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)		2023		2022		2021
Selected income statement data						
Total net revenue	$	**158,104**	$	128,695	$	121,649
Total noninterest expense		**87,172**		76,140		71,343
Pre-provision profit[(a)]		**70,932**		52,555		50,306
Provision for credit losses		**9,320**		6,389		(9,256)
Income before income tax expense		**61,612**		46,166		59,562
Income tax expense		**12,060**		8,490		11,228
Net income	$	**49,552**	$	37,676	$	48,334
Earnings per share data						
Net income: Basic	$	**16.25**	$	12.10	$	15.39
Diluted		**16.23**		12.09		15.36
Average shares: Basic		**2,938.6**		2,965.8		3,021.5
Diluted		**2,943.1**		2,970.0		3,026.6
Market and per common share data						
Market capitalization		**489,320**		393,484		466,206
Common shares at period-end		**2,876.6**		2,934.2		2,944.1
Book value per share		**104.45**		90.29		88.07
Tangible book value per share (“TBVPS”)[(a)]		**86.08**		73.12		71.53
Cash dividends declared per share		**4.10**		4.00		3.80
Selected ratios and metrics						
Return on common equity (“ROE”)		**17 %**		14 %		19 %
Return on tangible common equity (“ROTCE”)[(a)]		**21**		18		23
Return on assets (“ROA”)		**1.30**		0.98		1.30
Overhead ratio		**55**		59		59
Loans-to-deposits ratio		**55**		49		44
Firm Liquidity coverage ratio (“LCR”) (average)[(b)]		**113**		112		111
JPMorgan Chase Bank, N.A. LCR (average)[(b)]		**129**		151		178
Common equity Tier 1 (“CET1”) capital ratio[(c)(d)]		**15.0**		13.2		13.1
Tier 1 capital ratio[(c)(d)]		**16.6**		14.9		15.0
Total capital ratio[(c)(d)]		**18.5**		16.8		16.8
Tier 1 leverage ratio[(b)(c)]		**7.2**		6.6		6.5
Supplementary leverage ratio (“SLR”)[(b)(c)]		**6.1**		5.6		5.4
Selected balance sheet data (period-end)						
Trading assets	$	**540,607**	$	453,799	$	433,575
Investment securities, net of allowance for credit losses		**571,552**		631,162		672,232
Loans		**1,323,706**		1,135,647		1,077,714
Total assets		**3,875,393**		3,665,743		3,743,567
Deposits		**2,400,688**		2,340,179		2,462,303
Long-term debt		**391,825**		295,865		301,005
Common stockholders’ equity		**300,474**		264,928		259,289
Total stockholders’ equity		**327,878**		292,332		294,127
Employees[(e)]		**309,926** [(f)]		293,723		271,025
Credit quality metrics						
Allowances for credit losses	$	**24,765**	$	22,204	$	18,689
Allowance for loan losses to total retained loans		**1.75 %**		1.81 %		1.62 %
Nonperforming assets	$	**7,597**	$	7,247	$	8,346
Net charge-offs		**6,209**		2,853		2,865
Net charge-off rate		**0.52 %**		0.27 %		0.30 %

As of and for the period ended December 31, 2023, the results of the Firm include the impact of First Republic. Refer to Business Segment Results on page 67 and Note 34 for additional information.

(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 62–64 for a discussion of these measures.
(b) For the years ended December 31, 2023, 2022 and 2021, the percentage represents average ratios for the three months ended December 31, 2023, 2022 and 2021.
(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 91-101 for additional information.
(e) This metric, which was formerly Headcount, has been renamed Employees but is otherwise unchanged. Refer to Part I, Item 1, Business section on pages 2-3 of this Form 10-K for a further discussion of Human Capital.
(f) Included approximately 4,500 individuals associated with First Republic who became employees effective July 2, 2023.

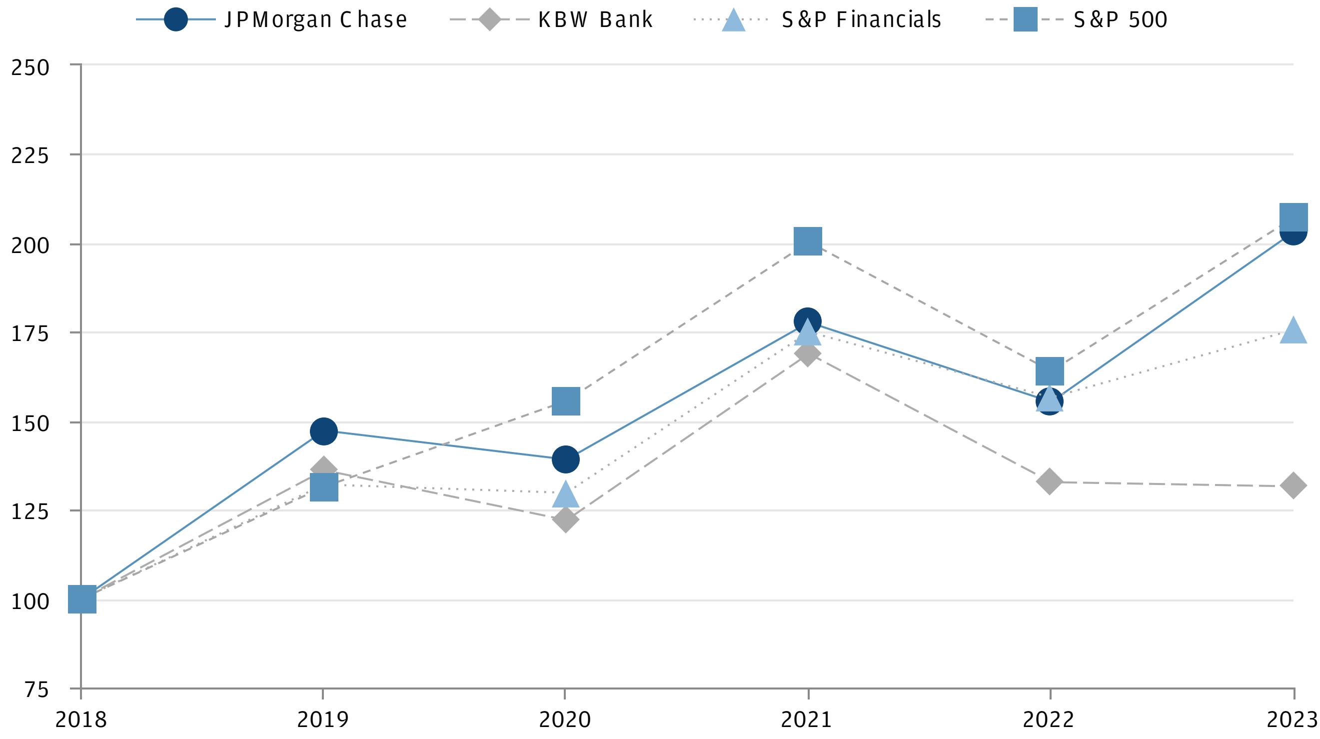
FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" 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, 2018, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends were reinvested.

December 31, (in dollars)	2018	2019	2020	2021	2022	**2023**
JPMorgan Chase	$ 100.00	$ 147.27	$ 139.14	$ 177.72	$ 155.33	**$ 203.09**
KBW Bank Index	100.00	136.12	122.09	168.90	132.76	**131.58**
S&P Financials Index	100.00	132.09	129.77	175.02	156.59	**175.61**
S&P 500 Index	100.00	131.48	155.65	200.29	164.02	**207.13**

December 31,
(in dollars)



The following is Management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorgan Chase for the year ended December 31, 2023. The MD&A is included in both JPMorgan Chase's Annual Report for the year ended December 31, 2023 ("Annual Report") and its Annual Report on Form 10-K for the year ended December 31, 2023 ("2023 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 315-321 for definitions of terms and acronyms used throughout the Annual Report and the 2023 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 JPMorgan Chase'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 161 and Part 1, Item 1A: Risk factors in this Form 10-K on pages 9-33 for a discussion of certain of those risks and uncertainties and the factors that could cause JPMorgan Chase'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. JPMorgan Chase had $3.9 trillion in assets and $327.9 billion in stockholders' equity as of December 31, 2023. 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.

JPMorgan Chase'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. JPMorgan Chase'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 JPMorgan Chase 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.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale businesses are the Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset & Wealth Management ("AWM") segments. Refer to Business Segment Results on pages 65–85, and Note 32 for a description of the Firm's business segments, and the products and services they provide to their respective client bases. On May 1, 2023, JPMorgan Chase acquired certain assets and assumed certain liabilities of First Republic Bank (the "First Republic acquisition") from the Federal Deposit Insurance Corporation ("FDIC"). All references in this Form 10-K to "excluding First Republic," "including First Republic," "associated with First Republic" or "attributable to First Republic" refer to excluding or including 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. JPMorgan Chase 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. JPMorgan Chase 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 2023 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 2023 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 2023 Form 10-K should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	2023	2022	Change
Selected income statement data			
Noninterest revenue	**$ 68,837**	$ 61,985	11%
Net interest income	**89,267**	66,710	34
Total net revenue	**158,104**	128,695	23
Total noninterest expense	**87,172**	76,140	14
Pre-provision profit	**70,932**	52,555	35
Provision for credit losses	**9,320**	6,389	46
Net income	**49,552**	37,676	32
Diluted earnings per share	**16.23**	12.09	34
Selected ratios and metrics			
Return on common equity	**17 %**	14 %	
Return on tangible common equity	**21**	18	
Book value per share	**$ 104.45**	$ 90.29	16
Tangible book value per share	**86.08**	73.12	18
Capital ratios[(a)(b)]			
CET1 capital	**15.0 %**	**13.2 %**	
Tier 1 capital	**16.6**	**14.9**	
Total capital	**18.5**	**16.8**	
Memo:			
NII excluding Markets[(c)]	**$ 90,041**	$ 62,355	44
NIR excluding Markets[(c)]	**44,533**	40,938	9
Markets[(c)]	**27,792**	28,984	(4)
Total net revenue - managed basis	**$ 162,366**	$ 132,277	23

As of and for the year ended December 31, 2023, the results of the Firm include the impact of First Republic. Refer to page 67 and Note 34 for additional information.

(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 91-101 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.

Comparisons noted in the sections below are for the full year of 2023 versus the full year of 2022, unless otherwise specified.

Firmwide overview

JPMorgan Chase reported net income of $49.6 billion for 2023, up 32%, earnings per share of $16.23, ROE of 17% and ROTCE of 21%.

- **Total net revenue** was $158.1 billion, up 23%, reflecting:
  - **Net interest income** ("NII") of $89.3 billion, up 34%, driven by higher rates, the impact of First Republic, and higher revolving balances in Card Services, partially offset by lower Markets net interest income and lower average deposit balances. NII excluding Markets was $90.0 billion, up 44%.
  - **Noninterest revenue** ("NIR") was $68.8 billion, up 11%, driven by the impact of First Republic, including the $2.8 billion estimated bargain purchase gain, higher Markets noninterest revenue, and higher asset management fees, partially offset by the absence of the gain on the sale of Visa B shares in the prior year, higher net securities losses in Treasury and CIO, and lower auto operating lease income.
- **Noninterest expense** was $87.2 billion, up 14%, predominantly driven by higher compensation expense, reflecting an increase in employees, primarily in technology and front office, as well as wage inflation. The increase in expense also includes the $2.9 billion FDIC special assessment and costs associated with the First Republic acquisition.
- The **provision for credit losses** was $9.3 billion, reflecting $6.2 billion of net charge-offs and a net addition to the allowance for credit losses of $3.1 billion. Net charge-offs increased $3.3 billion, predominantly driven by Card Services, and to a lesser extent single name exposures in wholesale. The net addition to the allowance for credit losses included:
  - a net addition of $1.3 billion in **consumer**, predominantly driven by CCB, reflecting $1.4 billion in Card Services driven by loan growth, including an increase in revolving balances, partially offset by a net reduction of $200 million in Home Lending, and
  - a net addition of $657 million in **wholesale**, driven by net downgrade activity and a deterioration in the outlook for commercial real estate in CB.

  The net addition also included $1.2 billion to establish the allowance for First Republic loans and lending-related commitments in the second quarter of 2023.

  The provision in the prior year included a $3.5 billion net addition to the allowance for credit losses and net charge-offs of $2.9 billion.
- The total **allowance for credit losses** was $24.8 billion at December 31, 2023. The Firm had an allowance for loan losses to retained loans coverage ratio of 1.75%, compared with 1.81% in the prior year.
- The Firm's **nonperforming assets** totaled $7.6 billion at December 31, 2023, up 5%, predominantly driven by wholesale nonaccrual loans, which reflected the impact of downgrades. Refer to Wholesale Credit Portfolio and Consumer Credit Portfolio on pages 120–130 and pages 114–119, respectively, for additional information.

- Firmwide **average loans** of $1.2 trillion were up 13%, predominantly driven by higher loans in CCB and CB, primarily as a result of First Republic.
- Firmwide **average deposits** of $2.4 trillion were down 4%, driven by
  - continued migration into higher-yielding investments in AWM, the impact of higher customer spending in CCB, continued deposit attrition in CB, and a net decline in CIB, which included actions taken to reduce certain deposits,

  partially offset by
  - the increase in deposits associated with First Republic, and growth related to the Firm's international consumer initiatives in Corporate.

  Refer to Liquidity Risk Management on pages 102-109 for additional information.

Selected capital and other metrics

- **CET1 capital** was $251 billion, and the Standardized and Advanced CET1 ratios were both 15.0%.
- **SLR** was 6.1%.
- **TBVPS** grew 18%, ending 2023 at $86.08.
- As of December 31, 2023, the Firm had eligible end-of-period **High Quality Liquid Assets** ("HQLA") of approximately $798 billion and unencumbered **marketable securities** with a fair value of approximately $649 billion, resulting in approximately $1.4 trillion of liquidity sources. Refer to Liquidity Risk Management on pages 102-109 for additional information.

Refer to Consolidated Results of Operations and Consolidated Balance Sheets Analysis on pages 54-57 and pages 58-60, respectively, for a further discussion of the Firm's results, including the provision for credit losses; and Business Segment Results on page 67 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 62-64 for a further discussion of each of these measures.

Business segment highlights

Selected business metrics for each of the Firm's four lines of business ("LOB") are presented below for the full year of 2023, and include the impact of First Republic, unless otherwise specified.

CCB ROE 38%	• Average deposits down 3%; client investment assets up 47%, or up 25% excluding First Republic • Average loans up 20%, or up 6% excluding First Republic; Card Services net charge-off rate of 2.45% • Debit and credit card sales volume[(a)] up 8% • Active mobile customers[(b)] up 8%
CIB ROE 13%	• #1 ranking for Global Investment Banking fees with 8.8% wallet share for the year • Total Markets revenue of $27.8 billion, down 4%, with Fixed Income Markets up 1% and Equity Markets down 13%
CB ROE 20%	• Gross Investment Banking and Markets revenue of $3.4 billion, up 14% • Average loans up 20%, or up 8% excluding First Republic; average deposits down 9%
AWM ROE 31%	• Assets under management ("AUM") of $3.4 trillion, up 24% • Average loans up 2%, or down 2% excluding First Republic; average deposits down 17%

(a) Excludes Commercial Card.
(b) Users of all mobile platforms who have logged in within the past 90 days. As of December 31, 2023, excludes First Republic.

Refer to the Business Segment Results on pages 65-85 for a detailed discussion of results by business segment.

Credit provided and capital raised

JPMorgan Chase 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 2023, consisting of:

$2.3 trillion	Total credit provided and capital raised (including loans and commitments)
$239 billion	Credit for consumers
$36 billion	Credit for U.S. small businesses
$1.0 trillion	Credit for corporations
$915 billion	Capital for corporate clients and non-U.S. government entities
$47 billion	Credit and capital for nonprofit and U.S. government entities[(a)]

(a) Includes states, municipalities, hospitals and universities.

Recent events

- On February 6, 2024, JPMorgan Chase announced that it plans to open more than 500 new branches, renovate approximately 1,700 locations and hire 3,500 employees over the next three years.
- On January 25, 2024, JPMorgan Chase announced new responsibilities for several key executives:
  - Jennifer Piepszak, formerly the Co-Chief Executive Officer ("CEO") of CCB, and Troy Rohrbaugh, formerly the Co-head of Markets and Securities Services, became Co-CEOs of the expanded Commercial & Investment Bank, which brings together the Firm's major wholesale businesses consisting of Global Investment Banking, Commercial Banking and Corporate Banking, as well as Markets, Securities Services and Global Payments.
  - Marianne Lake, the former Co-CEO of CCB, became the sole CEO of that business.
  - James Dimon, Chairman and CEO, and Daniel Pinto, President and Chief Operating Officer, will continue to jointly manage the company, with Mr. Pinto focusing on the execution of the Firm's LOB priorities.

  As a result of these organizational changes, the Firm will be reorganizing its business segments to reflect the manner in which the segments will be managed. The reorganization of the business segments is expected to be effective in the second quarter of 2024.
- On January 16, 2024, JPMorgan Chase announced that Mark Weinberger, 62, had been elected to its Board of Directors, effective immediately. He will also serve as a member of the Board's Audit Committee. Mr. Weinberger served as the Global Chairman and Chief Executive Officer of Ernst & Young from 2013 to 2019.

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 JPMorgan Chase'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 161 and Part I, Item 1A, Risk Factors section on pages 9-33 of this Form 10-K for a further discussion of certain of those risks and uncertainties and the other factors that could cause JPMorgan Chase's actual results to differ materially because of those risks and uncertainties. There is no assurance that actual results in 2024 will be in line with the outlook information set forth below, and the Firm does not undertake to update any forward-looking statements.

JPMorgan Chase's current outlook for full-year 2024 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 2024

- Management expects net interest income to be approximately $90 billion, market dependent.
- Management expects net interest income excluding Markets to be approximately $88 billion, market dependent.
- Management expects adjusted expense to be approximately $90 billion, market dependent.
- Management expects the net charge-off rate in Card Services to be less than 3.50%.

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 62-64.

Business Developments

First Republic acquisition

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

JPMorgan Chase's Consolidated Financial Statements as of and for the period ended December 31, 2023 reflect the impact of First Republic. Where meaningful to the disclosure, the impact of the First Republic acquisition, as well as subsequent related business and activities, are disclosed in various sections of this Form 10-K. The Firm continues to convert certain operations, and to integrate clients, products and services, associated with the First Republic acquisition to align with the Firm's businesses and operations.

Refer to Note 34 and page 67 for additional information related to First Republic.

Interbank Offered Rate ("IBOR") transition

The publication of the remaining principal tenors of U.S. dollar LIBOR (i.e., overnight, one-month, three-month, six-month and 12-month LIBOR) ceased on June 30, 2023 ("LIBOR Cessation"). The one-month, three-month and six-month tenors of U.S. dollar LIBOR will continue to be published on a "synthetic" basis, which will allow market participants to use such rates for certain legacy LIBOR-linked contracts through September 30, 2024.

As part of the Firm's overall transition efforts which culminated in the second quarter of 2023, the Firm successfully completed the conversion of predominantly all of its remaining cleared derivatives contracts linked to U.S. dollar LIBOR to the Secured Overnight Financing Rate ("SOFR") as part of initiatives by the principal central counterparties ("CCPs") to convert cleared derivatives prior to LIBOR Cessation. Nearly all of the Firm's other U.S. dollar LIBOR-linked products that remained outstanding at LIBOR Cessation have been remediated through contractual fallback provisions or through the framework provided by the Adjustable Interest Rate (LIBOR) Act ("LIBOR Act"). The Firm expects that the limited number of contracts remaining that reference "synthetic" U.S. dollar LIBOR will be remediated by September 30, 2024.

CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the two-year period ended December 31, 2023, unless otherwise specified. Refer to Consolidated Results of Operations on pages 51-54 of the Firm's Annual Report on Form 10-K for the year ended December 31, 2022 (the "2022 Form 10-K") for a discussion of the 2022 versus 2021 results. Factors that relate primarily to a single business segment are discussed in more detail within that business segment's results. Refer to pages 155-158 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)	2023		2022	2021
Investment banking fees	$ 6,519		$ 6,686	$ 13,216
Principal transactions	24,460		19,912	16,304
Lending- and deposit-related fees	7,413		7,098	7,032
Asset management fees	15,220		14,096	14,405
Commissions and other fees	6,836		6,581	6,624
Investment securities losses	(3,180)		(2,380)	(345)
Mortgage fees and related income	1,176		1,250	2,170
Card income	4,784		4,420	5,102
Other income[a]	5,609	(b)	4,322	4,830
Noninterest revenue	**68,837**		61,985	69,338
Net interest income	89,267		66,710	52,311
Total net revenue	**$ 158,104**		$ 128,695	$ 121,649

(a) Included operating lease income of $2.8 billion, $3.7 billion and $4.9 billion for the years ended December 31, 2023, 2022 and 2021, respectively. Also includes losses on tax-oriented investments. Refer to Note 6 for additional information.

(b) Included the estimated bargain purchase gain of $2.8 billion for the year ended December 31, 2023, in Corporate associated with the First Republic acquisition. Refer to Business Segment Results on page 67, and Notes 6 and 34 for additional information.

2023 compared with 2022

Investment banking fees decreased, reflecting in CIB:

- lower advisory fees due to a lower number of completed transactions, reflecting the lower level of announced deals in the current and the prior year amid a challenging environment, and
- lower debt underwriting fees as challenging market conditions, primarily in the first half of the year, resulted in lower issuance activity across leveraged loans, investment-grade loans and high-grade bonds. This was largely offset by higher issuance activity in high-yield bonds driven by higher industry-wide issuance,

partially offset by

- higher equity underwriting fees driven by a higher level of follow-on offerings due to lower equity market volatility and a higher level of convertible securities offerings, which benefited from higher rates, partially offset by lower activity in private placements amid a challenging environment.

Refer to CIB segment results on pages 72-77 and Note 6 for additional information.

Principal transactions revenue increased, reflecting in CIB:

- higher Equity Markets principal transactions revenue in Prime Finance and Equity Derivatives,
- higher Fixed Income Markets principal transactions revenue in Securitized Products and Fixed Income Financing, largely offset by lower revenue in Rates and Currencies & Emerging Markets;
  - the net increase in Markets principal transactions revenue was more than offset by a decline in Markets net interest income, primarily due to higher funding costs; and
- losses of $280 million in Credit Adjustments & Other compared with $836 million in the prior year.

The prior year included net markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio in CIB and CB.

The increase in principal transactions revenue also included the impact of higher short-term cash deployment activities in Treasury and CIO, reflective of the current interest rate environment.

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.

Refer to CIB and Corporate segment results on pages 72-77 and pages 84-85, respectively, and Note 6 for additional information.

Lending- and deposit-related fees increased, reflecting:

- higher lending-related revenue driven by the amortization of the purchase discount on certain acquired lending-related commitments associated with First Republic, primarily in AWM and CB,

predominantly offset by

- lower deposit-related fees in CB and CIB driven by the higher level of client credits that reduce such fees.

Refer to CIB, CB and AWM segment results on pages 72-77, pages 78-80 and pages 81-83, respectively, and Note 6 for additional information.

Asset management fees increased driven by strong net inflows and the removal of most money market fund fee waivers in the prior year in AWM, and in CCB the impact of First Republic, as well as higher average market levels and strong net inflows. Refer to CCB and AWM segment results on pages 68-71 and pages 81-83, respectively, and Note 6 for additional information.

Commissions and other fees increased due to higher commissions on annuity sales and travel-related services in CCB. Refer to CCB segment results on pages 68-71 and Note 6 for additional information.

Investment securities losses reflected higher net losses on higher sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio in both periods in Treasury and CIO. Refer to Corporate segment results on pages 84-85 and Note 10 for additional information.

Mortgage fees and related income: refer to CCB segment results on pages 68-71, Note 6 and 15 for further information.

Card income increased in CIB and CB, reflecting growth in merchant processing volume and Commercial Card transactions in J.P. Morgan Payments; and in CCB, driven by higher net interchange income on increased debit and credit card sales volume. Refer to Business Segment Results, CCB, CIB and CB segment results on pages 65-85, pages 68-71, pages 72-77 and pages 78-80, respectively, and Note 6 for further information.

Other income increased, reflecting:

- the $2.8 billion estimated bargain purchase gain in Corporate associated with the First Republic acquisition,
- the impact of net investment hedges in Treasury and CIO, and
- a gain of $339 million recognized in the first quarter of 2023 in AWM on the original minority interest in China International Fund Management ("CIFM") upon the Firm's acquisition of the remaining 51% interest in the entity,

partially offset by

- lower auto operating lease income in CCB due to a decline in volume,
- lower net gains related to certain other Corporate investments, and
- the net impact of equity investments in CIB, including impairment losses in the second half of 2023,

The prior year included:

- a gain of $914 million on the sale of Visa B shares and proceeds from an insurance settlement in Corporate, and
- a gain on an equity-method investment received in partial satisfaction of a loan in CB.

Refer to Business Segment Results on page 67 and Note 34 for additional information on the First Republic acquisition; Note 5 for additional information on net investment hedges; and Note 6 for further information.

Net interest income increased driven by higher rates, the impact of First Republic, and higher revolving balances in Card Services, partially offset by lower Markets net interest income and lower average deposit balances.

The Firm's average interest-earning assets were $3.3 trillion, down $23 billion, and the yield was 5.14%, up 236 basis points ("bps"). The net yield on these assets, on an FTE basis, was 2.70%, an increase of 70 bps. The net yield excluding Markets was 3.85%, up 125 bps.

Refer to the Consolidated average balance sheets, interest and rates schedule on pages 310-314 for further 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 62-64 for a further discussion of Net yield excluding Markets.

Provision for credit losses

Year ended December 31, (in millions)	2023	2022	2021
Consumer, excluding credit card	**$ 935**	$ 506	$ (1,933)
Credit card	**6,048**	3,353	(4,838)
Total consumer	**6,983**	3,859	(6,771)
Wholesale	**2,299**	2,476	(2,449)
Investment securities	**38**	54	(36)
Total provision for credit losses	**$ 9,320**	$ 6,389	$ (9,256)

2023 compared with 2022

The **provision for credit losses** was $9.3 billion, reflecting $6.2 billion of net charge-offs and a net addition of $3.1 billion to the allowance for credit losses.

Net charge-offs increased $3.3 billion, consisting of $2.6 billion in consumer, predominantly driven by Card Services, as the portfolio continued to normalize to pre-pandemic levels, and $698 million in wholesale.

The net addition to the allowance for credit losses included $1.9 billion, consisting of:

- $1.3 billion in **consumer**, predominantly driven by CCB, reflecting a $1.4 billion net addition in Card Services, partially offset by a net reduction of $200 million in Home Lending. The net addition in Card Services was driven by loan growth, including an increase in revolving balances, partially offset by reduced borrower uncertainty. The net reduction in Home Lending was driven by improvements in the outlook for home prices; and
- $657 million in **wholesale**, driven by net downgrade activity and the net effect of changes in the Firm's weighted average macroeconomic outlook, including a deterioration in the outlook for commercial real estate in CB, partially offset by the impact of changes in the loan and lending-related commitment portfolios.

The net addition also included $1.2 billion to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

The provision in the prior year included a $3.5 billion net addition to the allowance for credit losses, consisting of $2.3 billion in wholesale and $1.2 billion in consumer, driven by loan growth and deterioration in the Firm’s macroeconomic outlook, partially offset by a reduction in the allowance related to a decrease in uncertainty associated with borrower behavior as the effects of the pandemic gradually receded, and net charge-offs of $2.9 billion.

Refer to the segment discussions of CCB on pages 68–71, CIB on pages 72–77, CB on pages 78–80, AWM on pages 81–83, the Allowance for Credit Losses on pages 131–133, and Notes 1, 10 and 13 for further discussion of the credit portfolio and the allowance for credit losses.

Noninterest expense

Year ended December 31, (in millions)	2023	2022	2021
Compensation expense	$ 46,465	$ 41,636	$ 38,567
Noncompensation expense:			
Occupancy	4,590	4,696	4,516
Technology, communications and equipment[(a)]	9,246	9,358	9,941
Professional and outside services	10,235	10,174	9,814
Marketing	4,591	3,911	3,036
Other[(b)]	12,045	6,365	5,469
Total noncompensation expense[(c)]	40,707	34,504	32,776
Total noninterest expense	$ 87,172	$ 76,140	$ 71,343

(a) Includes depreciation expense associated with auto operating lease assets.

(b) Included Firmwide legal expense of $1.4 billion, $266 million and $426 million, as well as FDIC-related expense of $4.2 billion, $860 million and $730 million for the years ended December 31, 2023, 2022 and 2021, respectively. Refer to Note 6 for additional information.

(c) Reflected the impact of First Republic of $1.5 billion, which included expenses recorded in the second quarter of 2023 with respect to individuals associated with First Republic who did not become employees of the Firm until July 2, 2023. Refer to Business Segment Results on page 67 for additional information.

2023 compared with 2022

Compensation expense increased driven by:

- an increase in employees, primarily in technology and front office, as well as wage inflation,
- the impact of First Republic in the second half of 2023, predominantly in CCB and Corporate, and
- higher volume- and revenue-related compensation predominantly in AWM and CCB.

Noncompensation expense increased as a result of:

- higher FDIC-related expense, which included the $2.9 billion special assessment recognized in Corporate,
- the impact of First Republic in Corporate and CCB,
- higher legal expense in CIB, Corporate and CCB,
- higher investments in the business, including marketing and technology, and
- higher other expenses, including higher indirect tax expense in CIB, and higher travel and entertainment expense across the segments,

partially offset by

- lower depreciation expense on lower auto lease assets.

Refer to Business Segment Results on page 67 and Note 34 for additional information on the First Republic acquisition; Note 6 for further information;

Income tax expense

Year ended December 31, (in millions, except rate)	2023	2022	2021
Income before income tax expense	$ 61,612	$ 46,166	$ 59,562
Income tax expense	12,060	8,490	11,228
Effective tax rate	19.6 %	18.4 %	18.9 %

2023 compared with 2022

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

- the higher level of pre-tax income and changes in the mix of income and expenses subject to U.S. federal, state and local taxes,
- lower benefits associated with tax audit settlements, and
- vesting of employee stock based awards,

largely offset by

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

Refer to Note 25 for further information.

Consolidated balance sheets analysis

The following is a discussion of the significant changes between December 31, 2023 and 2022. Refer to pages 155–158 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)	2023	2022	Change
Assets			
Cash and due from banks	$ **29,066**	$ 27,697	5 %
Deposits with banks	**595,085**	539,537	10
Federal funds sold and securities purchased under resale agreements	**276,152**	315,592	(12)
Securities borrowed	**200,436**	185,369	8
Trading assets	**540,607**	453,799	19
Available-for-sale securities	**201,704**	205,857	(2)
Held-to-maturity securities	**369,848**	425,305	(13)
Investment securities, net of allowance for credit losses	**571,552**	631,162	(9)
Loans	**1,323,706**	1,135,647	17
Allowance for loan losses	**(22,420)**	(19,726)	14
Loans, net of allowance for loan losses	**1,301,286**	1,115,921	17
Accrued interest and accounts receivable	**107,363**	125,189	(14)
Premises and equipment	**30,157**	27,734	9
Goodwill, MSRs and other intangible assets	**64,381**	60,859	6
Other assets	**159,308**	182,884	(13)
Total assets	$ **3,875,393**	$ 3,665,743	6 %

Cash and due from banks and deposits with banks increased reflecting the higher level of excess cash placed with the Federal Reserve Banks. The Firm’s excess cash primarily resulted from:

- the net issuance of long-term debt, and
- the impact of maturities and paydowns of investment securities in Treasury and CIO,

partially offset by

- the impacts associated with the First Republic acquisition in the first half of 2023.

Federal funds sold and securities purchased under resale agreements decreased, reflecting a reduction in client-driven market-making activities, partially offset by higher cash deployment in Treasury and CIO.

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

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

Trading assets increased, reflecting in Markets higher debt and equity instruments on client-driven market-making activities, partially offset by lower derivative receivables, primarily as a result of market movements. Refer to Notes 2 and 5 for additional information.

Investment securities decreased due to:

- lower available-for-sale ("AFS") securities driven by maturities and paydowns, predominantly offset by the impact of First Republic, net purchases, and the transfer of securities from held-to-maturity (“HTM”) in the first quarter of 2023, and
- lower HTM securities driven by maturities and paydowns, and the transfer of securities to AFS.

Refer to Corporate segment results on pages 84–85, Investment Portfolio Risk Management on page 134 and Notes 2 and 10 for additional information on investment securities.

Loans increased, reflecting:

- $146 billion of loans associated with First Republic,
- growth in new accounts in Card Services, as well as higher revolving balances, which continued to normalize to pre-pandemic levels, and
- growth in Auto loans due to net originations.

The **allowance for loan losses** increased, reflecting:

- a net addition to the allowance for loan losses of $2.2 billion, consisting of:
  - $1.3 billion in **consumer**, predominantly driven by CCB, reflecting $1.4 billion in Card Services driven by loan growth, including an increase in revolving balances, partially offset by a net reduction of $176 million in Home Lending, and
  - $930 million in **wholesale**, driven by net downgrade activity and the net effect of changes in the Firm's weighted average macroeconomic outlook, and
- $1.1 billion to establish the allowance for the First Republic loans in the second quarter of 2023.

The allowance for loan losses also reflected a reduction of $587 million, on January 1, 2023, as a result of the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance.

References in this Form 10-K to "changes to the TDR accounting guidance" pertain to the Firm's adoption of this guidance.

There was also a $408 million net reduction in 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 54–57 and pages 111–134, respectively, and Notes 2, 3, 12 and 13 for additional information on loans and the total allowance for credit losses; and Business Segment Results on page 67 and Note 34 for additional information on the First Republic acquisition.

Accrued interest and accounts receivable decreased due to lower client receivables related to client-driven activities in Markets.

Premises and equipment increased as a result of the construction-in-process associated with the Firm's headquarters, the First Republic acquisition, largely lease right-of-use assets, and higher capitalized software. Refer to Note 16 and 18 for additional information.

Goodwill, MSRs and other intangibles increased predominantly due to:

- other intangibles and goodwill related to the acquisition of the remaining 51% interest in CIFM,
- core deposit intangibles associated with the First Republic acquisition, and
- higher MSRs as a result of net additions primarily from purchases, and the impact of higher interest rates, partially offset by the realization of expected cash flows.

Refer to Note 15 and 34 for additional information.

Other assets decreased reflecting the impact of the change in the type of collateral placed with CCPs from cash to securities.

Selected Consolidated balance sheets data

December 31, (in millions)	2023	2022	Change
Liabilities			
Deposits	$ **2,400,688**	$ 2,340,179	3
Federal funds purchased and securities loaned or sold under repurchase agreements	**216,535**	202,613	7
Short-term borrowings	**44,712**	44,027	2
Trading liabilities	**180,428**	177,976	1
Accounts payable and other liabilities	**290,307**	300,141	(3)
Beneficial interests issued by consolidated variable interest entities (“VIEs”)	**23,020**	12,610	83
Long-term debt	**391,825**	295,865	32
Total liabilities	**3,547,515**	3,373,411	5
Stockholders’ equity	**327,878**	292,332	12
Total liabilities and stockholders’ equity	$ **3,875,393**	$ 3,665,743	6 %

Deposits increased, reflecting the net impact of:

- higher balances in CIB due to net issuances of structured notes as a result of client demand, as well as deposit inflows from client-driven activities in Payments and Securities Services, partially offset by deposit attrition, including actions taken to reduce certain deposits,
- growth in Corporate related to the Firm's international consumer initiatives,
- lower balances in CCB reflecting higher customer spending,
- a decline in AWM due to continued migration into higher-yielding investments driven by the higher interest rate environment, predominantly offset by growth from new and existing customers as a result of new product offerings, and
- a decrease in CB due to continued deposit attrition as clients seek higher-yielding investments, predominantly offset by the retention of inflows associated with disruptions in the market in the first quarter of 2023.

The net increase also included $61 billion of deposits associated with First Republic, primarily reflected in CCB, AWM and CB.

Federal funds purchased and securities loaned or sold under repurchase agreements increased, reflecting the impact of a lower level of netting on reduced repurchase activity.

Refer to Liquidity Risk Management on pages 102–109 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; Business Segment Results on page 67 and Note 34 for additional information on the First Republic acquisition.

Trading liabilities increased due to client-driven market-making activities in Fixed Income Markets, which resulted in higher levels of short positions in debt instruments, partially offset by lower derivative payables primarily as a result of market movements. Refer to Notes 2 and 5 for additional information.

Accounts payable and other liabilities decreased primarily due to lower client payables related to client-driven activities in Markets, partially offset by higher accounts payable and accrued liabilities, including the $2.9 billion payable related to the FDIC special assessment. Refer to Note 19 for additional information.

Beneficial interests issued by consolidated VIEs increased in CIB primarily driven by higher levels of Firm-administered multi-seller conduit commercial paper held by third parties, reflecting changes in the Firm's short-term liquidity management. Refer to Liquidity Risk Management on pages 102–109; and Notes 14 and 28 for additional information on Firm-sponsored VIEs and loan securitization trusts.

Long-term debt increased, reflecting the impact of First Republic, which included the Purchase Money Note issued to the FDIC and additional FHLB advances, as well as net issuance consistent with the Firm's long-term funding plans. The increase was also attributable to net issuances of structured notes in Markets due to client demand and an increase in fair value. Refer to Liquidity Risk Management on pages 102–109 and Note 34 for additional information on the First Republic acquisition.

Stockholders' equity: refer to Consolidated Statements of changes in stockholders' equity on page 169, Capital Actions on page 99, 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, 2023 and 2022. Refer to Consolidated cash flows analysis on page 57 of the Firm's 2022 Form 10-K for a discussion of the 2021 activities.

	Year ended December 31,		
(in millions)	**2023**	2022	2021
Net cash provided by/(used in)			
Operating activities	**$ 12,974**	$ 107,119	$ 78,084
Investing activities	**67,643**	(137,819)	(129,344)
Financing activities	**(25,571)**	(126,257)	275,993
Effect of exchange rate changes on cash	**1,871**	(16,643)	(11,508)
Net increase/(decrease) in cash and due from banks and deposits with banks	**$ 56,917**	$(173,600)	$ 213,225

Operating activities

JPMorgan Chase'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 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.
- In 2022, cash provided resulted from higher accounts payable and other liabilities, lower securities borrowed, and net proceeds from sales, securitizations, and paydowns of loans held-for-sale, partially offset by higher trading assets.

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 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.
- In 2022, cash used resulted from net originations of loans and higher securities purchased under resale agreements, partially offset by net proceeds from investment securities.

Financing activities

The Firm's financing activities include acquiring customer deposits and issuing long-term debt and 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.
- In 2022, cash used reflected lower deposits, partially offset by 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 58–60, Capital Risk Management on pages 91-101, and Liquidity Risk Management on pages 102–109, and the Consolidated Statements of Cash Flows on page 170 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 166–170. 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 LOBs 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 (and each of the reportable business segments) 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 the LOBs.

Management also uses certain non-GAAP financial measures at the Firm and business-segment level 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 Results on pages 65–85 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.

