5,229	7,723
Non-U.S.	**77**	**29**	**106**	(3)	8	5
Change in interest expense	**11,293**	**8,736**	**20,029**	3,390	51,834	55,224
Change in net interest income	**$ 520**	**$ 2,793**	**$ 3,313**	$ (2,913)	$ 25,516	$ 22,603

2023 Form 10-K: Annual report on Form 10-K for the year ended December 31, 2023, filed with the U.S. Securities and Exchange Commission.

ABS: Asset-backed securities

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

AFS: Available-for-sale

ALCO: Asset Liability Committee

Alternative assets "Alternatives": The following types of assets constitute alternative investments - hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies

Amortized cost: Amount at which a financing receivable or investment is originated or acquired, adjusted for accretion or amortization of premium, discount, and net deferred fees or costs, collection of cash, charge-offs, foreign exchange, and fair value hedge accounting adjustments. For AFS securities, amortized cost is also reduced by any impairment losses recognized in earnings. Amortized cost is not reduced by the allowance for credit losses, except where explicitly presented net.

AOCI: Accumulated other comprehensive income/ (loss)

ARM: Adjustable rate mortgage(s)

AUC: "Assets under custody": Represents assets held directly or indirectly on behalf of clients under safekeeping, custody and servicing arrangements.

AUM: "Assets under management": Represent assets managed by AWM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called."

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

AWM: Asset & Wealth Management

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorganChase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

BHC: Bank holding company

BWM: Banking & Wealth Management

Bridge Financing Portfolio: A portfolio of held-for-sale unfunded loan commitments and funded loans. The unfunded commitments include both short-term bridge loan commitments that will ultimately be replaced by longer term financing as well as term loan commitments. The funded loans include term loans and funded revolver facilities.

CB: Commercial Banking

CCAR: Comprehensive Capital Analysis and Review

CCB: Consumer & Community Banking

CCB Consumer customer: A unique individual that has financial ownership or decision-making power with respect to accounts; excludes customers under the age of 18. Where a customer uses the same identifier as both a Consumer and a Small business, the customer is included in both metrics.

CCB Small business customer: A unique business or legal entity that has financial ownership or decision-making power with respect to accounts. Where a customer uses the same identifier as both a Consumer and a Small business, the customer is included in both metrics.

CCO: Chief Compliance Officer

CCP: "Central counterparty" is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes a counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

CDS: Credit default swaps

CECL: Current Expected Credit Losses

CEO: Chief Executive Officer

CET1 Capital: Common equity Tier 1 capital

CFO: Chief Financial Officer

CFP: Contingency funding plan

CFTC: Commodity Futures Trading Commission

CIB: Commercial & Investment Bank

CIO: Chief Investment Office

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.

Client investment assets: Represent assets under management as well as custody, brokerage and annuity accounts, and deposits held in investment accounts.

CLO: Collateralized loan obligations

CLTV: Combined loan-to-value

CMT: Constant Maturity Treasury

Collateral-dependent: A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided substantially through the operation or sale of the collateral when the borrower is

experiencing financial difficulty, including when foreclosure is deemed probable based on borrower delinquency.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caa1 and below, as defined by S&P and Moody's.

CRO: Chief Risk Officer

CRR: Capital Requirements Regulation

CTC: CIO, Treasury and Corporate

Custom lending: Loans to AWM's Global Private Bank clients, including loans to private investment funds and loans that are collateralized by nontraditional asset types, such as art work, aircraft, etc.

CVA: Credit valuation adjustment

Debit and credit card sales volume: Dollar amount of card member purchases, net of returns.

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

Dodd-Frank Act: Wall Street Reform and Consumer Protection Act

DVA: Debit valuation adjustment

EC: European Commission

Eligible HQLA: Eligible high-quality liquid assets, for purposes of calculating the LCR, is the amount of unencumbered HQLA that satisfy certain operational considerations as defined in the LCR rule.

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

EPS: Earnings per share

ERISA: Employee Retirement Income Security Act of 1974

ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via a central clearing house.

EU: European Union

Expense categories:

- Volume- and/or revenue-related expenses generally correlate with changes in the related business/ transaction volume or revenue. Examples include commissions and incentive compensation within the LOBs, depreciation expense related to operating lease assets, and brokerage expense related to trading transaction volume.
- Investments in the business include expenses associated with supporting medium- to longer-term strategic plans of the Firm. Examples include front office growth, market expansion, initiatives in technology (including related compensation), marketing, and acquisitions.
- Structural expenses are those associated with the day-to-day cost of running the Firm and are expenses not included in the above two categories. Examples include employee salaries and benefits, certain other incentive compensation, and costs related to real estate.