	2023			2022			2021		
Year ended December 31, (in millions, except ratios)	Reported	Fully taxable-equivalent adjustments[(a)]	Managed basis	Reported	Fully taxable-equivalent adjustments[(a)]	Managed basis	Reported	Fully taxable-equivalent adjustments[(a)]	Managed basis
Other income	**$ 5,609**	**$ 3,782**	**$ 9,391**	$ 4,322	$ 3,148	$ 7,470	$ 4,830	$ 3,225	$ 8,055
Total noninterest revenue	**68,837**	**3,782**	**72,619**	61,985	3,148	65,133	69,338	3,225	72,563
Net interest income	**89,267**	**480**	**89,747**	66,710	434	67,144	52,311	430	52,741
Total net revenue	**158,104**	**4,262**	**162,366**	128,695	3,582	132,277	121,649	3,655	125,304
Total noninterest expense	**87,172**	**NA**	**87,172**	76,140	NA	76,140	71,343	NA	71,343
Pre-provision profit	**70,932**	**4,262**	**75,194**	52,555	3,582	56,137	50,306	3,655	53,961
Provision for credit losses	**9,320**	**NA**	**9,320**	6,389	NA	6,389	(9,256)	NA	(9,256)
Income before income tax expense	**61,612**	**4,262**	**65,874**	46,166	3,582	49,748	59,562	3,655	63,217
Income tax expense	**12,060**	**4,262**	**16,322**	8,490	3,582	12,072	11,228	3,655	14,883
Net income	**$ 49,552**	**NA**	**$ 49,552**	$ 37,676	NA	$ 37,676	$ 48,334	NA	$ 48,334
Overhead ratio	**55 %**	**NM**	**54 %**	59 %	NM	58 %	59 %	NM	57 %

(a) Predominantly recognized in CIB, CB 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)	2023	2022	2021
Net interest income – reported	**$ 89,267**	$ 66,710	$ 52,311
Fully taxable-equivalent adjustments	**480**	434	430
Net interest income – managed basis[a]	**$ 89,747**	$ 67,144	$ 52,741
Less: Markets net interest income[b]	**(294)**	4,789	8,243
Net interest income excluding Markets[a]	**$ 90,041**	$ 62,355	$ 44,498
Average interest-earning assets	**$3,325,708**	$3,349,079	$3,215,942
Less: Average Markets interest-earning assets[b]	**985,777**	953,195	888,238
Average interest-earning assets excluding Markets	**$2,339,931**	$2,395,884	$2,327,704
Net yield on average interest-earning assets – managed basis	**2.70 %**	2.00 %	1.64 %
Net yield on average Markets interest-earning assets[b]	**(0.03)**	0.50	0.93
Net yield on average interest-earning assets excluding Markets	**3.85 %**	2.60 %	1.91 %
Noninterest revenue – reported	**$ 68,837**	$ 61,985	$ 69,338
Fully taxable-equivalent adjustments	**3,782**	3,148	3,225
Noninterest revenue – managed basis	**$ 72,619**	$ 65,133	$ 72,563
Less: Markets noninterest revenue[b]	**28,086**	24,195	19,151
Noninterest revenue excluding Markets	**$ 44,533**	$ 40,938	$ 53,412
Memo: Total Markets net revenue[b]	**$ 27,792**	$ 28,984	$ 27,394

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.

(b) Refer to pages 75-76 for further information on Markets.

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 understand the effect of these items on reported results and provide an alternative presentation of the Firm's performance.

The Firm also reviews the allowance for loan losses to period-end loans retained excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

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, 2023**	Dec 31, 2022	**2023**	2022	2021
Common stockholders' equity	**$ 300,474**	$ 264,928	**$ 282,056**	$ 253,068	$ 250,968
Less: Goodwill	**52,634**	51,662	**52,258**	50,952	49,584
Less: Other intangible assets	**3,225**	1,224	**2,572**	1,112	876
Add: Certain deferred tax liabilities[(a)]	**2,996**	2,510	**2,883**	2,505	2,474
Tangible common equity	**$ 247,611**	$ 214,552	**$ 230,109**	$ 203,509	$ 202,982
Return on tangible common equity	**NA**	NA	**21 %**	18 %	23 %
Tangible book value per share	**$ 86.08**	$ 73.12	**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 RESULTS

The Firm is managed on an LOB basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset & Wealth Management. In addition, there is a Corporate segment.

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. 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 62–64 for a definition of managed basis.

JPMorgan Chase [(a)]						
Consumer Businesses			**Wholesale Businesses**			
Consumer & Community Banking			**Corporate & Investment Bank**		**Commercial Banking**	**Asset & Wealth Management**
Banking & Wealth Management	Home Lending	Card Services & Auto	Banking	Markets & Securities Services	• Middle Market Banking	• Asset Management
• Consumer Banking • J.P. Morgan Wealth Management • Business Banking	• Home Lending Production • Home Lending Servicing • Real Estate Portfolios	• Card Services • Auto	• Investment Banking • Payments • Lending	• Fixed Income Markets • Equity Markets • Securities Services • Credit Adjustments & Other	• Corporate Client Banking • Commercial Real Estate Banking	• Global Private Bank

(a) As a result of the organizational changes that were announced on January 25, 2024, the Firm will be reorganizing its business segments to reflect the manner in which the segments will be managed. The reorganization of the business segments is expected to be effective in the second quarter of 2024. Refer to Recent events on page 52 for additional information.

Description of business segment reporting methodology

Results of the 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 join efforts to sell products and services to the Firm's clients and customers, the participating business segments 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 segment(s) involved in the transaction. The segment 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 support units, technology and operations 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 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.

As a result of the higher interest rate environment, the cost of funds for assets and the credits earned for liabilities have generally increased, impacting the business segments' net interest income. During the period ended December 31, 2023, this has resulted in higher cost of funds for loans and

Markets activities, and contributed to margin expansion on deposits.

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 143 for additional information.

Debt expense and preferred stock dividend allocation
As part of the funds transfer pricing 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 91-101 for additional information.

Capital allocation
The amount of capital assigned to each business segment is referred to as equity. The Firm's current 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 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 may change.

Refer to Line of business equity on page 98 for additional information on capital allocation.

Segment Results – Managed Basis

The following tables summarize the Firm's results by segment for the periods indicated.

Year ended December 31,	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking		
(in millions, except ratios)	**2023**	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Total net revenue	**$ 70,148**	$ 54,814 (a)	$49,879 (a)	**$48,807**	$ 48,102 (a)	$51,943 (a)	**$ 15,546**	$ 11,533	$ 10,008
Total noninterest expense	**34,819**	31,208 (a)	29,028 (a)	**28,594**	27,350 (a)	25,553 (a)	**5,378**	4,719	4,041
Pre-provision profit/(loss)	**35,329**	23,606	20,851	**20,213**	20,752	26,390	**10,168**	6,814	5,967
Provision for credit losses	**6,899**	3,813	(6,989)	**121**	1,158	(1,174)	**1,970**	1,268	(947)
Net income/(loss)	**21,232**	14,916 (a)	20,957 (a)	**14,129**	14,925 (a)	21,107 (a)	**6,143**	4,213	5,246
Return on equity ("ROE")	**38 %**	29 %	41 %	**13 %**	14 %	25 %	**20 %**	16 %	21 %

Year ended December 31,	Asset & Wealth Management			Corporate			Total		
(in millions, except ratios)	**2023**	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Total net revenue	**$ 19,827**	$ 17,748	$ 16,957	**$ 8,038**	$ 80	$ (3,483)	**$162,366**	$132,277	$125,304
Total noninterest expense	**12,780**	11,829	10,919	**5,601**	1,034	1,802	**87,172**	76,140	71,343
Pre-provision profit/(loss)	**7,047**	5,919	6,038	**2,437**	(954)	(5,285)	**75,194**	56,137	53,961
Provision for credit losses	**159**	128	(227)	**171**	22	81	**9,320**	6,389	(9,256)
Net income/(loss)	**5,227**	4,365	4,737	**2,821**	(743)	(3,713)	**49,552**	37,676	48,334
Return on equity ("ROE")	**31 %**	25 %	33 %	**NM**	NM	NM	**17 %**	14 %	19 %

(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.

Selected Firmwide Metrics

The following tables present key metrics for Wealth Management, which consists of the Global Private Bank in AWM and J.P. Morgan Wealth Management in CCB; and total revenue and key metrics for J.P. Morgan Payments, which consists of payments activities in CIB and CB. This presentation is intended to provide investors with additional information concerning Wealth Management and J.P. Morgan Payments, each of which consists of similar business activities conducted across LOBs to serve different types of clients and customers.

Selected metrics - Wealth Management

Year ended December 31,	2023	2022	2021
Client assets (in billions)[a]	**$ 3,177** [b]	$ 2,438	$ 2,456
Number of client advisors	**8,971**	8,166	7,463

(a) Consists of Global Private Bank in AWM and client investment assets in J.P. Morgan Wealth Management in CCB.
(b) At December 31, 2023, included $144.6 billion of client investment assets associated with First Republic.

Selected metrics - J.P. Morgan Payments

(in millions, except where otherwise noted) Year ended December 31,	2023	2022	2021
Total net revenue[a]	**$18,248**	$13,909	$ 9,861
Merchant processing volume (in billions)	**2,408**	2,158	1,887
Average deposits (in billions)	**715**	779	800

(a) Includes certain revenues that are reported as investment banking product revenue in CB, and excludes the net impact of equity investments.

Segment information related to First Republic

The following table presents selected impacts to CCB, CB, AWM and Corporate associated with First Republic from the acquisition date of May 1, 2023.

	As of or for the year ended December 31, 2023				
(in millions)	Consumer & Community Banking	Commercial Banking	Asset & Wealth Management	Corporate	Total
Selected Income Statement Data					
Revenue					
Asset management fees	**$ 387**	**$ –**	**$ –**	**$ –**	**$ 387**
All other income	**489**	**201**	**503**	**2,862** [b]	**4,055**
Noninterest revenue	**876**	**201**	**503**	**2,862**	**4,442**
Net interest income	**2,401**	**704**	**668**	**(55)**	**3,718**
Total net revenue	**3,277**	**905**	**1,171**	**2,807**	**8,160**
Provision for credit losses	**421**	**731**	**128**	**–**	**1,280**
Noninterest expense	**1,219**	**45**	**50**	**1,033** [c]	**2,347**
Net income	**1,244**	**98**	**753**	**2,015**	**4,110**
Selected Balance Sheet Data (period-end)					
Loans	**$ 94,671**	**$ 38,495**	**$ 11,436**	**$ –**	**$ 144,602** [d]
Deposits[a]	**42,710**	**6,163**	**12,098**	**–**	**60,971** [d]

(a) In the fourth quarter of 2023, CCB transferred certain deposits associated with First Republic to AWM, CB and CIB.
(b) Included the preliminary estimated bargain purchase gain of $2.7 billion recorded in other income. For the year ended December 31, 2023, reflects measurement period adjustments of $63 million, resulting in an estimated bargain purchase gain of $2.8 billion for the year ended December 31, 2023. Refer to Note 34 for additional information.
(c) Included $360 million of restructuring and integration costs.
(d) Excluded $1.9 billion of loans and $508 million of deposits allocated to CIB.

The following sections provide a comparative discussion of the Firm's results by segment as of or for the years ended December 31, 2023 and 2022, 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, J.P. Morgan Wealth Management and Business Banking), 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)	2023		2022		2021	
Revenue						
Lending- and deposit-related fees	**$ 3,356**		$ 3,316		$ 3,034	
Asset management fees	**3,282**	(d)	2,734		2,794	
Mortgage fees and related income	**1,175**		1,236		2,159	
Card income	**2,532**		2,469	(f)	3,364	(f)
All other income[(a)]	**4,773**	(d)	5,131	(f)	5,741	(f)
Noninterest revenue	**15,118**		14,886		17,092	
Net interest income	**55,030**	(d)	39,928		32,787	
Total net revenue	**70,148**		54,814		49,879	
Provision for credit losses	**6,899**	(d)	3,813		(6,989)	
Noninterest expense						
Compensation expense	**15,171**		13,092		12,142	
Noncompensation expense[(b)]	**19,648**		18,116	(f)	16,886	(f)
Total noninterest expense	**34,819**	(d)	31,208		29,028	
Income before income tax expense	**28,430**		19,793		27,840	
Income tax expense	**7,198**		4,877	(f)	6,883	(f)
Net income	**$21,232**		$14,916		$20,957	
Revenue by line of business						
Banking & Wealth Management	**$43,199**	(e)	$30,059	(f)	$23,786	(f)
Home Lending	**4,140**	(e)	3,674		5,291	
Card Services & Auto	**22,809**		21,081		20,802	
Mortgage fees and related income details:						
Production revenue	**421**		497		2,215	
Net mortgage servicing revenue[(c)]	**754**		739		(56)	
Mortgage fees and related income	**$ 1,175**		$ 1,236		$ 2,159	
Financial ratios						
Return on equity	**38**	%	29	%	41	%
Overhead ratio	**50**		57		58	

(a) Primarily includes operating lease income and commissions and other fees. Operating lease income was $2.8 billion, $3.6 billion and $4.8 billion for the years ended December 31, 2023, 2022 and 2021, respectively.
(b) Included depreciation expense on leased assets of $1.7 billion, $2.4 billion and $3.3 billion for the years ended December 31, 2023, 2022 and 2021, respectively.
(c) Included MSR risk management results of $131 million, $93 million and $(525) million for the years ended December 31, 2023, 2022 and 2021, respectively.
(d) Includes First Republic. Refer to page 67 for additional information.
(e) Banking & Wealth Management and Home Lending included revenue associated with First Republic of $2.3 billion and $932 million, respectively, for the year ended December 31, 2023.
(f) 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.

2023 compared with 2022

Net income was $21.2 billion, up 42%.

Net revenue was $70.1 billion, up 28%.

Net interest income was $55.0 billion, up 38%, driven by:

- deposit margin expansion on higher rates, partially offset by lower average deposits and the impact of lower PPP loan forgiveness in Banking & Wealth Management ("BWM"),
- higher Card Services NII, reflecting an increase in revolving balances, and
- the impact of First Republic in Home Lending.

Noninterest revenue was $15.1 billion, up 2%, driven by:

- higher asset management fees due to the impact of First Republic as well as higher market levels and strong net inflows, higher commissions on annuity sales in BWM and higher other service fees associated with First Republic,
- higher net interchange income on increased debit and credit card sales volume, and
  - In Card Services, higher annual fees and the higher net interchange income were more than offset by an increase in amortization related to new account origination costs, reflecting continued growth. Net interchange income in Card Services also reflected the impact of a reduction in rewards costs and partner payments in the first quarter of 2023 related to a periodic tax refund on airline miles redeemed and an increase to the rewards liability due to adjustments to certain reward program terms in the second quarter of 2023;
- higher travel-related commissions in Card Services,

predominantly offset by

- lower auto operating lease income as a result of a decline in volume, and
- lower mortgage fees and related income in Home Lending.

Refer to Note 6 for additional information on card income, asset management fees, and commissions and other fees; and Critical Accounting Estimates on pages 155–158 for credit card rewards liability.

Refer to Note 15 for further information regarding changes in the value of the MSR asset and related hedges, and mortgage fees and related income.

Refer to Note 34 for additional information on the First Republic acquisition.

Noninterest expense was $34.8 billion, up 12%, reflecting:

- higher compensation expense, driven by an increase in employees, including the impact of First Republic in the second half of 2023 and additions primarily in bankers, advisors and technology, wage inflation and higher revenue-related compensation, as well as
- higher noncompensation expense, driven by the impact of First Republic, investments in marketing and technology, the increase in the FDIC assessment announced in the prior year as well as higher legal expense, partially offset by lower auto lease depreciation on lower auto lease assets.

The provision for credit losses was $6.9 billion, reflecting:

- net charge-offs of $5.3 billion, up $2.6 billion, predominantly driven by Card Services, as the portfolio continued to normalize to pre-pandemic levels,
- a $1.2 billion net addition to the allowance for credit losses, which included $1.4 billion in Card Services, partially offset by a net reduction of $200 million in Home Lending. The net addition in Card Services was driven by loan growth, including an increase in revolving balances, partially offset by reduced borrower uncertainty. The net reduction in Home Lending was driven by improvements in the outlook for home prices; and
- $408 million to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

The provision in the prior year was $3.8 billion, driven by net charge-offs of $2.7 billion and a $1.1 billion net addition to the allowance for credit losses across CCB.

Refer to Credit and Investment Risk Management on pages 111–134 and Allowance for Credit Losses on pages 131–133 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)	2023		2022	2021
Selected balance sheet data (period-end)				
Total assets	**$ 642,951**		$ 514,085	$ 500,370
Loans:				
Banking & Wealth Management[a]	**31,142**	(d)	29,008	35,095
Home Lending[b]	**259,181**	(d)	172,554	180,529
Card Services	**211,175**		185,175	154,296
Auto	**77,705**		68,191	69,138
Total loans	**579,203**		454,928	439,058
Deposits	**1,094,738**	(e)	1,131,611	1,148,110
Equity	**55,500**		50,000	50,000
Selected balance sheet data (average)				
Total assets	**$ 584,367**		$ 497,263	$ 489,771
Loans:				
Banking & Wealth Management	**30,142**	(f)	31,545	44,906
Home Lending[c]	**232,115**	(f)	176,285	181,049
Card Services	**191,424**		163,335	140,405
Auto	**72,674**		68,098	67,624
Total loans	**526,355**		439,263	433,984
Deposits	**1,126,552**	(g)	1,162,680	1,054,956
Equity	**54,349**		50,000	50,000
Employees	**141,640**		135,347	128,863

(a) At December 31, 2023, 2022 and 2021, included $94 million, $350 million and $5.4 billion of loans, respectively, in Business Banking under the PPP.
(b) At December 31, 2023, 2022 and 2021, Home Lending loans held-for-sale and loans at fair value were $3.4 billion, $3.0 billion and $14.9 billion, respectively.
(c) Average Home Lending loans held-for sale and loans at fair value were $4.8 billion, $7.3 billion and $15.4 billion for the years ended December 31, 2023, 2022 and 2021, respectively.
(d) At December 31, 2023, included $4.0 billion and $90.7 billion for Banking & Wealth Management and Home Lending, respectively, associated with First Republic.
(e) Includes First Republic. In the fourth quarter of 2023, CCB transferred certain deposits associated with First Republic to AWM, CB, and CIB. Refer to page 67 for additional information.
(f) Average Banking & Wealth Management and Home Lending loans associated with First Republic were $2.4 billion and $60.2 billion, respectively, for the year ended December 31, 2023.
(g) Included $39.4 billion associated with First Republic for the year ended December 31, 2023.

Selected metrics

As of or for the year ended December 31, (in millions, except ratio data)	2023		2022		2021	
Credit data and quality statistics						
Nonaccrual loans[a][b]	**$ 3,740**		$ 3,899		$ 4,875	
Net charge-offs/(recoveries)						
Banking & Wealth Management	**340**		370		289	
Home Lending	**(56)**		(229)		(275)	
Card Services	**4,699**		2,403		2,712	
Auto	**357**		144		35	
Total net charge-offs/ (recoveries)	**$ 5,340**		$ 2,688		$ 2,761	
Net charge-off/(recovery) rate						
Banking & Wealth Management[c]	**1.13**	**%**	1.17	%	0.64	%
Home Lending	**(0.02)**		(0.14)		(0.17)	
Card Services	**2.45**		1.47		1.94	
Auto	**0.49**		0.21		0.05	
Total net charge-off/ (recovery) rate	**1.02**	**%**	0.62	%	0.66	%
30+ day delinquency rate						
Home Lending[d][e]	**0.66**	**%**	0.83	%	1.25	%
Card Services	**2.14**		1.45		1.04	
Auto	**1.19**		1.01		0.64	
90+ day delinquency rate - Card Services	**1.05**	**%**	0.68	%	0.50	%
Allowance for loan losses						
Banking & Wealth Management	**$ 685**		$ 722		$ 697	
Home Lending	**578**	(f)	867		660	
Card Services	**12,453**		11,200		10,250	
Auto	**742**		715		733	
Total allowance for loan losses	**$14,458**	(g)	$13,504		$12,340	

(a) At December 31, 2023, 2022 and 2021, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $123 million, $187 million and $342 million, respectively. These amounts have been excluded based upon the government guarantee. 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, 2023, 2022 and 2021, generally excludes loans that were under payment deferral programs offered in response to the COVID-19 pandemic.
(c) At December 31, 2023, 2022 and 2021, included $94 million, $350 million and $5.4 billion of loans, respectively, in Business Banking under the PPP. The Firm does not expect to realize material credit losses on PPP loans because the loans are guaranteed by the SBA.
(d) At December 31, 2023, 2022 and 2021, the principal balance of loans under payment deferral programs offered in response to the COVID-19 pandemic was $29 million, $449 million and $1.1 billion in Home Lending, respectively. Loans that are performing according to their modified terms are generally not considered delinquent.
(e) At December 31, 2023, 2022 and 2021, excluded mortgage loans insured by U.S. government agencies of $176 million, $258 million and $405 million, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
(f) Includes First Republic.
(g) On January 1, 2023, the Firm adopted changes to the TDR accounting guidance. The adoption of this guidance resulted in a net decrease in the allowance for loan losses of $591 million, driven by residential real estate and credit card. Refer to Note 1 for further information.

Selected metrics

As of or for the year ended December 31, (in billions, except ratios and where otherwise noted)	2023		2022		2021	
Business Metrics						
CCB Consumer customers (in millions)[(a)]	**82.1**	(g)	79.2		76.5	
CCB Small business customers (in millions)[(a)]	**6.4**	(g)	5.7		5.3	
Number of branches	**4,897**		4,787		4,790	
Active digital customers (in thousands)[(b)]	**66,983**	(g)	63,136		58,857	
Active mobile customers (in thousands)[(c)]	**53,828**	(g)	49,710		45,452	
Debit and credit card sales volume	**$1,678.6**		$1,555.4		$1,360.7	
Total payments transaction volume (in trillions)[(d)]	**5.9**	(g)	5.6		5.0	
Banking & Wealth Management						
Average deposits	**$1,111.7**	(h)	$1,145.7		$1,035.4	
Deposit margin	**2.84**	**%**	1.71	%	1.27	%
Business Banking average loans	**$ 19.6**		$ 22.3		$ 37.5	
Business Banking origination volume	**4.8**		4.3		13.9	(j)
Client investment assets[(e)]	**951.1**		647.1		718.1	
Number of client advisors	**5,456**		5,029		4,725	
Home Lending						
Mortgage origination volume by channel						
Retail	**$ 22.4**	(i)	$ 38.5		$ 91.8	
Correspondent	**12.7**		26.9		70.9	
Total mortgage origination volume[(f)]	**$ 35.1**		$ 65.4		$ 162.7	
Third-party mortgage loans serviced (period-end)	**$ 631.2**		$ 584.3		$ 519.2	
MSR carrying value (period-end)	**8.5**		8.0		5.5	
Card Services						
Sales volume, excluding commercial card	**$1,163.6**		$1,064.7		$ 893.5	
Net revenue rate	**9.72**	**%**	9.87	%	10.51	%
Net yield on average loans	**9.61**		9.77		9.88	
New credit card accounts opened (in millions)	**10.0**		9.6		8.0	
Auto						
Loan and lease origination volume	**$ 41.3**		$ 30.4		$ 43.6	
Average auto operating lease assets	**10.9**		14.3		19.1	

(a) The Consumer and Small business customers metrics include unique individuals, and businesses and legal entities, respectively, that have financial ownership or decision-making power with respect to accounts; these metrics exclude customers under the age of 18. Where a customer uses the same unique identifier as both a Consumer and a Small business, the customer is included in both metrics. For information concerning the Households metric previously disclosed, refer to the Glossary of terms and acronyms on pages 315-321.
(b) Users of all web and/or mobile platforms who have logged in within the past 90 days.
(c) Users of all mobile platforms who have logged in within the past 90 days.
(d) 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.
(e) 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 81-83 for additional information. At December 31, 2023, included $144.6 billion of client investment assets associated with First Republic.
(f) Firmwide mortgage origination volume was $41.4 billion, $81.8 billion and $182.4 billion for the years ended December 31, 2023, 2022 and 2021, respectively.
(g) Excludes First Republic.
(h) Included $39.4 billion for the year ended December 31, 2023, associated with First Republic.
(i) Included $2.3 billion for the year ended December 31, 2023, associated with First Republic.
(j) Included origination volume under the PPP of $10.6 billion for the year ended December 31, 2021. The program ended on May 31, 2021 for new applications.

The Corporate & Investment Bank, which consists of Banking and Markets & Securities Services, offers a broad suite of investment banking, market-making, prime brokerage, lending, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, merchants, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Payments, which 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, a global market-maker across products, including cash and derivative instruments, which also offers sophisticated risk management solutions, prime brokerage, clearing and research. Markets & Securities Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Selected income statement data

Year ended December 31, (in millions)	2023	2022	2021
Revenue			
Investment banking fees[a]	**$ 6,582**	$ 6,929	$13,359
Principal transactions	**23,671**	19,926	15,764
Lending- and deposit-related fees	**2,213**	2,419	2,514
Commissions and other fees	**4,821**	5,058	4,995
Card income	**1,450**	1,249 [c]	1,108 [c]
All other income	**1,578**	621 [c]	663 [c]
Noninterest revenue	**40,315**	36,202	38,403
Net interest income	**8,492**	11,900	13,540
Total net revenue[b]	**48,807**	48,102	51,943
Provision for credit losses	**121**	1,158	(1,174)
Noninterest expense			
Compensation expense	**14,345**	13,918	13,096
Noncompensation expense	**14,249**	13,432 [c]	12,457 [c]
Total noninterest expense	**28,594**	27,350	25,553
Income before income tax expense	**20,092**	19,594	27,564
Income tax expense	**5,963**	4,669 [c]	6,457 [c]
Net income	**$14,129**	$14,925	$21,107

(a) Includes CB's share of revenue from investment banking products sold to CB clients through the CIB that is subject to a revenue sharing arrangement which is reported as a reduction in All other income.

(b) Includes tax-equivalent adjustments, predominantly due to income tax credits and other tax benefits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; and tax-exempt income from municipal bonds of $3.6 billion, $3.0 billion and $3.0 billion for the years ended December 31, 2023, 2022 and 2021, respectively.

(c) 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.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2023	2022	2021
Financial ratios			
Return on equity	**13 %**	14 %	25 %
Overhead ratio	**59**	57	49
Compensation expense as percentage of total net revenue	**29**	29	25
Revenue by business			
Investment Banking	**$ 6,243**	$ 6,510	$12,506
Payments	**9,273**	7,579 [b]	6,464 [b]
Lending	**1,007**	1,377	1,001
Total Banking	**16,523**	15,466	19,971
Fixed Income Markets	**18,813**	18,617	16,865
Equity Markets	**8,979**	10,367	10,529
Securities Services	**4,772**	4,488	4,328
Credit Adjustments & Other[a]	**(280)**	(836)	250
Total Markets & Securities Services	**32,284**	32,636	31,972
Total net revenue	**$48,807**	$48,102	$51,943

(a) 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.

(b) 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.

2023 compared with 2022

Net income was $14.1 billion, down 5%.

Net revenue was $48.8 billion, up 1%.

Banking revenue was $16.5 billion, up 7%.

- Investment Banking revenue was $6.2 billion, down 4%. Excluding $257 million of markdowns on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio recorded in the second quarter of 2022, Investment Banking revenue was down 8%. Investment Banking fees were down 5%, driven by lower advisory and debt underwriting fees, partially offset by higher equity underwriting fees. The Firm ranked #1 for Global Investment Banking fees, according to Dealogic.
  - Advisory fees were $2.8 billion, down 8%, due to a lower number of completed transactions, reflecting the lower level of announced deals in the current and the prior year amid a challenging environment.
  - Debt underwriting fees were $2.6 billion, down 8%, as challenging market conditions, primarily in the first half of the year, resulted in lower issuance activity across leveraged loans, investment-grade loans, and high-grade bonds. This was largely offset by higher issuance activity in high-yield bonds driven by higher industry-wide issuance.
  - Equity underwriting fees were $1.2 billion, up 11%, driven by a higher level of follow-on offerings due to lower equity market volatility and a higher level of convertible securities offerings which benefited from higher rates, partially offset by lower activity in private placements amid a challenging environment.
- Payments revenue was $9.3 billion, up 22%, driven by deposit margin expansion on higher rates and fees, partially offset by the higher level of client credits that reduce such fees and lower average deposits. The net impact of equity investments was flat reflecting net markdowns in both periods, including the impact of an impairment in the current year.
- Lending revenue was $1.0 billion, down 27%, driven by $494 million of fair value losses on hedges of retained loans which included an increase in hedging activity, compared to $27 million of gains in the prior year, partially offset by higher net interest income.

Markets & Securities Services revenue was $32.3 billion, down 1%. Markets revenue was $27.8 billion, down 4%.

- Fixed Income Markets revenue was $18.8 billion, up 1%, driven by an increase in finance and trading activity in the Securitized Products Group and improved performance in Credit Trading, predominantly offset by lower revenue in Currencies & Emerging Markets as the business substantially normalized from the prior year's elevated levels of volatility and client activity.
- Equity Markets revenue was $9.0 billion, down 13%, driven by lower revenue in Equity Derivatives and Cash Equities, compared with a stronger performance in the prior year.
- Securities Services revenue was $4.8 billion, up 6%, driven by deposit margin expansion on higher rates, largely offset by lower average deposits and fees.
- Credit Adjustments & Other was a loss of $280 million, compared with a loss of $836 million in the prior year.

Noninterest expense was $28.6 billion, up 5%, driven by higher legal expense, compensation expense, including the impact of wage inflation, and higher indirect tax expense.

The provision for credit losses was $121 million, driven by net charge-offs of $272 million, up $190 million, driven by single name exposures, largely offset by a $151 million net reduction in the allowance for credit losses.

The net reduction in the allowance was driven by the impact of changes in the loan and lending-related commitment portfolios and the net effect of changes in the Firm's weighted average macroeconomic outlook, predominantly offset by an addition for certain accounts receivable and net downgrade activity.

The provision in the prior year was $1.2 billion, predominantly driven by a net addition to the allowance for credit losses.

Selected metrics

As of or for the year ended December 31, (in millions, except employees)	2023	2022	2021
Selected balance sheet data (period-end)			
Total assets	**$1,338,168**	$1,334,296	$1,259,896
Loans:			
Loans retained[(a)]	**197,523**	187,642	159,786
Loans held-for-sale and loans at fair value[(b)]	**38,919**	42,304	50,386
Total loans	**236,442**	229,946	210,172
Equity	**108,000**	103,000	83,000
Selected balance sheet data (average)			
Total assets	**$1,428,904**	$1,406,250	$1,334,518
Trading assets-debt and equity instruments	**508,799**	405,916	448,099
Trading assets-derivative receivables	**63,836**	77,802	68,203
Loans:			
Loans retained[(a)]	**190,601**	172,627	145,137
Loans held-for-sale and loans at fair value[(b)]	**39,831**	46,846	51,072
Total loans	**230,432**	219,473	196,209
Deposits	**728,537**	739,700	760,048
Equity	**108,000**	103,000	83,000
Employees	**74,404**	73,452	67,546

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-investment loans and overdrafts.
(b) Loans held-for-sale and loans at fair value primarily reflect lending related positions originated and purchased in CIB Markets, including loans held for securitization.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2023	2022	2021
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 272**	$ 82	$ 6
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[(a)]	**866**	718	584
Nonaccrual loans held-for-sale and loans at fair value[(b)]	**828**	848	844
Total nonaccrual loans	**1,694**	1,566	1,428
Derivative receivables	**364**	296	316
Assets acquired in loan satisfactions	**115**	87	91
Total nonperforming assets	**2,173**	1,949	1,835
Allowance for credit losses:			
Allowance for loan losses	**2,321**	2,292	1,348
Allowance for lending-related commitments	**1,048**	1,448	1,372
Total allowance for credit losses	**3,369**	3,740	2,720
Net charge-off/(recovery) rate[(c)]	**0.14 %**	0.05 %	– %
Allowance for loan losses to period-end loans retained	**1.18**	1.22	0.84
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[(d)]	**1.64**	1.67	1.12
Allowance for loan losses to nonaccrual loans retained[(a)]	**268**	319	231
Nonaccrual loans to total period-end loans	**0.72**	0.68	0.68

(a) Allowance for loan losses of $95 million, $104 million and $58 million were held against these nonaccrual loans at December 31, 2023, 2022 and 2021, respectively.
(b) At December 31, 2023, 2022 and 2021, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $59 million, $115 million and $281 million, respectively. These amounts have been excluded based upon the government guarantee.
(c) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(d) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 62-64.

Investment banking fees

(in millions)	Year ended December 31, 2023	2022	2021
Advisory	**$ 2,814**	$ 3,051	$ 4,381
Equity underwriting	**1,151**	1,034	3,953
Debt underwriting[(a)]	**2,617**	2,844	5,025
Total investment banking fees	**$ 6,582**	$ 6,929	$ 13,359

(a) Represents long-term debt and loan syndications.

League table results – wallet share

	2023		2022		2021	
Year ended December 31,	Rank	Share	Rank	Share	Rank	Share
Based on fees[(a)]						
M&A[(b)]						
Global	**# 2**	**9.3 %**	# 2	7.9 %	# 2	9.6 %
U.S.	**2**	**11.2**	2	9.0	2	10.7
Equity and equity-related[(c)]						
Global	**1**	**7.8**	2	5.7	3	8.8
U.S.	**1**	**14.1**	1	13.9	2	11.8
Long-term debt[(d)]						
Global	**1**	**7.2**	1	6.9	1	8.4
U.S.	**1**	**10.9**	1	12.2	1	12.1
Loan syndications						
Global	**1**	**12.1**	1	11.0	1	10.9
U.S.	**1**	**15.1**	1	12.8	1	12.6
Global investment banking fees[(e)]	**# 1**	**8.8 %**	# 1	7.8 %	# 1	9.3 %

(a) Source: Dealogic as of January 2, 2024. 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)	**2023**			2022			2021		
	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	**$ 12,064**	**$ 11,514**	**$ 23,578**	$ 11,682	$ 8,846	$ 20,528	$ 7,911	$ 7,519	$ 15,430
Lending- and deposit-related fees	**307**	**40**	**347**	303	22	325	321	17	338
Commissions and other fees	**596**	**1,908**	**2,504**	550	1,975	2,525	545	1,948	2,493
All other income	**1,744**	**(87)**	**1,657**	916	(99)	817	972	(82)	890
Noninterest revenue	**14,711**	**13,375**	**28,086**	13,451	10,744	24,195	9,749	9,402	19,151
Net interest income[(a)]	**4,102**	**(4,396)**	**(294)**	5,166	(377)	4,789	7,116	1,127	8,243
Total net revenue	**$ 18,813**	**$ 8,979**	**$ 27,792**	$ 18,617	$ 10,367	$ 28,984	$ 16,865	$ 10,529	$ 27,394
Loss days[(b)]			3			7			4

(a) The decline in Markets net interest income was driven by higher funding costs.

(b) Loss days represent the number of days for which Markets, which consists of Fixed Income Markets and Equity Markets, posted losses to total net revenue. 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 137-139.

Selected metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)	**2023**	2022	2021
Assets under custody ("AUC") by asset class (period-end) (in billions):			
Fixed Income	**$ 15,543**	$ 14,361	$ 16,098
Equity	**12,927**	10,748	12,962
Other[(a)]	**3,922**	3,526	4,161
Total AUC	**$ 32,392**	$ 28,635	$ 33,221
Merchant processing volume (in billions)[(b)]	**$ 2,408**	$ 2,158	$ 1,887
Client deposits and other third party liabilities (average)[(c)]	**$ 645,074**	$ 687,391	$ 714,910

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.

(b) Represents Firmwide merchant processing volume.

(c) 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)	2023	2022	2021
Total net revenue[a]			
Europe/Middle East/Africa	**$ 13,725**	$ 15,303	$ 13,954
Asia-Pacific	**7,607**	7,846	7,555
Latin America/Caribbean	**2,094**	2,239	1,833
Total international net revenue	**23,426**	25,388	23,342
North America	**25,381**	22,714 [c]	28,601 [c]
Total net revenue	**$ 48,807**	$ 48,102	$ 51,943
Loans retained (period-end)[a]			
Europe/Middle East/Africa	**$ 42,792**	$ 39,424	$ 33,084
Asia-Pacific	**14,333**	15,571	14,471
Latin America/Caribbean	**8,341**	8,599	7,006
Total international loans	**65,466**	63,594	54,561
North America	**132,057**	124,048	105,225
Total loans retained	**$ 197,523**	$ 187,642	$ 159,786
Client deposits and other third-party liabilities (average)[b]			
Europe/Middle East/Africa	**$ 230,225**	$ 247,203	$ 243,867
Asia-Pacific	**126,918**	129,134	132,241
Latin America/Caribbean	**39,134**	39,917	46,045
Total international	**$ 396,277**	$ 416,254	$ 422,153
North America	**248,797**	271,137	292,757
Total client deposits and other third-party liabilities	**$ 645,074**	$ 687,391	$ 714,910
AUC (period-end)[b] **(in billions)**			
North America	**$ 21,792**	$ 19,219	$ 21,655
All other regions	**10,600**	9,416	11,566
Total AUC	**$ 32,392**	$ 28,635	$ 33,221

(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.
(c) 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.

Commercial Banking provides comprehensive financial solutions, including lending, payments, investment banking and asset management products across three primary client segments: Middle Market Banking, Corporate Client Banking and Commercial Real Estate Banking. Other includes amounts not aligned with a primary client segment.

Middle Market Banking covers small and midsized companies, local governments and nonprofit clients.

Corporate Client Banking covers large corporations.

Commercial Real Estate Banking covers investors, developers, and owners of multifamily, office, retail, industrial and affordable housing properties.

Selected income statement data

Year ended December 31, (in millions)	2023		2022	2021
Revenue				
Lending- and deposit-related fees	**$ 1,210**	(b)	$ 1,243	$ 1,392
Card income	**763**		685	624
All other income	**1,521**		1,408	1,913
Noninterest revenue	**3,494**		3,336	3,929
Net interest income	**12,052**	(b)	8,197	6,079
Total net revenue[a]	**15,546**		11,533	10,008
Provision for credit losses	**1,970**	(b)	1,268	(947)
Noninterest expense				
Compensation expense	**2,760**	(b)	2,296	1,973
Noncompensation expense	**2,618**		2,423	2,068
Total noninterest expense	**5,378**		4,719	4,041
Income before income tax expense	**8,198**		5,546	6,914
Income tax expense	**2,055**		1,333	1,668
Net income	**$ 6,143**		$ 4,213	$ 5,246

(a) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities and in entities established for rehabilitation of historic properties, as well as tax-exempt income related to municipal financing activities of $382 million, $322 million and $330 million for the years ended December 31, 2023, 2022 and 2021, respectively.
(b) Includes First Republic. Refer to page 67 for additional information.

2023 compared with 2022

Net income was $6.1 billion, up 46%.

Net revenue was $15.5 billion, up 35%.

Net interest income was $12.1 billion, up 47%, driven by:

- deposit margin expansion on higher rates, partially offset by lower average deposits, and
- higher average loans, including the impact from First Republic.

Noninterest revenue was $3.5 billion, up 5%, driven by:

- higher lending-related revenue predominantly driven by the amortization of the purchase discount on certain acquired lending-related commitments associated with First Republic,
- net markups on held-for-sale positions, primarily unfunded commitments, in the bridge financing portfolio, compared with net markdowns in the prior year, and
- higher investment banking revenue and card income,

predominantly offset by

- lower deposit-related fees due to the higher level of client credits that reduce such fees, and
- the absence of a gain on an equity-method investment received in partial satisfaction of a loan.

Noninterest expense was $5.4 billion, up 14%, driven by higher compensation expense, reflecting an increase in employees including front office and technology, as well as higher volume-related expense, including the impact of new client acquisitions.

The provision for credit losses was $2.0 billion, reflecting:

- a $1.0 billion net addition to the allowance for credit losses, driven by the net effect of changes in the Firm's weighted average macroeconomic outlook, including a deterioration in the outlook for commercial real estate and net downgrade activity, partially offset by the impact of changes in the loan and lending-related commitment portfolios,
- $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 $316 million, up $232 million, primarily driven by Real Estate, predominantly concentrated in Office.

The provision in the prior year was $1.3 billion, reflecting a net addition to the allowance for credit losses.

CB product revenue consists of the following:

Lending includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Payments includes services that enable CB clients to manage payments globally across liquidity and account solutions, commerce solutions, clearing, trade and working capital.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from fixed income and equity markets products used by CB clients is also included.

Other revenue primarily includes tax-equivalent adjustments generated from Community Development Banking and activity derived from principal transactions.