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FCC: Firmwide Control Committee

FDIC: Federal Deposit Insurance Corporation

FDM: "Financial difficulty modification" applies to loan modifications effective January 1, 2023, and is deemed

to occur when the Firm modifies specific terms of the original loan agreement. The following types of modifications are considered FDMs: principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications.

Federal Reserve: The Board of the Governors of the Federal Reserve System

FFIEC: Federal Financial Institutions Examination Council

FHA: Federal Housing Administration

FHLB: Federal Home Loan Bank

FICC: The Fixed Income Clearing Corporation

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

FINRA: Financial Industry Regulatory Authority

Firm: JPMorgan Chase & Co.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

FRC: Firmwide Risk Committee

Freddie Mac: Federal Home Loan Mortgage Corporation

Free standing derivatives: a derivative contract entered into either separate and apart from any of the Firm's other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FSB: Financial Stability Board

FTE: Fully taxable equivalent

FVA: Funding valuation adjustment

FX: Foreign exchange

G7: Group of Seven nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government securities: Securities issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association

GSIB: Global systemically important banks

HELOC: Home equity line of credit

Home equity – senior lien: Represents loans and commitments where JPMorganChase holds the first security interest on the property.

Home equity – junior lien: Represents loans and commitments where JPMorganChase holds a security interest that is subordinate in rank to other liens.

HQLA: "High-quality liquid assets" consist of cash and certain high-quality liquid securities as defined in the LCR rule.

HTM: Held-to-maturity

IBOR: Interbank Offered Rate

ICAAP: Internal capital adequacy assessment process

IDI: Insured depository institutions

IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Indirect tax expense: Refers to taxes that are imposed on goods and services rather than on income. Examples of indirect taxes include value-added tax ("VAT") and sales tax, among others.

Investment-grade: An indication of credit quality based on JPMorganChase's internal risk assessment. The Firm considers ratings of BBB-/Baa3 or higher as investment-grade.

IPO: Initial public offering

ISDA: International Swaps and Derivatives Association

JPMorganChase: JPMorgan Chase & Co.

JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Chase Foundation or the Firm's Foundation: A not-for-profit organization that makes contributions for charitable and educational purposes.

J.P. Morgan Securities: J.P. Morgan Securities LLC

JPMSE: J.P. Morgan SE

LCR: Liquidity coverage ratio

LDA: Loss Distribution Approach

LGD: Loss given default

LIBOR: London Interbank Offered Rate

LLC: Limited Liability Company

LOB: Line of business

LOB CROs: Line of Business and CTC Chief Risk Officers

LTIP: Long-term incentive plan

LTV: "Loan-to-value": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio
The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio
An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized

home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio
The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Macro businesses: the macro businesses include Rates, Currencies and Emerging Markets, Fixed Income Financing and Commodities in CIB's Fixed Income Markets.

Managed basis: A non-GAAP presentation of Firmwide financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management also uses this financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Markets: consists of CIB's Fixed Income Markets and Equity Markets businesses.

Master netting agreement: A single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due).

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

Measurement alternative: Measures equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer.

Merchant Services: offers merchants payment processing capabilities, fraud and risk management, data and analytics, and other payments services. Through Merchant Services, merchants of all sizes can accept payments via credit and debit cards and payments in multiple currencies.

MEV: Macroeconomic variable

Moody's: Moody's Investor Services

Mortgage origination channels:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Mortgage product types:

Alt-A
Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs
The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime
Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime
Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's

primary residence; or (v) a history of delinquencies or late payments on the loan.

MREL: Minimum requirements for own funds and eligible liabilities

MSR: Mortgage servicing rights

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

NA: Data is not applicable or available for the period presented.

NAV: Net Asset Value

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net interchange income includes the following components:

- **Interchange income**: Fees earned by credit and debit card issuers on sales transactions.
- **Rewards costs**: The cost to the Firm for points earned by cardholders enrolled in credit card rewards programs generally tied to sales transactions.
- **Partner payments**: Payments to co-brand credit card partners based on the cost of loyalty program rewards earned by cardholders on credit card transactions.