Selected income statement data (continued)

Year ended December 31, (in millions, except ratios)	2023		2022	2021
Revenue by product				
Lending	**$ 5,993**	(d)	$ 4,524	$ 4,629
Payments[a]	**8,250**		5,691	3,653
Investment banking[a][b]	**1,167**		1,064	1,611
Other	**136**		254	115
Total net revenue	**$ 15,546**		$ 11,533	$ 10,008
Investment Banking and Markets revenue, gross[c]	**$ 3,393**		$ 2,978	$ 5,092
Revenue by client segment				
Middle Market Banking	**$ 7,371**	(e)	$ 5,134	$ 4,004
Corporate Client Banking	**4,777**		3,918	3,508
Commercial Real Estate Banking	**3,308**	(e)	2,461	2,419
Other	**90**		20	77
Total net revenue	**$ 15,546**		$ 11,533	$ 10,008
Financial ratios				
Return on equity	**20 %**		16 %	21 %
Overhead ratio	**35**		41	40

(a) In the third quarter of 2023, certain revenue from CIB Markets products was reclassified from payments to investment banking. Prior-period amounts have been revised to conform with the current presentation.
(b) Includes CB's share of revenue from Investment Banking and Markets' products sold to CB clients through the CIB which is reported in All other income.
(c) Includes gross revenues earned by the Firm that are subject to a revenue sharing arrangement between CB and the CIB for Investment Banking and Markets' products sold to CB clients. This includes revenues related to fixed income and equity markets products. Refer to Business Segment Results on page 65 for a discussion of revenue sharing.
(d) Includes First Republic. Refer to page 67 for additional information.
(e) Middle Market Banking and Commercial Real Estate Banking included $216 million and $687 million, respectively, for the year ended December 31, 2023, associated with First Republic.

Selected metrics

As of or for the year ended December 31, (in millions, except employees)	2023		2022	2021
Selected balance sheet data (period-end)				
Total assets	**$ 300,325**		$ 257,106	$ 230,776
Loans:				
Loans retained	**277,663**	(b)	233,879	206,220
Loans held-for-sale and loans at fair value	**545**		707	2,223
Total loans	**$ 278,208**		$ 234,586	$ 208,443
Equity	**30,000**		25,000	24,000
Period-end loans by client segment				
Middle Market Banking[a]	**$ 78,043**	(c)	$ 72,625	$ 61,159
Corporate Client Banking	**56,132**		53,840	45,315
Commercial Real Estate Banking	**143,507**	(c)	107,999	101,751
Other	**526**		122	218
Total loans[a]	**$ 278,208**		$ 234,586	$ 208,443
Selected balance sheet data (average)				
Total assets	**$ 287,851**		$ 243,108	$ 225,548
Loans:				
Loans retained	**267,285**	(d)	222,388	201,920
Loans held-for-sale and loans at fair value	**1,060**		1,350	3,122
Total loans	**$ 268,345**		$ 223,738	$ 205,042
Deposits	**267,758**	(e)	294,180	301,343
Equity	**29,507**		25,000	24,000
Average loans by client segment				
Middle Market Banking	**$ 77,130**	(f)	$ 67,830	$ 60,128
Corporate Client Banking	**58,770**		50,281	44,361
Commercial Real Estate Banking	**132,114**	(f)	105,459	100,331
Other	**331**		168	222
Total loans	**$ 268,345**		$ 223,738	$ 205,042
Employees	**17,867**		14,687	12,902

(a) As of December 31, 2023, 2022 and 2021, total loans included $36 million, $132 million, and $1.2 billion of loans, respectively, under the PPP, of which $32 million, $123 million and $1.1 billion were in Middle Market Banking, respectively.
(b) Includes First Republic. Refer to page 67 for additional information.
(c) As of December 31, 2023, included $5.9 billion and $32.6 billion for Middle Market Banking and Commercial Real Estate Banking, respectively, associated with First Republic.
(d) Average loans retained associated with First Republic were $26.8 billion for the year ended December 31, 2023.
(e) In the fourth quarter of 2023, certain deposits associated with First Republic were transferred from CCB. Refer to page 67 for additional information.
(f) Average Middle Market Banking and Commercial Real Estate Banking loans associated with First Republic were $4.2 billion and $22.5 billion, respectively, for the year ended December 31, 2023.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2023	2022	2021
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 316**	$ 84	$ 71
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[(a)]	**$ 809**	$ 766	$ 740
Nonaccrual loans held-for-sale and loans at fair value	**—**	—	—
Total nonaccrual loans	**$ 809**	$ 766	$ 740
Assets acquired in loan satisfactions	**54**	—	17
Total nonperforming assets	**$ 863**	$ 766	$ 757
Allowance for credit losses:			
Allowance for loan losses	**$ 5,005**	$ 3,324	$ 2,219
Allowance for lending-related commitments	**801**	830	749
Total allowance for credit losses	**$ 5,806** [(c)]	$ 4,154	$ 2,968
Net charge-off/(recovery) rate[(b)]	**0.12%**	0.04%	0.04%
Allowance for loan losses to period-end loans retained	**1.80**	1.42	1.08
Allowance for loan losses to nonaccrual loans retained[(a)]	**619**	434	300
Nonaccrual loans to period-end total loans	**0.29**	0.33	0.36

(a) Allowance for loan losses of $156 million, $153 million and $124 million was held against nonaccrual loans retained at December 31, 2023, 2022 and 2021, respectively.
(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(c) As of December 31, 2023, included a $729 million allowance for First Republic.

Asset & Wealth Management, with client assets of $5.0 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)	2023		2022	2021
Revenue				
Asset management fees	**$11,826**		$11,510	$11,518
Commissions and other fees	**697**		662	$ 815
All other income	**1,037**	(a)(b)	335	738
Noninterest revenue	**13,560**		12,507	13,071
Net interest income	**6,267**		5,241	3,886
Total net revenue	**19,827**		17,748	16,957
Provision for credit losses	**159**		128	(227)
Noninterest expense				
Compensation expense	**7,115**		6,336	5,692
Noncompensation expense	**5,665**		5,493	5,227
Total noninterest expense	**12,780**		11,829	10,919
Income before income tax expense	**6,888**		5,791	6,265
Income tax expense	**1,661**		1,426	1,528
Net income	**$ 5,227**		$ 4,365	$ 4,737
Revenue by line of business				
Asset Management	**$ 9,129**		$ 8,818	$ 9,246
Global Private Bank	**10,698**		8,930	7,711
Total net revenue	**$19,827**		$17,748	$16,957
Financial ratios				
Return on equity	**31 %**		25 %	33 %
Overhead ratio	**64**		67	64
Pre-tax margin ratio:				
Asset Management	**31**		30	35
Global Private Bank	**38**		35	39
Asset & Wealth Management	**35**		33	37

(a) Includes the amortization of the purchase 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 the current year as the commitments are 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.

2023 compared with 2022

Net income was $5.2 billion, up 20%.

Net revenue was $19.8 billion, up 12%. Net interest income was $6.3 billion, up 20%. Noninterest revenue was $13.6 billion, up 8%.

Revenue from Asset Management was $9.1 billion, up 4%, driven by:

- 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, and
- higher asset management fees driven by strong net inflows largely offset by the net impact of foreign exchange rate movements, as well as the removal of most money market fund fee waivers in the prior year,

largely offset by

- lower performance fees, and
- lower NII due to higher funding costs.

Revenue from Global Private Bank was $10.7 billion, up 20%, driven by:

- higher net interest income on higher average loans associated with First Republic, and from deposit margin expansion on higher rates, largely offset by lower average deposits, and
- higher noninterest revenue, predominantly driven by the amortization of the purchase discount on certain acquired lending-related commitments associated with First Republic, partially offset by net investment valuation losses.

Noninterest expense was $12.8 billion, up 8%, predominantly driven by higher compensation, including continued growth in private banking advisor teams, revenue-related compensation and the impacts of closing the Global Shares and J.P. Morgan Asset Management China acquisitions.

The provision for credit losses was $159 million, predominantly driven by 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.

The provision in the prior year was $128 million driven by a net addition to the allowance for credit losses.

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 industrywide 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)	2023		2022	2021
% of JPM mutual fund assets and ETFs rated as 4- or 5-star[a]	**69 %**		73 %	69 %
% of JPM mutual fund assets and ETFs ranked in 1st or 2nd quartile:[b]				
1 year	**40**		68	54
3 years	**67**		76	73
5 years	**71**		81	80
Selected balance sheet data (period-end)[c]				
Total assets	**$245,512**		$232,037	$234,425
Loans	**227,929**	(d)	214,006	218,271
Deposits	**233,232**	(e)	233,130	282,052
Equity	**17,000**		17,000	14,000
Selected balance sheet data (average)[c]				
Total assets	**$240,222**		$232,438	$217,187
Loans	**220,487**	(f)	215,582	198,487
Deposits	**216,178**	(e)	261,489	230,296
Equity	**16,671**		17,000	14,000
Employees	**28,485**		26,041	22,762
Number of Global Private Bank client advisors	**3,515**		3,137	2,738
Credit data and quality statistics[c]				
Net charge-offs/(recoveries)	**$ 13**		$ (7)	$ 26
Nonaccrual loans	**650**		459	708
Allowance for credit losses:				
Allowance for loan losses	**$ 633**		$ 494	$ 365
Allowance for lending-related commitments	**28**		20	18
Total allowance for credit losses	**$ 661**	(g)	$ 514	$ 383
Net charge-off/(recovery) rate	**0.01 %**		– %	0.01 %
Allowance for loan losses to period-end loans	**0.28**		0.23	0.17
Allowance for loan losses to nonaccrual loans	**97**		108	52
Nonaccrual loans to period-end loans	**0.29**		0.21	0.32

(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. This metric has been updated to include active ETFs, and prior period amounts have been revised to conform with the current presentation.
(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. This metric has been updated to include active ETFs, and prior period numbers have been revised to conform with the current presentation.
(c) Loans, deposits and related credit data and quality statistics relate to the Global Private Bank business.
(d) Includes First Republic. Refer to page 67 for additional information.
(e) In the fourth quarter of 2023, certain deposits associated with First Republic were transferred from CCB. Refer to page 67 for additional information.
(f) Includes $8.7 billion for the full year 2023, associated with First Republic.
(g) Includes First Republic.

Client assets

2023 compared with 2022

Assets under management were $3.4 trillion and client assets were $5.0 trillion, each up 24%, driven by continued net inflows, higher market levels, and the impact of the acquisition of Global Shares.

Client assets

December 31, (in billions)	2023	2022	2021
Assets by asset class			
Liquidity	**$ 926**	$ 654	$ 708
Fixed income	**751**	638	693
Equity	**868**	670	779
Multi-asset	**680**	603	732
Alternatives	**197**	201	201
Total assets under management	**3,422**	2,766	3,113
Custody/brokerage/ administration/deposits	**1,590**	1,282	1,182
Total client assets[a]	**$ 5,012**	$ 4,048	$ 4,295
Assets by client segment			
Private Banking	**$ 974**	$ 751	$ 805
Global Institutional	**1,488**	1,252	1,430
Global Funds	**960**	763	878
Total assets under management	**$ 3,422**	$ 2,766	$ 3,113
Private Banking	**$ 2,452**	$ 1,964	$ 1,931
Global Institutional	**1,594**	1,314	1,479
Global Funds	**966**	770	885
Total client assets[a]	**$ 5,012**	$ 4,048	$ 4,295

(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)	2023	2022	2021
Assets under management rollforward			
Beginning balance	**$ 2,766**	$ 3,113	$ 2,716
Net asset flows:			
Liquidity	**242**	(55)	68
Fixed income	**70**	13	36
Equity	**70**	35	85
Multi-asset	**1**	(9)	17
Alternatives	**(1)**	8	26
Market/performance/other impacts	**274**	(339)	165
Ending balance, December 31	**$ 3,422**	$ 2,766	$ 3,113
Client assets rollforward			
Beginning balance	**$ 4,048**	$ 4,295	$ 3,652
Net asset flows	**490**	49	389
Market/performance/other impacts	**474**	(296)	254
Ending balance, December 31	**$ 5,012**	$ 4,048	$ 4,295

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2023	2022	2021
Total net revenue (in millions)[a]			
Europe/Middle East/Africa	**$ 3,377**	$ 3,240	$ 3,571
Asia-Pacific	**1,876**	1,836	2,017
Latin America/Caribbean	**985**	967	886
Total international net revenue	**6,238**	6,043	6,474
North America	**13,589**	11,705	10,483
Total net revenue	**$ 19,827**	$ 17,748	$ 16,957
Assets under management			
Europe/Middle East/Africa	**$ 539**	$ 487	$ 561
Asia-Pacific	**263**	218	254
Latin America/Caribbean	**86**	69	79
Total international assets under management	**888**	774	894
North America	**2,534**	1,992	2,219
Total assets under management	**$ 3,422**	$ 2,766	$ 3,113
Client assets			
Europe/Middle East/Africa	**$ 740**	$ 610	$ 687
Asia-Pacific	**406**	331	381
Latin America/Caribbean	**232**	189	195
Total international client assets	**1,378**	1,130	1,263
North America	**3,634**	2,918	3,032
Total client assets	**$ 5,012**	$ 4,048	$ 4,295

(a) Regional revenue is based on the domicile of the client.

The Corporate segment 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)	2023		2022	2021
Revenue				
Principal transactions	$ 302		$ (227)	$ 187
Investment securities gains/(losses)	(3,180)		(2,380)	(345)
All other income	3,010	(c)	809	226
Noninterest revenue	132		(1,798)	68
Net interest income	7,906	(c)	1,878	(3,551)
Total net revenue[(a)]	8,038		80	(3,483)
Provision for credit losses	171		22	81
Noninterest expense	5,601	(c)(d)	1,034	1,802
Income/(loss) before income tax expense/(benefit)	2,266		(976)	(5,366)
Income tax expense/(benefit)	(555)	(e)	(233)	(1,653)
Net income/(loss)	$ 2,821		$ (743)	$ (3,713)
Total net revenue				
Treasury and CIO	6,072		(439)	(3,464)
Other Corporate	1,966	(c)	519	(19)
Total net revenue	$ 8,038		$ 80	$ (3,483)
Net income/(loss)				
Treasury and CIO	4,206		(197)	(3,057)
Other Corporate	(1,385)	(c)(d)	(546)	(656)
Total net income/(loss)	$ 2,821		$ (743)	$ (3,713)
Total assets (period-end)	$1,348,437		$ 1,328,219	$ 1,518,100
Loans (period-end)	1,924		2,181	1,770
Deposits[(b)]	21,826		14,203	396
Employees	47,530		44,196	38,952

(a) Included tax-equivalent adjustments, predominantly driven by tax-exempt income from municipal bonds, of $211 million, $235 million and $257 million for the years ended December 31, 2023, 2022 and 2021, respectively.
(b) Predominantly relates to the Firm's international consumer initiatives.
(c) Includes the impact of the First Republic acquisition. Refer to Notes 6 and 34 for additional information.
(d) Includes the FDIC special assessment. Refer to Note 6 for additional information.
(e) Income taxes associated with the First Republic acquisition are reflected in the estimated bargain purchase gain.

2023 compared with 2022

Net income was $2.8 billion, compared with a net loss of $743 million in the prior year.

Net revenue was $8.0 billion, compared with $80 million in the prior year, predominantly driven by higher net interest income due to higher rates, partially offset by the impact of lower Firmwide average deposit balances.

Noninterest revenue was $132 million, compared with a loss of $1.8 billion in the prior year, driven by:

- the $2.8 billion estimated bargain purchase gain associated with the First Republic acquisition,
- higher losses in the prior year on certain revenues associated with foreign exchange rate movements that are risk-managed by Treasury and CIO, and
- the impact of higher short-term cash deployment activities as a result of the current interest rate environment,

partially offset by

- higher net investment securities losses related to the sales of U.S. Treasuries and U.S. GSE and government agency MBS, associated with repositioning the investment securities portfolio, and
- lower net gains related to certain other Corporate investments.

The prior year included a gain on the sale of Visa B shares and proceeds from an insurance settlement.

Noninterest expense was $5.6 billion, up $4.6 billion, predominantly driven by:

- the $2.9 billion FDIC special assessment,
- $1.0 billion associated with First Republic, predominantly driven by integration and restructuring costs as well as expenses recorded in the second quarter of 2023 with respect to individuals associated with First Republic who did not become employees of the Firm until July 2, 2023,
- a greater benefit in the prior year on certain expenses associated with foreign exchange rate movements that are risk-managed by Treasury and CIO,
- higher legal expenses, and
- higher costs associated with the Firm's international consumer growth initiatives,

partially offset by

- lower benefits-related and real estate expenses.

The net impact of movements in foreign exchange rates associated with the foreign exchange risk that was transferred to Treasury and CIO on certain revenues and expenses was not material to net income. Refer to Foreign Exchange Risk on page 66 for additional information.

Refer to Note 10 and Note 13 for additional information on the investment securities portfolio and the allowance for credit losses.

The provision for credit losses 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.

The current period income tax benefit was driven by:

- the finalization of certain income tax regulations, other tax adjustments and tax benefits associated with tax audit settlements,

partially offset by

- the impact from changes in the level and mix of income and expenses subject to U.S. federal, state and local taxes that also impacted the Firm's tax reserves.

The income taxes associated with the First Republic acquisition are reflected in the estimated bargain purchase gain.

The prior period income tax benefit was driven by benefits related to tax audit settlements as well as other tax adjustments, partially offset by a change in the level and mix of income and expenses subject to U.S. federal, state and local taxes that also impacted the Firm's tax reserves.

Other Corporate also reflects the Firm's international consumer initiatives, which includes Chase U.K., the Firm's digital retail bank in the U.K.; Nutmeg, a digital wealth manager in the U.K.; and a 46% ownership stake in C6 Bank, a digital bank in Brazil.

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 four major 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 102–109 for further information on liquidity and funding risk. Refer to Market Risk Management on pages 135–143 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, 2023, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $569.2 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)	**2023**	2022	2021
Investment securities losses	**$ (3,180)**	$ (2,380)	$ (345)
Available-for-sale securities (average)	**$ 200,708**	$ 239,924	$ 306,827
Held-to-maturity securities (average)(a)	**402,010**	412,180	285,086
Investment securities portfolio (average)	**$ 602,718**	$ 652,104	$ 591,913
Available-for-sale securities (period-end)	**$ 199,354** (c)	$ 203,981	$ 306,352
Held-to-maturity securities (period-end)(a)	**369,848**	425,305	363,707
Investment securities portfolio, net of allowance for credit losses (period-end)(b)	**$ 569,202**	$ 629,286	$ 670,059

(a) Effective January 1, 2023, the Firm adopted new hedge accounting guidance. As permitted by the guidance, the Firm elected to transfer $7.1 billion of HTM securities to AFS. During 2022 and 2021, the Firm transferred $78.3 billion and $104.5 billion of investment securities, respectively, from AFS to HTM for capital management purposes. Refer to Note 1 and Note 10 for additional information on the new hedge accounting guidance.

(b) As of December 31, 2023, 2022 and 2021, the allowance for credit losses on investment securities was $94 million, $67 million and $42 million, respectively.

(c) As of December 31, 2023, included $24.2 billion of AFS securities associated with First Republic. Refer to Note 34 for additional information.

FIRMWIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase'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, but are not limited to, 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 of risks manifesting, 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 giving 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 identification of risks within their respective organizations 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 practices of the first line of defense. IRM is also responsible for the identification of risks within its respective organization, 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 headed 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 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 own 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 each LOB and Corporate's responsibility 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 LOB and Corporate's identified risks, maintains the central repository and provides the consolidated Firmwide results to the Firmwide Risk Committee ("FRC") and the Board Risk Committee.