Net mortgage servicing revenue: Includes operating revenue earned from servicing third-party mortgage loans, which is recognized over the period in which the service is provided; changes in the fair value of MSRs; the impact of risk management activities associated with MSRs; and gains and losses on securitization of excess mortgage servicing. Net mortgage servicing revenue also includes gains and losses on sales and lower of cost or fair value adjustments of certain repurchased loans insured by U.S. government agencies.

Net revenue rate: Represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NFA: National Futures Association

NM: Not meaningful

NOL: Net operating loss

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest have been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfactions, predominantly real estate owned and other commercial and personal property.

NSFR: Net Stable Funding Ratio

OAS: Option-adjusted spread

OCC: Office of the Comptroller of the Currency

OCI: Other comprehensive income/(loss)

OPEB: Other postretirement employee benefit

Operating losses: Primarily refer to fraud losses associated with customer deposit accounts, credit and debit cards; exclude legal expense.

Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase & Co.

Participating securities: Represents unvested share-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorganChase grants RSUs to certain employees under its share-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

PCAOB: Public Company Accounting Oversight Board

PCD: "Purchased credit deteriorated" assets represent acquired financial assets that as of the date of acquisition have experienced a more-than-insignificant deterioration in credit quality since origination, as determined by the Firm.

PD: Probability of default

Pillar 1: The Basel framework consists of a three "Pillar" approach. Pillar 1 establishes minimum capital

requirements, defines eligible capital instruments, and prescribes rules for calculating RWA.

Pillar 3: The Basel framework consists of a three "Pillar" approach. Pillar 3 encourages market discipline through disclosure requirements which allow market participants to assess the risk and capital profiles of banks.

PRA: Prudential Regulation Authority

Preferred stock dividends: reflects dividends declared and deemed dividends upon redemption of preferred stock

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pre-tax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AWM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue is driven by many factors, including:

- the bid-offer spread, which is the difference between the price at which a market participant is willing and able to sell an instrument to the Firm and the price at which another market participant is willing and able to buy it from the Firm, and vice versa; and
- realized and unrealized gains and losses on financial instruments and commodities transactions, including those accounted for under the fair value option, primarily used in client-driven market-making activities.
  - Realized gains and losses result from the sale of instruments, closing out or termination of transactions, or interim cash payments.
  - Unrealized gains and losses result from changes in valuation.

In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities, including physical commodities inventories and financial instruments that reference commodities.

Principal transactions revenue also includes realized and unrealized gains and losses related to:

- derivatives designated in qualifying hedge accounting relationships, primarily fair value hedges of commodity and foreign exchange risk;
- derivatives used for specific risk management purposes, primarily to mitigate credit, foreign exchange and interest rate risks.

Production revenue: Includes fees and income recognized as earned on mortgage loans originated with the intent to sell, and the impact of risk management activities associated with the mortgage pipeline and warehouse loans. Production revenue also includes gains and losses on sales and lower of cost or fair value adjustments on mortgage loans held-for-sale (excluding certain repurchased loans insured by U.S. government agencies), and changes in the fair value of financial instruments measured under the fair value option.

PSU(s): Performance share units

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

RHS: Rural Housing Service of the U.S. Department of Agriculture

ROA: Return on assets

ROE: Return on equity

ROTCE: Return on tangible common equity

ROU assets: Right-of-use assets

RSU(s): Restricted stock units

RWA "Risk-weighted assets": Basel III establishes two comprehensive approaches for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.

S&P: Standard and Poor's

SAR as it pertains to Hong Kong: Special Administrative Region

SAR(s) as it pertains to employee stock awards: Stock appreciation rights

SCB: Stress capital buffer

Scored portfolios: Consumer loan portfolios that predominantly include residential real estate loans, credit card loans, auto loans to individuals and certain small business loans.