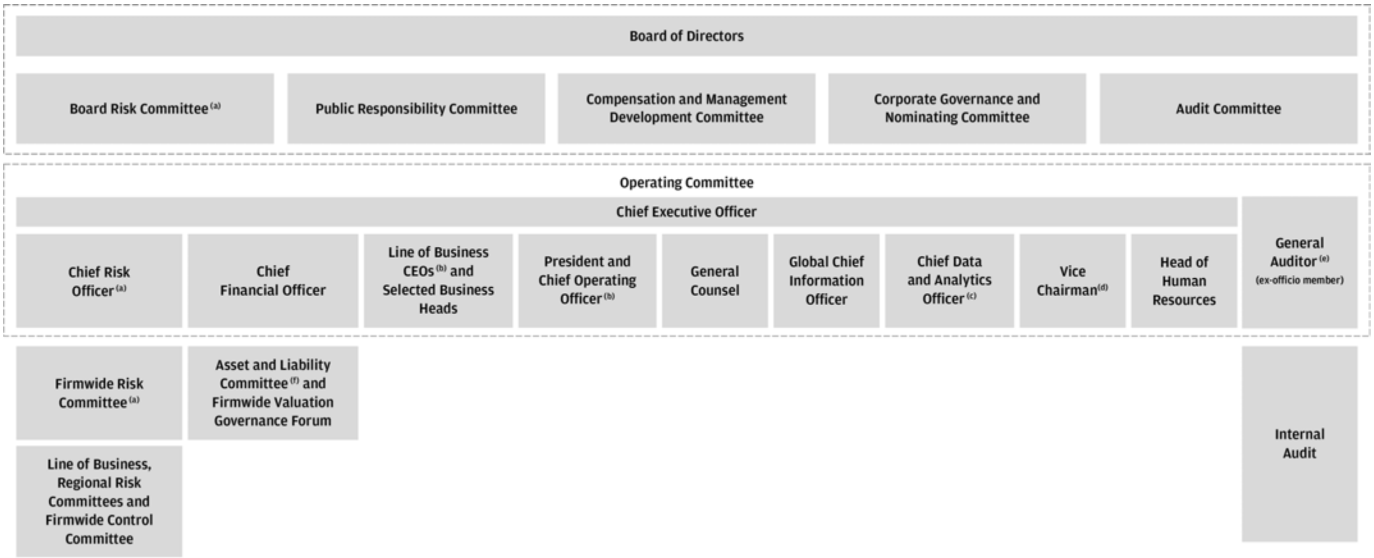
Risk appetite

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 CRO may escalate directly to the Board Risk Committee. The Firmwide Risk Committee escalates to the Board Risk Committee, as appropriate.
(b) As of December 31, 2023, the CEO of the Corporate & Investment Bank was also the Firm's President and Chief Operating Officer. Refer to Recent events on page 52 for further information.
(c) The Chief Data and Analytics Officer role was added to the Operating Committee in June 2023.
(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, and the Vice Chairman became an emeritus member of the Operating Committee.
(e) The General Auditor reports to the Audit Committee and administratively to the Firm's CEO.
(f) The Asset and Liability Committee escalates to the Firm's CEO or the Board of Directors (including its committees).

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 responsibility 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, rules 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 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 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 manages 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 manage the risks inherent in the Firm's business activities.

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 against prior-year 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 91-101 for further information on capital risk. Refer to Liquidity Risk Management on pages 102–109 for further information on liquidity risk. Refer to Reputation Risk Management on page 110 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 86–89 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 2.9%, and will remain in effect until September 30, 2024. The Firm's Standardized CET1 capital ratio requirement, including regulatory buffers, was 11.4% as of December 31, 2023.

Refer to Capital actions on page 99 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.

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 "U.S. Basel III proposal". Under the proposal, changes to the framework would include replacement of the Advanced approach with an expanded risk-based approach, which would not permit the use of internal models for the calculation of RWA, other than for market risk. In addition, the stress capital buffer requirement would be applicable to both the expanded risk-based approach and the Standardized approach. The proposal would significantly revise risk-based capital requirements for all banks with assets of $100 billion or more, including the Firm and other U.S. GSIBs. The proposed effective date is July 1, 2025, with a three-year transition period applicable to the expanded risk-based approach. Based on the Firm's understanding of the proposal, as applied to its Consolidated balance sheets as of June 30, 2023 (the reference date for a special data collection exercise conducted by the Federal Reserve), the estimated impact at the end of the transition period would increase RWA by approximately 30%, which would result in an approximately 25% increase to CET1 capital necessary to meet the Firm's CET1 ratio requirement, all else equal. These estimates do not reflect any actions that the Firm may take to mitigate the impact of the rule as currently proposed.

Pending the finalization of the U.S. Basel III proposal, the Firm expects that it will continue to build capital above the current levels, and therefore the CET1 target of 13.5% previously set by the Firm (which was with respect to the current Standardized RWA measure) is no longer meaningful. The Firm's quarterly capital ratios will vary dependent on market conditions and other factors. Under the requirements of the U.S. Basel III proposal, the new expanded risk-based approach, when fully phased-in, would be the Firm's binding constraint.

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, 2023, the Advanced Total Capital ratio became the most binding constraint for the Firm’s Basel III risk-based ratios, primarily reflecting the reduction in the Stress Capital Buffer requirement. However, as of December 31, 2023, with respect to the CET1 and Tier 1 risk-based ratios, the Standardized ratios are more binding than the Advanced ratios.

Basel III also includes a requirement for Advanced Approaches banking organizations, including the Firm, to calculate its SLR. As of the fourth quarter of 2023, the Firm’s SLR became more binding than the Basel III risk-based ratios, primarily reflecting the reduction in the Stress Capital Buffer requirement. With the increase in the GSIB surcharge in the first quarter of 2024, the Firm expects the risk-based ratios to revert to being more binding than the SLR.

Refer to page 95 for additional information on GSIB surcharge and page 98 for additional information on SLR.

Other Key Regulatory Developments

GSIB Surcharge

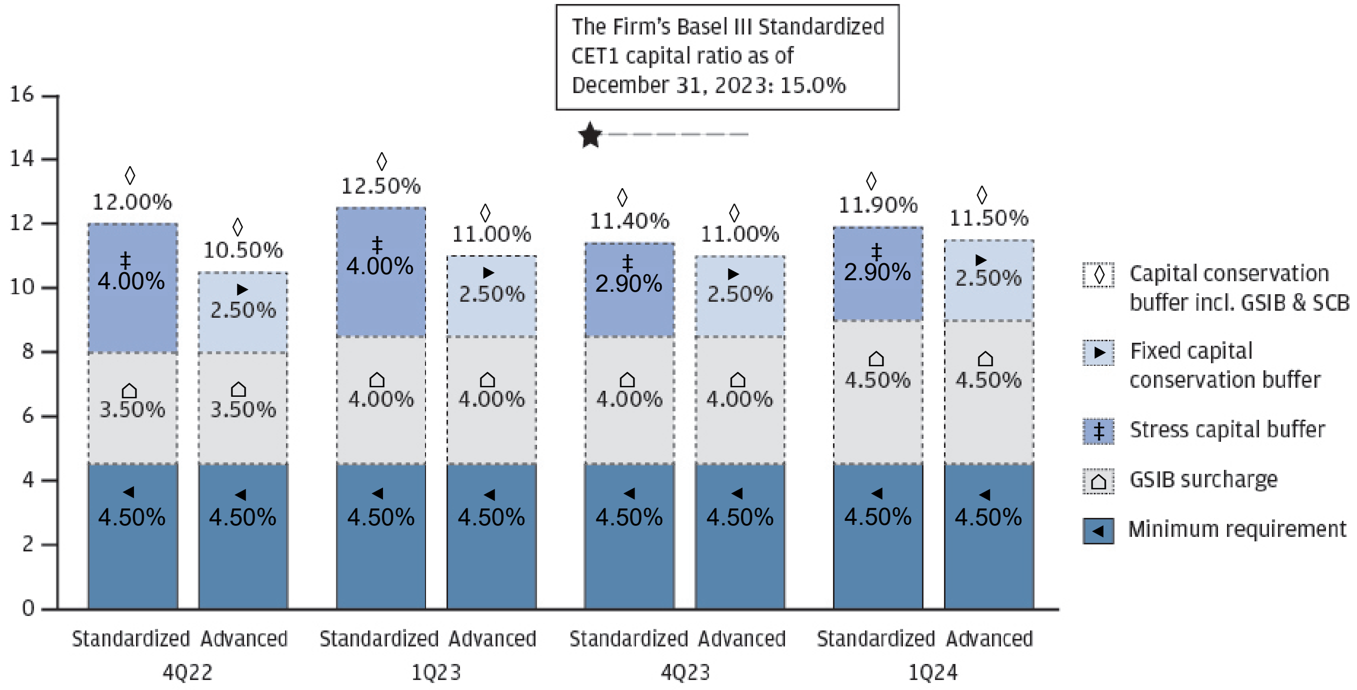
In July 2023, the Federal Reserve also released a proposal to amend the calculation of the GSIB surcharge. If adopted as proposed, these amendments would require the Firm to assess its GSIB surcharge on an annual basis, using the average of the quarterly surcharge calculations throughout the calendar year, with daily averaging required for certain measures within the surcharge calculation. Surcharge increments would be reduced from 50 bps to 10 bps and there would also be other technical amendments to the Method 2 calculation. The proposed amendments would revise risk-based capital requirements for the Firm and other U.S. GSIBs, and would become effective two calendar quarters after the adoption of the final rule. Refer to Risk-based Capital Regulatory Requirements on pages 94-95 for further information on the GSIB surcharge.

TLAC and Eligible LTD Requirements

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. While U.S. GSIBs are already subject to these requirements, the proposal would reduce the amount of LTD with remaining maturities of less than two years that count towards a U.S. GSIB's TLAC requirement. The proposal would also expand the existing capital deduction framework for LTD issued by GSIBs to include LTD issued by non-GSIB banks subject to the LTD requirements.

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 by the Financial Stability Board ("FSB") across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. "Method 2", calculated by the Firm, 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, 2023 and 2022.

	2024	2023	2022
Method 1	2.5 %	2.5 %	2.0 %
Method 2	4.5 %	4.0 %	3.5 %

On November 27, 2023, the FSB released its annual list of GSIBs based upon data as of December 31, 2022, which affirmed the Firm's Method 1 GSIB surcharge of 2.5%, which will be effective January 1, 2025, unless the Firm's Method 1 GSIB surcharge, as determined by the FSB, is lower based upon data as of December 31, 2023.

The Firm's Method 2 surcharge calculated using data as of December 31, 2021 is 4.5% (up from 4.0%), which became effective January 1, 2024. The Firm's estimated Method 2 surcharge calculated using data as of December 31, 2022 is 4.5%. Accordingly, based on the GSIB rule currently in effect, the Firm's effective GSIB surcharge increased to 4.5% on January 1, 2024.

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, 2023, 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, FDIC and 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 100 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 98 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, 2023**	December 31, 2022	Capital ratio requirements[b]	**December 31, 2023**	December 31, 2022	Capital ratio requirements[b]
Risk-based capital metrics:[a]						
CET1 capital	**$ 250,585**	$ 218,934		**$ 250,585**	$ 218,934	
Tier 1 capital	**277,306**	245,631		**277,306**	245,631	
Total capital	**308,497**	277,769		**295,417** [c]	264,583	
Risk-weighted assets	**1,671,995**	1,653,538		**1,669,156** [c]	1,609,773	
CET1 capital ratio	**15.0 %**	13.2 %	**11.4 %**	**15.0 %**	13.6 %	**11.0 %**
Tier 1 capital ratio	**16.6**	14.9	**12.9**	**16.6**	15.3	**12.5**
Total capital ratio	**18.5**	16.8	**14.9**	**17.7**	16.4	**14.5**

(a) The capital metrics reflect the CECL capital transition provisions. Refer to Note 27 for additional information.
(b) Represents minimum requirements and regulatory buffers applicable to the Firm for the period ended December 31, 2023. For the period ended December 31, 2022, the Basel III Standardized CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were 12.0%, 13.5%, and 15.5%, respectively; the Basel III Advanced CET1, Tier 1, and Total capital ratio requirements applicable to the Firm were 10.5%, 12.0%, and 14.0%, 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, 2023**	December 31, 2022	Capital ratio requirements[c]
Leverage-based capital metrics:[a]			
Adjusted average assets[b]	**$ 3,831,200**	$ 3,703,873	
Tier 1 leverage ratio	**7.2 %**	6.6 %	**4.0 %**
Total leverage exposure	**$ 4,540,465**	$ 4,367,092	
SLR	**6.1 %**	5.6 %	**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, 2023 and 2022.

(in millions)	December 31, 2023	December 31, 2022
Total stockholders' equity	**$ 327,878**	$ 292,332
Less: Preferred stock	27,404	27,404
Common stockholders' equity	**300,474**	264,928
Add:		
Certain deferred tax liabilities[a]	2,996	2,510
Other CET1 capital adjustments[b]	4,717	6,221
Less:		
Goodwill[c]	54,377	53,501
Other intangible assets	3,225	1,224
Standardized/Advanced CET1 capital	**250,585**	218,934
Add: Preferred stock	27,404	27,404
Less: Other Tier 1 adjustments	683	707
Standardized/Advanced Tier 1 capital	**$ 277,306**	$ 245,631
Long-term debt and other instruments qualifying as Tier 2 capital	$ 11,779	$ 13,569
Qualifying allowance for credit losses[d]	20,102	19,353
Other	(690)	(784)
Standardized Tier 2 capital	**$ 31,191**	$ 32,138
Standardized Total capital	**$ 308,497**	$ 277,769
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital[e]	(13,080) [f]	(13,186)
Advanced Tier 2 capital	**$ 18,111**	$ 18,952
Advanced Total capital	**$ 295,417**	$ 264,583

(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, 2023 and 2022, included a net benefit associated with cash flow hedges and debit valuation adjustments ("DVA") related to structured notes recorded in AOCI of $4.3 billion and $5.2 billion and the benefit from the CECL capital transition provisions of $1.4 billion and $2.2 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 134 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) Included an incremental $655 million allowance for credit losses 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, 2023.

Year ended December 31, (in millions)	**2023**
Standardized/Advanced CET1 capital at December 31, 2022	$ 218,934
Net income applicable to common equity	48,051
Dividends declared on common stock	(12,055)
Net purchase of treasury stock	(8,881)
Changes in additional paid-in capital	1,084
Changes related to AOCI applicable to capital:	
Unrealized gains/(losses) on investment securities	5,381
Translation adjustments, net of hedges[a]	329
Fair value hedges	(101)
Defined benefit pension and other postretirement employee benefit ("OPEB") plans	373
Changes related to other CET1 capital adjustments[b]	(2,530)
Change in Standardized/Advanced CET1 capital	31,651
Standardized/Advanced CET1 capital at December 31, 2023	**$ 250,585**
Standardized/Advanced Tier 1 capital at December 31, 2022	$ 245,631
Change in CET1 capital[b]	31,651
Redemptions of noncumulative perpetual preferred stock	–
Other	24
Change in Standardized/Advanced Tier 1 capital	31,675
Standardized/Advanced Tier 1 capital at December 31, 2023	**$ 277,306**
Standardized Tier 2 capital at December 31, 2022	$ 32,138
Change in long-term debt and other instruments qualifying as Tier 2	(1,790)
Change in qualifying allowance for credit losses[b]	749
Other	94
Change in Standardized Tier 2 capital	(947)
Standardized Tier 2 capital at December 31, 2023	**$ 31,191**
Standardized Total capital at December 31, 2023	**$ 308,497**
Advanced Tier 2 capital at December 31, 2022	$ 18,952
Change in long-term debt and other instruments qualifying as Tier 2	(1,790)
Change in qualifying allowance for credit losses[b][c]	855
Other	94
Change in Advanced Tier 2 capital	(841)
Advanced Tier 2 capital at December 31, 2023	**$ 18,111**
Advanced Total capital at December 31, 2023	**$ 295,417**

(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 27 for additional information on the CECL capital transition.

(c) Included an incremental $655 million allowance for credit losses 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, 2023. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Year ended December 31, 2023 (in millions)	Standardized Credit risk RWA[c]	Standardized Market risk RWA	Standardized Total RWA	Advanced Credit risk RWA[c][d]	Advanced Market risk RWA	Advanced Operational risk RWA	Advanced Total RWA
December 31, 2022	$ 1,568,536	$ 85,002	**$ 1,653,538**	$ 1,078,076	$ 85,432	$ 446,265	**$ 1,609,773**
Model & data changes[a]	(11,024)	(4,883)	**(15,907)**	(11,313)	(4,883)	–	**(16,196)**
Movement in portfolio levels[b]	46,339	(11,975)	**34,364**	88,498	(11,946)	(973)	**75,579**
Changes in RWA	35,315	(16,858)	**18,457**	77,185	(16,829)	(973)	**59,383**
December 31, 2023	**$ 1,603,851**	**$ 68,144**	**$ 1,671,995**	**$ 1,155,261**	**$ 68,603**	**$ 445,292**	**$ 1,669,156**

(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, impacts associated with the First Republic acquisition, including the benefit of the shared-loss agreements entered into with the FDIC, position roll-offs in legacy portfolios in Home Lending, 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, market movements, and changes in the Firm's regulatory multiplier from Regulatory VaR backtesting exceptions; and for Operational risk RWA, updates to cumulative losses and macroeconomic model inputs.
(c) As of December 31, 2023 and 2022, the Basel III Standardized Credit risk RWA included wholesale and retail off balance-sheet RWA of $208.5 billion and $210.1 billion, respectively; and the Basel III Advanced Credit risk RWA included wholesale and retail off balance-sheet RWA of $188.5 billion and $180.8 billion, respectively.
(d) As of December 31, 2023, Credit risk RWA reflected approximately $52.4 billion 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, 2023	December 31, 2022
Tier 1 capital	**$ 277,306**	$ 245,631
Total average assets	3,885,632	3,755,271
Less: Regulatory capital adjustments[a]	54,432	51,398
Total adjusted average assets[b]	3,831,200	3,703,873
Add: Off-balance sheet exposures[c]	709,265	663,219
Total leverage exposure	**$ 4,540,465**	$ 4,367,092
SLR	**6.1 %**	5.6 %

(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 equity

Each business segment 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 a business segment's performance.

The Firm's current allocation methodology incorporates Basel III Standardized RWA and the GSIB surcharge, both under rules currently in effect, as well as a simulation of capital 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 may change. As of January 1, 2024, changes to the Firm's line of business 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. In addition, the capital that the Firm has accumulated to meet the increased requirements of the U.S. Basel III proposal has generally been retained in Corporate.

The following table presents the capital allocated to each business segment.

Line of business equity (Allocated capital)

(in billions)	January 1, 2024	December 31, 2023[a]	December 31, 2022
Consumer & Community Banking	**$ 54.5**	$ 55.5	$ 50.0
Corporate & Investment Bank	**102.0**	108.0	103.0
Commercial Banking	**30.0**	30.0	25.0
Asset & Wealth Management	**15.5**	17.0	17.0
Corporate	**98.5**	90.0	69.9
Total common stockholders' equity	**$ 300.5**	$ 300.5	$ 264.9

(a) Includes the impact of the First Republic acquisition.

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.

The Firm's quarterly common stock dividend is currently $1.05 per share. 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,	**2023**	2022	2021
Common dividend payout ratio	**25 %**	33 %	25 %

Common stock

Effective May 1, 2022, the Firm is authorized to purchase up to $30 billion under its common share repurchase program previously approved by the Board of Directors, which was announced on April 13, 2022.

The following table sets forth the Firm's repurchases of common stock for the years ended December 31, 2023, 2022 and 2021.

Year ended December 31, (in millions)	**2023**	2022[(b)]	2021[(c)]
Total number of shares of common stock repurchased	**69.5**	23.1	119.7
Aggregate purchase price of common stock repurchases[(a)]	**$ 9,898**	$ 3,122	$ 18,448

(a) Excludes excise tax and commissions. As part of the Inflation Reduction Act of 2022, a 1% excise tax was imposed on net share repurchases effective January 1, 2023.

(b) In the second half of 2022, the Firm temporarily suspended share repurchases, which it resumed under its current common share repurchase program in the first quarter of 2023.

(c) As directed by the Federal Reserve, total net repurchases and common stock dividends in the first and second quarter of 2021 were restricted and could not exceed the average of the Firm's net income for the four preceding calendar quarters. Effective July 1, 2021, the Firm became subject to the normal capital distribution restrictions provided under the regulatory capital framework.

The Board of Directors' authorization to repurchase common shares is utilized at management's discretion, and the timing of purchases and the exact amount of common shares that may be repurchased is subject to 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); internal capital generation; current and proposed future capital requirements; and alternative investment opportunities. The $30 billion common share repurchase program approved by the Board does not establish specific price targets or timetables. The repurchase program 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 Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on page 35 of the 2023 Form 10-K for additional information regarding repurchases of the Firm's equity securities.

Refer to capital planning and stress testing on page 91 for additional information.

Preferred stock

Preferred stock dividends declared were $1.5 billion for the year ended December 31, 2023, and $1.6 billion for each of the years ended December 31, 2022 and 2021.

Refer to Note 21 for additional information on the Firm's preferred stock, including the issuance and redemption of preferred stock.

Subordinated Debt

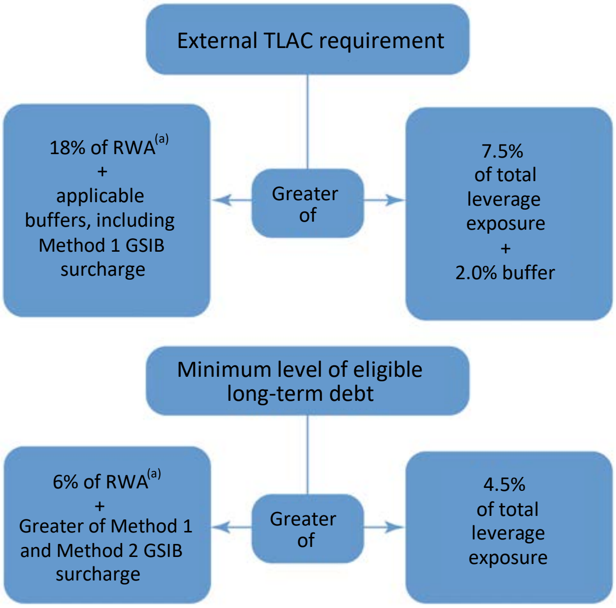
Refer to Long-term funding and issuance on page 108 and Note 20 for additional information on the Firm's subordinated debt.

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, 2023 and 2022.

	December 31, 2023		December 31, 2022	
(in billions, except ratio)	**External TLAC**	**LTD**	External TLAC	LTD
Total eligible amount	**$ 513.8**	**$ 222.6**	$ 486.0	$ 228.5
% of RWA	**30.7 %**	**13.3 %**	29.4 %	13.8 %
Regulatory requirements	**23.0**	**10.0**	22.5	9.5
Surplus/(shortfall)	**$ 129.2**	**$ 55.4**	$ 114.0	$ 71.4
% of total leverage exposure	**11.3 %**	**4.9 %**	11.1 %	5.2 %
Regulatory requirements	**9.5**	**4.5**	9.5	4.5
Surplus/(shortfall)	**$ 82.5**	**$ 18.3**	$ 71.2	$ 32.0

Effective January 1, 2023, the Firm's regulatory requirements for TLAC to RWA and eligible LTD to RWA ratios increased by 50 bps to 23.0% and 10.0%, respectively, due to the increase in the Firm's GSIB requirements. Refer to Risk-based Capital Regulatory Requirements on pages 94–95 for further information on the GSIB surcharge.

Refer to Liquidity Risk Management on pages 102–109 for further information on long-term debt issued by the Parent Company.

Refer to Part I, Item 1A: Risk Factors on pages 9-33 of the 2023 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

JPMorgan Chase'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, 2023 (in millions)	Actual	Minimum
Net Capital	$ 27,865	$ 5,346

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, 2023, 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 European Union ("EU") Capital Requirements Regulation ("CRR"), as adopted in the U.K., and the PRA capital rules, each of which have implemented Basel III and thereby subject J.P. Morgan Securities plc to its requirements.

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, 2023, J.P. Morgan Securities plc was compliant with its MREL requirements.

Effective January 1, 2023, J.P. Morgan Securities plc was required to meet the minimum Tier 1 leverage ratio requirement established by the PRA of 3.25%, plus regulatory buffers.

The following table presents J.P. Morgan Securities plc's risk-based and leverage-based capital metrics:

December 31, 2023 (in millions, except ratios)	Actual	Regulatory Minimum ratios[(a)]
Total capital	$ 52,522	
CET1 capital ratio	16.9 %	4.5 %
Tier 1 capital ratio	22.3	6.0
Total capital ratio	28.1	8.0
Tier 1 leverage ratio	7.3	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, 2023 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 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 required by the EU Single Resolution Board to maintain MREL. As of December 31, 2023, JPMSE was compliant with its MREL requirements.

The following table presents JPMSE's risk-based and leverage-based capital metrics:

December 31, 2023 (in millions, except ratios)	Actual	Regulatory Minimum ratios[(a)]
Total capital	$ 44,158	
CET1 capital ratio	18.1 %	4.5 %
Tier 1 capital ratio	18.1	6.0
Total capital ratio	32.2	8.0
Tier 1 leverage ratio	5.8	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, 2023 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 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 liquidity risk appetite tolerances and limits;
- 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 86–89 for further discussion of ALCO and other risk-related committees.

Internal stress testing

The Firm conducts internal liquidity stress testing that is intended to ensure that the Firm and its material legal entities have sufficient liquidity 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 regular 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 maintains 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, 2023, September 30, 2023 and December 31, 2022 based on the Firm's interpretation of the LCR framework.

	Three months ended		
Average amount (in millions)	**December 31, 2023**	September 30, 2023	December 31, 2022
JPMorgan Chase & Co.:			
HQLA			
Eligible cash[(a)]	**$ 485,263**	$ 402,663	$ 542,847
Eligible securities[(b)(c)]	**313,365**	378,702	190,201
Total HQLA[(d)]	**$ 798,628**	$ 781,365	$ 733,048
Net cash outflows	**$ 704,857**	$ 696,668	$ 652,580
LCR	**113 %**	112 %	112 %
Net excess eligible HQLA[(d)]	**$ 93,771**	$ 84,697	$ 80,468
JPMorgan Chase Bank, N.A.:			
LCR	**129 %**	123 %	151 %
Net excess eligible HQLA	**$ 215,190**	$ 167,096	$ 356,733

(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, 2023, compared with the three months ended September 30, 2023, driven by CIB market activities, partially offset by loan growth.

JPMorgan Chase Bank, N.A.'s average LCR for the three months ended December 31, 2023 decreased compared with the three months ended December 31, 2022, reflecting a decrease in JPMorgan Chase Bank, N.A.'s HQLA as a result of a reduction in cash due to a decline in average deposits and loan growth, as well as the impact of First Republic and lower market values of HQLA-eligible investment securities. These impacts were partially offset by CIB markets activities.

Refer to Note 10 and Note 34 for additional information on the Firm's investment securities portfolio and the First Republic acquisition.

Actions by the Federal Reserve have impacted depositor behavior, resulting in reductions to system-wide deposits, including those held by the Firm. 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 continued 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 $649 billion and $694 billion as of December 31, 2023 and 2022, 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, 2022, was driven by a reduction in excess eligible HQLA securities at JPMorgan Chase Bank, N.A., partially offset by an increase in unencumbered AFS securities.

As of December 31, 2023 and 2022, the Firm had approximately $1.4 trillion of available cash and securities comprised of eligible end-of-period HQLA, excluding the impact of regulatory haircuts of $798.0 billion and $735.5 billion, respectively, and unencumbered marketable securities with a fair value of approximately $649 billion and $694 billion, respectively.

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 $340 billion and $323 billion as of December 31, 2023 and 2022, 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, 2022 primarily due to a higher amount of wholesale loans 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, 2023, 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 rule. Refer to the Firm's U.S. NSFR Disclosure report covering December 31, 2023 and September 30, 2023 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 stable 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, 2023 and 2022.

As of or for the year ended December 31,			Average	
(in millions)	**2023**	2022	**2023**	2022
Consumer & Community Banking	**$ 1,094,738**	$ 1,131,611	**$ 1,126,552**	$ 1,162,680
Corporate & Investment Bank	**777,638**	689,893	**728,537**	739,700
Commercial Banking	**273,254**	271,342	**267,758**	294,180
Asset & Wealth Management	**233,232**	233,130	**216,178**	261,489
Corporate	**21,826**	14,203	**20,042**	9,866
Total Firm	**$ 2,400,688**	$ 2,340,179	**$ 2,359,067**	$ 2,467,915

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.

Average deposits were lower for the year ended December 31, 2023 compared to the year ended December 31, 2022, reflecting the net impact of:

- lower balances in AWM due to continued migration into higher-yielding investments driven by the higher interest rate environment, partially offset by growth from new and existing customers as a result of new product offerings and the impact of First Republic,
- a decline in CCB reflecting higher customer spending, largely offset by the impact of First Republic,
- a decrease in CB due to continued deposit attrition as clients seek higher-yielding investments, partially offset by the retention of inflows associated with disruptions in the market in the first quarter of 2023,
- a decline in CIB due to deposit attrition, including actions taken to reduce certain deposits, predominantly offset by net issuances of structured notes as a result of client demand, and
- growth in Corporate related to the Firm's international consumer initiatives.

Period-end deposits increased from December 31, 2022, reflecting the net impact of:

- higher balances in CIB due to net issuances of structured notes as a result of client demand, as well as deposit inflows from client-driven activities in Payments and Securities Services, partially offset by deposit attrition, including actions taken to reduce certain deposits,
- growth in Corporate related to the Firm's international consumer initiatives,
- lower balances in CCB reflecting higher customer spending,
- a decline in AWM due to continued migration into higher-yielding investments driven by the higher interest rate environment, predominantly offset by growth from new and existing customers as a result of new product offerings, and
- a decrease in CB due to continued deposit attrition as clients seek higher-yielding investments, predominantly offset by the retention of inflows associated with disruptions in the market in the first quarter of 2023.

The net increase also included $61 billion of deposits associated with First Republic, primarily reflected in CCB, AWM and CB.

Refer to Business Segment Results on pages 65-85 and Note 34 for additional information on the First Republic acquisition.

Refer to the Firm's Consolidated Balance Sheets Analysis and the Business Segment Results on pages 58-60 and pages 65-85, respectively, for further information on deposit and liability balance trends. 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 Federal Deposit Insurance Corporation ("FDIC") provides deposit insurance protection for deposits placed in a U.S. depository institution. At December 31, 2023 and 2022, the Firmwide estimated uninsured deposits were $1,331.9 billion and $1,383.7 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, 2023		December 31, 2022	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Three months or less	**$ 82,719**	**$ 77,466**	$ 43,513	$ 68,765
Over three months but within 6 months	**17,736**	**5,358**	8,670	3,658
Over six months but within 12 months	**10,294**	**4,820**	7,035	2,850
Over 12 months	**710**	**2,543**	787	2,634
Total	**$111,459**	**$ 90,187**	$ 60,005	$ 77,907

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, 2023 and 2022.

As of December 31, (in billions except ratios)	**2023**	2022
Deposits	**$ 2,400.7**	$ 2,340.2
Deposits as a % of total liabilities	**68 %**	69 %
Loans	**$ 1,323.7**	$ 1,135.6
Loans-to-deposits ratio	**55 %**	49 %

The following table provides a summary of the average balances and average interest rates of JPMorgan Chase's deposits for the years ended December 31, 2023, 2022, and 2021.

(Unaudited) Year ended December 31,	Average balances			Average interest rates		
(in millions, except interest rates)	**2023**	2022	2021	**2023**	2022	2021
U.S. offices						
Noninterest-bearing	**$ 635,791**	$ 691,206	$ 648,170	**NA**	NA	NA
Interest-bearing						
Demand[(a)]	**279,725**	324,512	322,122	**3.50 %**	0.92 %	0.06 %
Savings[(b)]	**864,558**	971,788	930,866	**1.10**	0.28	0.06
Time	**145,827**	62,022	48,628	**4.74**	2.07	0.26
Total interest-bearing deposits	**1,290,110**	1,358,322	1,301,616	**2.03**	0.52	0.07
Total deposits in U.S. offices	**1,925,901**	2,049,528	1,949,786	**1.36**	0.34	0.05
Non-U.S. offices						
Noninterest-bearing	**24,747**	28,043	26,315	**NA**	NA	NA
Interest-bearing						
Demand	**321,976**	324,740	313,304	**2.71**	0.57	(0.10)
Time	**86,443**	65,604	57,749	**5.82**	1.85	(0.09)
Total interest-bearing deposits	**408,419**	390,344	371,053	**3.37**	0.78	(0.10)
Total deposits in non-U.S. offices	**433,166**	418,387	397,368	**3.18**	0.73	(0.09)
Total deposits	**$ 2,359,067**	$ 2,467,915	$ 2,347,154	**1.70 %**	0.41 %	0.02 %

(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, 2023 and 2022, and average balances for the years ended December 31, 2023 and 2022. Refer to the Consolidated Balance Sheets Analysis on pages 58–60 and Note 11 for additional information.

Sources of funds (excluding deposits)

As of or for the year ended December 31,			Average	
(in millions)	**2023**	2022	**2023**	2022
Commercial paper	**$ 14,737**	$ 12,557	**$ 12,675**	$ 16,151
Other borrowed funds	**8,200**	8,418	**9,712**	12,250
Federal funds purchased	**787**	1,684	**1,754**	1,567
Total short-term unsecured funding	**$ 23,724**	$ 22,659	**$ 24,141**	$ 29,968
Securities sold under agreements to repurchase[(a)]	**$ 212,804**	$ 198,382	**$ 249,661**	$ 236,192
Securities loaned[(a)]	**2,944**	2,547	**4,671**	5,003
Other borrowed funds	**21,775** (g)	23,052	**22,010**	25,211
Obligations of Firm-administered multi-seller conduits[(b)]	**17,781**	9,236	**14,918**	7,387
Total short-term secured funding	**$ 255,304**	$ 233,217	**$ 291,260**	$ 273,793
Senior notes	**$ 191,202**	$ 188,025	**$ 181,803**	$ 189,047
Subordinated debt	**19,708**	21,803	**20,374**	20,125
Structured notes[(c)]	**86,056**	70,839	**76,574**	68,656
Total long-term unsecured funding	**$ 296,966**	$ 280,667	**$ 278,751**	$ 277,828
Credit card securitization[(b)]	**$ 2,998**	$ 1,999	**$ 1,634**	$ 1,950
FHLB advances	**41,246** (g)	11,093	**28,865**	11,103
Purchase Money Note[(d)]	**48,989**	NA	**$ 32,829**	NA
Other long-term secured funding[(e)]	**4,624**	4,105	**4,513**	3,837
Total long-term secured funding	**$ 97,857**	$ 17,197	**$ 67,841**	$ 16,890
Preferred stock[(f)]	**$ 27,404**	$ 27,404	**$ 27,404**	$ 31,893
Common stockholders' equity[(f)]	**$ 300,474**	$ 264,928	**$ 282,056**	$ 253,068

(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 which are secured.
(f) Refer to Capital Risk Management on pages 91-101, Consolidated statements of changes in stockholders' equity on page 169, Note 21 and Note 22 for additional information on preferred stock and common stockholders' equity.
(g) As of December 31, 2023, included short-term and long-term FHLB advances of $500 million and $23.2 billion, respectively, associated with First Republic. Refer to Note 34 for additional information.

Short-term funding

The Firm's sources of short-term secured funding primarily consist of securities loaned or 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, 2023, compared with December 31, 2022, reflecting the impact of a lower level of netting on reduced repurchase activity.

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 sources of short-term unsecured funding primarily consist of issuances of wholesale commercial paper and other borrowed funds.

The increase in period-end commercial paper and the decrease in average balances for the year ended December 31, 2023 compared to the respective prior year periods were due to changes in net issuance levels primarily for short-term liquidity management.

The decrease in average secured other borrowed funds for the year ended December 31, 2023 compared to the prior year period was primarily due to lower financing of Markets activities.

Long-term funding and issuance

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.

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. For the year ended December 31, 2023, the increase in period-end structured notes compared to the prior year period was attributable to net issuances of structured notes in Markets due to client demand and an increase in fair value.

The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2023 and 2022. Refer to Note 20 for additional information on the IHC and long-term debt.

Long-term unsecured funding

Year ended December 31,	2023	2022	2023	2022
(Notional in millions)	Parent Company		Subsidiaries	
Issuance				
Senior notes issued in the U.S. market	**$ 14,256**	$ 32,600	**$ 3,750**	$ –
Senior notes issued in non-U.S. markets	**2,141**	2,752	**–**	–
Total senior notes	**16,397**	35,352	**3,750**	–
Subordinated debt	**–**	3,500	**–**	–
Structured notes[(a)]	**3,013**	2,535	**35,281**	35,577
Total long-term unsecured funding – issuance	**$ 19,410**	$ 41,387	**$ 39,031**	$ 35,577
Maturities/redemptions				
Senior notes	**$ 21,483**	$ 16,700	**$ 67**	$ 65
Subordinated debt	**2,090**	–	**–**	–
Structured notes	**1,532**	1,594	**28,777**	25,481
Total long-term unsecured funding – maturities/redemptions	**$ 25,105**	$ 18,294	**$ 28,844**	$ 25,546

(a) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.

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, 2023 and 2022. Additionally, the table includes the FHLB advances and Purchase Money Note associated with First Republic. Refer to Note 34 for additional information.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	**2023**	2022	**2023**	2022
Credit card securitization	**$ 1,998**	$ 999	**$ 1,000**	$ 1,400
FHLB advances	**39,775**	–	**9,485**	14
Purchase Money Note[(a)]	**50,000**	NA	**–**	NA
Other long-term secured funding[(b)]	**991**	476	**432**	268
Total long-term secured funding	**$ 92,764**	$ 1,475	**$ 10,917**	$ 1,682

(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.

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 Note 5 and Note 14 for additional information.

The credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries as of December 31, 2023, 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		
December 31, 2023	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	A1	P-1	Stable	Aa2	P-1	Negative [(b)]	Aa3	P-1	Stable
Standard & Poor's[(a)]	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	AA-	F1+	Stable	AA	F1+	Stable	AA	F1+	Stable

(a) On March 31, 2023, Standard & Poor's affirmed the credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries, and revised the outlook from positive to stable.
(b) On November 13, 2023, Moody's revised the outlook of the Firm's principal bank subsidiary from stable to negative to reflect Moody's change to the U.S. sovereign outlook.

JPMorgan Chase'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 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, Corporate and 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 increasingly 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, measures and manages credit risk throughout the Firm and defines credit risk policies and procedures. The Firm's credit risk management governance includes the following activities:

- Maintaining a credit risk policy framework
- Monitoring, measuring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry and geographic concentration limits, as appropriate, and establishing underwriting guidelines
- Assigning and managing credit approval authorities in connection with the approval of credit exposure
- Managing 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 155–158 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 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 114–119 and Note 12 for further discussions of the consumer credit environment and consumer loans. Refer to Wholesale Credit Portfolio on pages 120–130 and Note 12 for further discussions of the wholesale credit environment and wholesale loans.

On January 1, 2023, the Firm adopted changes to the TDR accounting guidance, which eliminated the accounting and disclosure requirements for TDRs including the requirement to assess whether a modification is reasonably expected or involves a concession. The new guidance requires disclosure of loan modifications to borrowers experiencing financial difficulty consisting of principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications. The Firm has defined these types of modifications as financial difficulty modifications ("FDMs"). 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 differs from the population previously considered TDRs. Refer to Note 1 and Note 12 for further information.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[d]	
	2023	2022	**2023**	2022
Loans retained	**$1,280,870**	$1,089,598	**$ 5,989**	$ 5,837
Loans held-for-sale	**3,985**	3,970	**184**	54
Loans at fair value	**38,851**	42,079	**744**	829
Total loans	**1,323,706**	1,135,647	**6,917**	6,720
Derivative receivables	**54,864**	70,880	**364**	296
Receivables from customers[a]	**47,625**	49,257	**–**	–
Total credit-related assets	**1,426,195**	1,255,784	**7,281**	7,016
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**274**	203
Other	**NA**	NA	**42**	28
Total assets acquired in loan satisfactions	**NA**	NA	**316**	231
Lending-related commitments	**1,497,847**	1,326,782	**464**	455
Total credit portfolio	**$2,924,042** [c]	$2,582,566	**$ 8,061**	$ 7,702
Credit derivatives and credit-related notes used in credit portfolio management activities[b]	**$ (37,779)**	$ (19,330)	**$ –**	$ –
Liquid securities and other cash collateral held against derivatives	**(22,461)**	(23,014)	**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) Includes credit exposure associated with First Republic consisting of $102.2 billion in the Consumer credit portfolio and $90.6 billion in the Wholesale credit portfolio.

(d) At December 31, 2023 and 2022, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $182 million and $302 million, respectively. These amounts have been excluded based upon the government guarantee. 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)	**2023**	2022
Total nonaccrual loans	**$ 6,917**	$ 6,720
Total loans	**1,323,706**	1,135,647
Firmwide nonaccrual loans to total loans outstanding	**0.52 %**	0.59 %

The following table provides information about the Firm's net charge-offs and recoveries.