SEC: U.S. Securities and Exchange Commission

Securities financing agreements: Include resale, repurchase, securities borrowed and securities loaned agreements

Securitized Products Group: Comprised of Securitized Products and tax-oriented investments.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Shelf securities: Securities registered with the SEC under a shelf registration statement that have not been issued, offered or sold. These securities are not included in league tables until they have actually been issued.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SMBS: Stripped mortgage-backed securities

SOFR: Secured Overnight Financing Rate

SPEs: Special purpose entities

Structural interest rate risk: Represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are financial instruments whose cash flows are linked to the movement in one or more indexes, interest rates, foreign exchange rates, commodities prices, prepayment rates, underlying reference pool of loans or other market variables. The notes typically contain embedded (but not separable or detachable) derivatives. Contractual cash flows for principal, interest, or both can vary in amount and timing throughout the life of the note based on non-traditional indexes or non-traditional uses of traditional interest rates or indexes.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting results on a managed basis, the total net revenue for each of the reportable business segments and Corporate, and the Firm as a whole, is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in managed basis results on a level comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share

TCE: Tangible common equity

TDR: "Troubled debt restructuring" applies to loan modifications granted prior to January 1, 2023 and is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty. Loans with short-term and other insignificant modifications that are not considered concessions are not TDRs.

TLAC: Total Loss Absorbing Capacity

U.K.: United Kingdom

Unaudited: Financial statements and/or information that have not been subject to auditing procedures by an independent registered public accounting firm.

U.S.: United States of America

U.S. GAAP: Accounting principles generally accepted in the U.S.

U.S. government agencies: U.S. government agencies include, but are not limited to, agencies such as Ginnie Mae and FHA, and do not include Fannie Mae and Freddie Mac which are U.S. government-sponsored enterprises ("U.S. GSEs"). In general, obligations of U.S. government agencies are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government in the event of a default.

U.S. GSE(s): "U.S. government-sponsored enterprises" are quasi-governmental, privately-held entities established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae or FHA. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VCG: Valuation Control Group

VGF: Valuation Governance Forum

VIEs: Variable interest entities

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as loans.

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As of March, 2025

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Alibaba Group
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Jaime Augusto Zobel de Ayala
Chairman
Ayala Corporation
Makati City, Philippines

*Ex-officio

Corporate headquarters

383 Madison Avenue
New York, NY 10179-0001
Telephone: 212-270-6000
jpmorganchase.com

Annual Report on Form 10-K

The Annual Report on Form 10-K of JPMorganChase as filed with the U.S. Securities and Exchange Commission will be made available without charge upon request to:

Office of the Secretary
JPMorganChase
383 Madison Avenue, 39th Floor
New York, NY 10179-0001
corporate.secretary@jpmchase.com

Stock listing

New York Stock Exchange

The New York Stock Exchange ticker symbol for the common stock of JPMorganChase is JPM.

Financial information about JPMorgan Chase & Co. can be accessed by visiting our website at jpmorganchase.com and clicking on "Investor Relations." Additional questions should be addressed to:

Investor Relations
JPMorganChase
277 Park Avenue
New York, NY 10172-0001
Telephone: 212-270-2479
JPMCinvestorrelations@jpmchase.com

Directors

To contact any of the Board members or committee chairs, the Lead Independent Director or the non-management directors as a group, please mail correspondence to:

JPMorganChase
Attention (Board member(s))
Office of the Secretary
383 Madison Avenue, 39th Floor
New York, NY 10179-0001
corporate.secretary@jpmchase.com

The Corporate Governance Principles, the charters of the principal standing Board committees, the Code of Conduct, the Code of Ethics for Finance Professionals and other governance information can be accessed by visiting our website at jpmorganchase.com and clicking on "Governance" under the "About us" tab.

Transfer agent and registrar

Computershare
150 Royall Street, Suite 101
Canton, MA 02021-1031
United States
Telephone: 800-982-7089
www.computershare.com/investor

Investor Services Program

JPMorganChase's Investor Services Program offers a variety of convenient, low-cost services to make it easier to reinvest dividends and buy and sell shares of JPMorganChase common stock. A brochure and enrollment materials may be obtained by contacting the Program Administrator, Computershare, by calling 800-982-7089, by writing to the address indicated above or by visiting its website at www-us.computershare.com/investor.

Direct deposit of dividends

For information about direct deposit of dividends, please contact Computershare.

Stockholder inquiries

Contact Computershare:

By telephone:

Within the United States, Canada and Puerto Rico: 800-982-7089 (toll free)

From all other locations: 201-680-6862 (collect)

TDD service for the hearing impaired within the United States, Canada and Puerto Rico: 800-231-5469 (toll free)

All other locations: 201-680-6610 (collect)

By regular mail:

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Providence, RI 02940-3078
United States

By overnight delivery:

Computershare
150 Royall Street, Suite 101
Canton, MA 02021-1031
United States

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If you receive duplicate mailings because you have more than one account listing and you wish to consolidate your accounts, please contact Computershare.

Independent registered public accounting firm

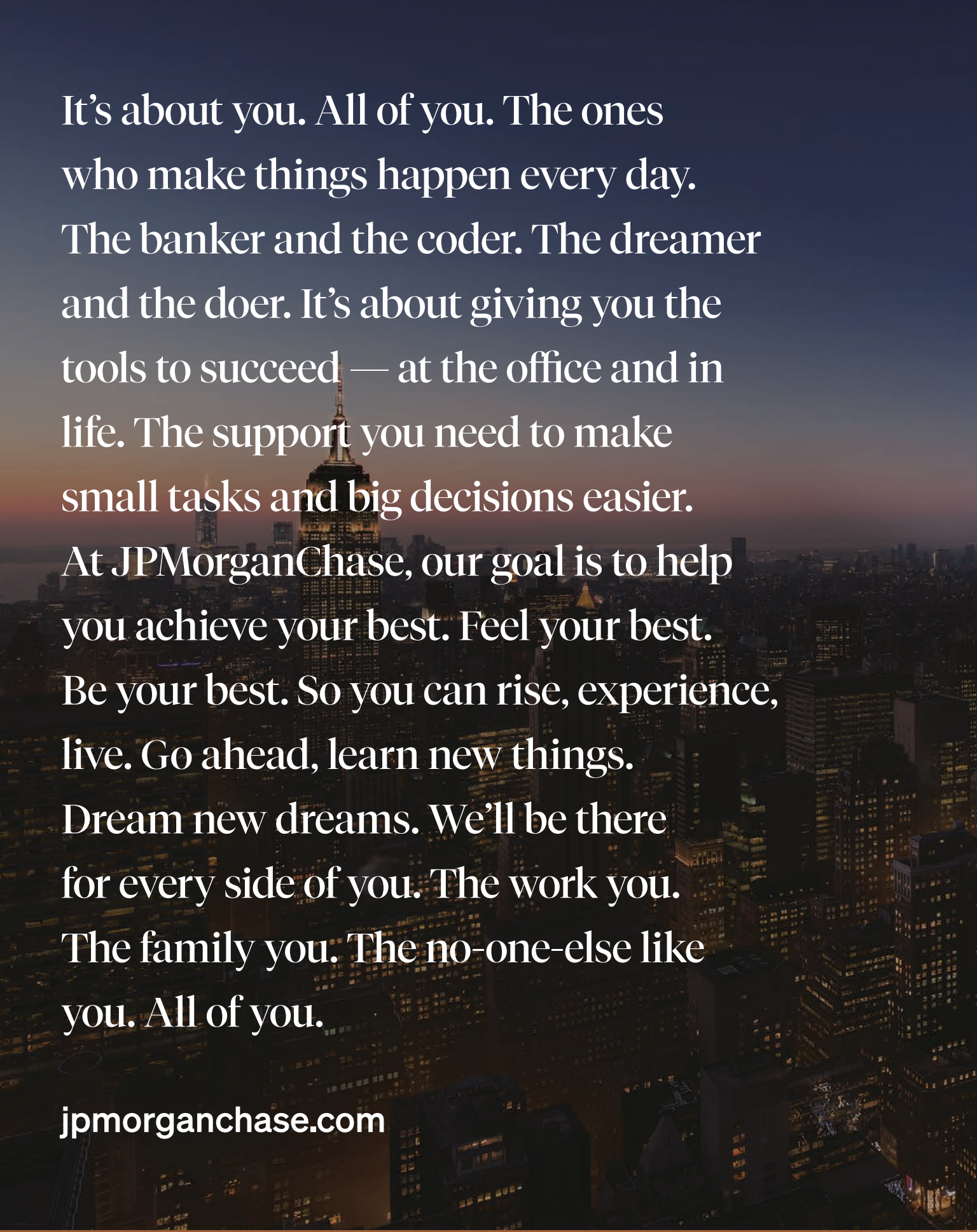
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It’s about you. All of you. The ones
who make things happen every day.
The banker and the coder. The dreamer
and the doer. It’s about giving you the
tools to succeed — at the office and in
life. The support you need to make
small tasks and big decisions easier.
At JPMorganChase, our goal is to help
you achieve your best. Feel your best.
Be your best. So you can rise, experience,
live. Go ahead, learn new things.
Dream new dreams. We’ll be there
for every side of you. The work you.
The family you. The no-one-else like
you. All of you.
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