Year ended December 31, (in millions, except ratios)	**2023**	2022
Net charge-offs	**$ 6,209**	$ 2,853
Average retained loans	**1,202,348**	1,044,765
Net charge-off rates	**0.52 %**	0.27 %

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, including those associated with First Republic, primarily in residential real estate. 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[j][k][l]	
	2023	2022	**2023**	2022
Consumer, excluding credit card				
Residential real estate[a]	**$ 326,409**	$ 237,561	**$ 3,466**	$ 3,745
Auto and other[b][c]	**70,866**	63,192	**177**	129
Total loans - retained	**397,275**	300,753	**3,643**	3,874
Loans held-for-sale	**487**	618	**95**	28
Loans at fair value[d]	**12,331**	10,004	**465**	423
Total consumer, excluding credit card loans	**410,093**	311,375	**4,203**	4,325
Lending-related commitments[e]	**45,403**	33,518		
Total consumer exposure, excluding credit card	**455,496** [i]	344,893		
Credit card				
Loans retained[f]	**211,123**	185,175	**NA**	NA
Total credit card loans	**211,123**	185,175	**NA**	NA
Lending-related commitments[e][g]	**915,658**	821,284		
Total credit card exposure	**1,126,781**	1,006,459		
Total consumer credit portfolio	**$ 1,582,277**	$ 1,351,352	**$ 4,203**	$ 4,325
Credit-related notes used in credit portfolio management activities[h]	**$ (790)**	$ (1,187)		

	Year ended December 31,					
	Net charge-offs/(recoveries)		Average loans - retained		Net charge-off/(recovery) rate[m]	
(in millions, except ratios)	**2023**	2022	**2023**	2022	**2023**	2022
Consumer, excluding credit card						
Residential real estate	**$ (52)**	$ (226)	**$ 296,515**	$ 233,454	**(0.02)%**	(0.10)%
Auto and other	**684**	495	**67,546**	65,955	**1.01**	0.75
Total consumer, excluding credit card - retained	**632**	269	**364,061**	299,409	**0.17**	0.09
Credit card - retained	**4,698**	2,403	**191,412**	163,335	**2.45**	1.47
Total consumer - retained	**$ 5,330**	$ 2,672	**$ 555,473**	$ 462,744	**0.96 %**	0.58 %

(a) Includes scored mortgage and home equity loans held in CCB and AWM.
(b) At December 31, 2023 and 2022, excluded operating lease assets of $10.4 billion and $12.0 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. For credit card commitments, and if certain conditions are met, home equity commitments and certain business banking commitments, the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. Refer to Note 28 for further information.
(f) Includes billed interest and fees.
(g) Also includes commercial card lending-related commitments primarily in CB and 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) At December 31, 2023, included credit exposure of $102.2 billion associated with First Republic, consisting of $99.6 billion in residential real estate and $2.6 billion in auto and other.
(j) At December 31, 2023 and 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $182 million and $302 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance.
(k) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(l) At December 31, 2023 and 2022, nonaccrual loans excluded $15 million and $101 million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.
(m) Average consumer loans held-for-sale and loans at fair value were $12.9 billion and $17.4 billion for the years ended December 31, 2023 and 2022, 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, 2023 (in millions)	Within 1 year[(e)]	1-5 years	5-15 years	After 15 years	Total
Consumer, excluding credit card					
Residential real estate	$ 17,830	$ 27,447	$ 110,504	$ 181,593	$ 337,374
Auto and other	20,191 [(f)]	47,315	5,209	4	72,719
Total consumer, excluding credit card loans[(a)]	$ 38,021	$ 74,762	$ 115,713	$ 181,597	$ 410,093
Total credit card loans	$ 210,418	$ 700	$ 5	$ –	$ 211,123
Total consumer loans	$ 248,439	$ 75,462	$ 115,718	$ 181,597	$ 621,216
Loans due after one year at fixed interest rates					
Residential real estate[(b)]		$ 20,337	$ 59,603	$ 89,044	
Auto and other		47,236	3,767	4	
Credit card		700	5	–	
Loans due after one year at variable interest rates[(c)]					
Residential real estate[(d)]		$ 7,110	$ 50,901	$ 92,549	
Auto and other		79	1,442	–	
Total consumer loans		$ 75,462	$ 115,718	$ 181,597	

(a) Included $3.9 billion, $4.6 billion, $27.9 billion, and $56.2 billion of loans within 1 year, 1-5 years, 5-15 years, and after 15 years, respectively, associated with First Republic.
(b) Included $3.0 billion, $8.9 billion, and $15.1 billion in 1-5 years, 5-15 years, and after 15 years, respectively, associated with First Republic.
(c) 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.
(d) Included $1.6 billion, $19.1 billion, and $41.0 billion in 1-5 years, 5-15 years, and after 15 years, respectively, associated with First Republic.
(e) Includes loans held-for-sale and loans at fair value.
(f) Includes overdrafts.

Consumer, excluding credit card

Portfolio analysis

Loans increased from December 31, 2022 driven by residential real estate loans associated with First Republic and higher 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 increased compared to December 31, 2022 driven by residential real estate loans associated with First Republic. Retained nonaccrual loans decreased compared to December 31, 2022 predominantly driven by loan sales, partially offset by the net impact of paydowns and additions, including those associated with First Republic. Net recoveries were lower for the year ended December 31, 2023 compared to the prior year driven by lower prepayments due to higher interest rates.

Loans at fair value increased from December 31, 2022, driven by an increase in Home Lending as originations outpaced warehouse loan sales, and in CIB as purchases outpaced sales and paydowns.

At December 31, 2023 and 2022, the carrying values of interest-only residential mortgage loans were $90.6 billion and $36.3 billion, respectively. The increase was driven by First Republic. 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 with the performance of the broader prime mortgage portfolio.

The carrying value of home equity lines of credit outstanding was $16.1 billion at December 31, 2023, which included $2.6 billion associated with First Republic. The carrying value of home equity lines of credit outstanding included $4.2 billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified and $4.3 billion of interest-only balloon HELOCs, which primarily mature after 2030. The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile.

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, 2023**	December 31, 2022
Current	**$ 446**	$ 659
30-89 days past due	**102**	136
90 or more days past due	**182**	302
Total government guaranteed loans	**$ 730**	$ 1,097

Geographic composition and current estimated loan-to-value ratio of residential real estate loans

At December 31, 2023, $228.4 billion, or 70% of the total retained residential real estate loan portfolio, was concentrated in California, New York, Florida, Texas and Massachusetts, compared with $147.8 billion, or 62% at December 31, 2022.

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.

Modified residential real estate loans

For the year ended December 31, 2023, residential real estate FDMs were $136 million. In addition to FDMs, the Firm also had $69 million of loans subject to trial modification where the terms of the loans have not been permanently modified, as well as $9 million of loans subject to discharge under Chapter 7 bankruptcy proceedings ("Chapter 7 loans"). The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications and Chapter 7 loans were considered TDRs, but not FDMs. Refer to Note 1 and Note 12 for further information.

For the year ended December 31, 2022, residential real estate TDRs were $362 million. Refer to Note 12 for further information on TDRs in prior periods.

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 increased when compared to December 31, 2022 due to originations of scored auto loans and an increase in other consumer unsecured fair value option loans in CIB associated with First Republic, largely offset by paydowns. Net charge-offs for the year ended December 31, 2023 increased compared to the prior year due to higher charge-offs of scored auto loans driven by the decline in used vehicle valuations. The scored auto net charge-off rates were 0.56% and 0.24% for the years ended December 31, 2023 and 2022, respectively.

Nonperforming assets

The following table presents information as of December 31, 2023 and 2022, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[(a)]

December 31, (in millions)	2023	2022
Nonaccrual loans		
Residential real estate[(b)]	**$ 4,015**	$ 4,196
Auto and other[(c)]	**188**	129
Total nonaccrual loans	**4,203**	4,325
Assets acquired in loan satisfactions		
Real estate owned	**120**	129
Other	**42**	28
Total assets acquired in loan satisfactions	**162**	157
Total nonperforming assets	**$ 4,365**	$ 4,482

(a) At December 31, 2023 and 2022, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $182 million and $302 million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(c) At December 31, 2023 and 2022, nonaccrual loans excluded $15 million and $101 million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.

Nonaccrual loans

The following table presents changes in consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2023 and 2022.

Nonaccrual loan activity

Year ended December 31, (in millions)	2023	2022
Beginning balance	**$ 4,325**	$ 5,350
Additions:	**2,894**	2,196
Reductions:		
Principal payments and other[(a)]	**1,306**	1,393
Charge-offs	**472**	255
Returned to performing status	**1,052**	1,405
Foreclosures and other liquidations	**186**	168
Total reductions	**3,016**	3,221
Net changes	**(122)**	(1,025)
Ending balance	**$ 4,203**	$ 4,325

(a) Other reductions include loan sales.

Refer to Note 12 for further information about the consumer credit portfolio, including information about delinquencies, other credit quality indicators, loan modifications and loans that were in the process of active or suspended foreclosure.

Credit card

Total credit card loans increased from December 31, 2022 reflecting growth from new accounts and revolving balances which continued to normalize to pre-pandemic levels. The December 31, 2023 30+ and 90+ day delinquency rates of 2.14% and 1.05%, respectively, increased compared to the December 31, 2022 30+ and 90+ day delinquency rates of 1.45% and 0.68%, respectively. Net charge-offs increased for the year ended December 31, 2023 compared to the prior year as delinquencies have normalized.

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, 2023, $98.1 billion, or 46% of the total retained credit card loan portfolio, was concentrated in California, Texas, New York, Florida and Illinois, compared with $85.4 billion, or 46%, at December 31, 2022.

Modifications of credit card loans

For the year ended December 31, 2023, credit card FDMs were $648 million. FDMs increased for the year ended December 31, 2023 compared to credit card TDRs in the prior year, as delinquencies have normalized. In addition to FDMs, the Firm also had $27 million of loans subject to trial modification where the terms of the loans have not been permanently modified for the year ended December 31, 2023. The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications were considered TDRs, but not FDMs.

For the year ended December 31, 2022, credit card TDRs were $418 million.

Refer to Note 1 and Note 12 for further information about this portfolio, including information about delinquencies, geographic and FICO composition, and modifications.

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 122–125 for further information.

The Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM, and Corporate, and risk-rated exposure held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses. The Firm continues to convert certain operations, and to integrate clients, products and services, associated with First Republic. Accordingly, reporting classifications and internal risk rating profiles in the wholesale portfolio may change in future periods. Refer to Business Developments on page 53 for additional information.

As of December 31, 2023, retained loans increased $68.8 billion predominantly driven by the impact of First Republic. Lending-related commitments increased $64.8 billion, driven by the impact of First Republic, and net portfolio activity in CIB and CB.

As of December 31, 2023, nonperforming exposure increased $476 million predominantly driven by nonperforming retained loans in Real Estate and Healthcare, reflecting downgrades, and Individuals largely driven by the impact of First Republic, partially offset by a single name upgrade in Civic Organizations.

For the year ended December 31, 2023, wholesale net charge-offs increased $698 million, predominantly driven by the restructuring of a loan, increases in Real Estate (concentrated in Office) and Consumer & Retail.

Wholesale credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming	
	2023	2022	**2023**	2022
Loans retained	**$ 672,472**	$ 603,670	**$ 2,346**	$ 1,963
Loans held-for-sale	**3,498**	3,352	**89**	26
Loans at fair value	**26,520**	32,075	**279**	406
Loans	**702,490**	639,097	**2,714**	2,395
Derivative receivables	**54,864**	70,880	**364**	296
Receivables from customers[(a)]	**47,625**	49,257	**—**	—
Total wholesale credit-related assets	**804,979**	759,234	**3,078**	2,691
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**154**	74
Other	**NA**	NA	**—**	—
Total assets acquired in loan satisfactions	**NA**	NA	**154**	74
Lending-related commitments	**536,786**	471,980	**464**	455
Total wholesale credit portfolio	**$1,341,765** [(c)]	$1,231,214	**$ 3,696**	$ 3,220
Credit derivatives and credit-related notes used in credit portfolio management activities[(b)]	**$ (36,989)**	$ (18,143)	**$ —**	$ —
Liquid securities and other cash collateral held against derivatives	**(22,461)**	(23,014)	**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 130 and Note 5 for additional information.

(c) Included credit exposure of $90.6 billion associated with First Republic.

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, 2023 and 2022. 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, 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 %**

	Maturity profile[d]				Ratings profile			
December 31, 2022 (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	$ 204,761	$ 253,896	$ 145,013	$ 603,670	$ 425,412	$ 178,258	$ 603,670	70 %
Derivative receivables				70,880			70,880	
Less: Liquid securities and other cash collateral held against derivatives				(23,014)			(23,014)	
Total derivative receivables, net of collateral	13,508	14,880	19,478	47,866	36,231	11,635	47,866	76
Lending-related commitments	101,083	347,456	23,441	471,980	327,168	144,812	471,980	69
Subtotal	319,352	616,232	187,932	1,123,516	788,811	334,705	1,123,516	70
Loans held-for-sale and loans at fair value[a]				35,427			35,427	
Receivables from customers				49,257			49,257	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 1,208,200			$ 1,208,200	
Credit derivatives and credit-related notes used in credit portfolio management activities[b][c]	$ (2,817)	$ (13,530)	$ (1,796)	$ (18,143)	$ (15,115)	$ (3,028)	$ (18,143)	83 %

(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, 2023, 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 $41.4 billion at December 31, 2023 and $31.3 billion at December 31, 2022, representing approximately 3.3% and 2.7% of total wholesale credit exposure, respectively; of the $41.4 billion, $38.3 billion was performing. The increase in criticized exposure was predominantly driven by Real Estate, Technology, Media & Telecommunications (predominantly Technology) and Healthcare, reflecting downgrades.

The table below summarizes by industry the Firm's exposures as of December 31, 2023 and 2022. 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)]

						Selected metrics			
			Noninvestment-grade						
As of or for the year ended **December 31, 2023** (in millions)	Credit exposure[(f)(g)(h)]	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans[(i)]	Net charge-offs/ (recoveries)	Credit derivative and credit-related notes[(i)]	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)**	**–**
Oil & Gas	**34,475**	**18,276**	**16,076**	**111**	**12**	**45**	**11**	**(1,927)**	**(5)**
Automotive	**33,977**	**23,152**	**10,060**	**640**	**125**	**59**	**–**	**(653)**	**–**
Chemicals & Plastics	**20,773**	**11,353**	**8,352**	**916**	**152**	**106**	**2**	**(1,045)**	**–**
Insurance	**20,501**	**14,503**	**5,700**	**298**	**–**	**2**	**–**	**(961)**	**(6,898)**
Central Govt	**17,704**	**17,264**	**312**	**127**	**1**	**–**	**–**	**(3,490)**	**(2,085)**
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)**	**–**
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**								

As of or for the year ended December 31, 2022 (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 [i]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 170,857	$ 129,866	$ 36,945	$ 3,609	$ 437	$ 543	$ 19	$ (113)	$ –
Individuals and Individual Entities[b]	130,815	112,006	18,104	360	345	1,038	1	–	–
Asset Managers	95,656	78,925	16,665	61	5	15	(1)	–	(8,278)
Consumer & Retail	120,555	60,781	51,871	7,295	608	321	49	(1,157)	–
Technology, Media & Telecommunications	72,286	39,199	25,689	7,096	302	62	39	(1,766)	–
Industrials	72,483	39,052	30,500	2,809	122	282	44	(1,258)	–
Healthcare	62,613	43,839	17,117	1,479	178	43	27	(1,055)	–
Banks & Finance Companies	51,816	27,811	22,994	961	50	36	–	(262)	(994)
Utilities	36,218	25,981	9,294	807	136	21	15	(607)	(1)
State & Municipal Govt[c]	33,847	33,191	529	126	1	36	–	(9)	(5)
Oil & Gas	38,668	20,547	17,616	474	31	57	(6)	(414)	–
Automotive	33,287	23,908	8,839	416	124	198	(2)	(513)	–
Chemicals & Plastics	20,030	12,134	7,103	744	49	10	3	(298)	–
Insurance	21,045	15,468	5,396	181	–	1	–	(273)	(7,296)
Central Govt	19,095	18,698	362	35	–	–	10	(4,591)	(677)
Transportation	15,009	6,497	6,862	1,574	76	24	2	(339)	–
Metals & Mining	15,915	8,825	6,863	222	5	7	(1)	(27)	(4)
Securities Firms	8,066	4,235	3,716	115	–	–	(13)	(26)	(2,811)
Financial Markets Infrastructure	4,962	4,525	437	–	–	–	–	–	–
All other[d]	123,307	105,284	17,555	223	245	4	(5)	(5,435)	(2,948)
Subtotal	$ 1,146,530	$ 810,772	$ 304,457	$ 28,587	$ 2,714	$ 2,698	$ 181	$ (18,143)	$ (23,014)
Loans held-for-sale and loans at fair value	35,427								
Receivables from customers	49,257								
Total[e]	$ 1,231,214								

(a) The industry rankings presented in the table as of December 31, 2022, are based on the industry rankings of the corresponding exposures at December 31, 2023, not actual rankings of such exposures at December 31, 2022.
(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, 2023 and 2022, noted above, the Firm held: $5.9 billion and $6.6 billion, respectively, of trading assets; $21.4 billion and $6.8 billion, respectively, of AFS securities; and $9.9 billion and $19.7 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 December 31, 2023 and 95% and 5%, respectively, at December 31, 2022.
(e) Excludes cash placed with banks of $614.1 billion and $556.6 billion, at December 31, 2023 and 2022, 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) Included credit exposure of $90.6 billion associated with First Republic predominantly in Real Estate, Asset Managers, and Individuals and Individual Entities.
(i) 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 $208.3 billion as of December 31, 2023. Criticized exposure increased by $5.2 billion from $4.0 billion at December 31, 2022 to $9.2 billion at December 31, 2023, predominantly driven by client-specific downgrades, partially offset by client-specific upgrades.

	December 31, 2023								
(in millions, except ratios)		Loans and Lending-related Commitments		Derivative Receivables		Credit exposure		% Investment-grade	% Drawn[e]
Multifamily[a]	$	**121,946**	$	**21**	$	**121,967**		**79 %**	**90 %**
Industrial		**20,254**		**18**		**20,272**		**70**	**72**
Office		**16,462**		**32**		**16,494**		**51**	**81**
Services and Non Income Producing		**16,145**		**74**		**16,219**		**62**	**46**
Other Income Producing Properties[b]		**15,542**		**208**		**15,750**		**55**	**63**
Retail		**12,763**		**48**		**12,811**		**75**	**73**
Lodging		**4,729**		**19**		**4,748**		**30**	**48**
Total Real Estate Exposure[c]	**$**	**207,841**	**$**	**420**	**$**	**208,261**	(d)	**71 %**	**80 %**

	December 31, 2022							
(in millions, except ratios)		Loans and Lending-related Commitments		Derivative Receivables		Credit exposure	% Investment-grade	% Drawn[e]
Multifamily[a]	$	99,555	$	17	$	99,572	82 %	87 %
Industrial		15,928		1		15,929	72	71
Office		14,917		25		14,942	74	73
Services and Non Income Producing		13,968		10		13,978	65	48
Other Income Producing Properties[b]		12,701		150		12,851	70	62
Retail		10,192		8		10,200	75	68
Lodging		3,347		38		3,385	6	37
Total Real Estate Exposure	$	170,608	$	249	$	170,857	76 %	77 %

(a) 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 82% secured; unsecured exposure is predominantly investment-grade largely to Real Estate Investment Trusts ("REITs") and Real Estate Operating Companies ("REOCs") whose underlying assets are generally diversified.
(d) Included $33.4 billion of credit exposure associated with First Republic, largely in Multifamily.
(e) Represents drawn exposure as a percentage of credit exposure.

Consumer & Retail

Consumer & Retail exposure was $127.1 billion as of December 31, 2023. Criticized exposure increased by $409 million from $7.9 billion at December 31, 2022 to $8.3 billion at December 31, 2023, driven by client-specific downgrades predominantly offset by client-specific upgrades and net portfolio activity.

	December 31, 2023				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Retail[a]	**$ 36,042**	**$ 334**	**$ 36,376**	**51 %**	**30 %**
Business and Consumer Services	**34,822**	**392**	**35,214**	**42**	**42**
Food and Beverage	**32,256**	**930**	**33,186**	**57**	**36**
Consumer Hard Goods	**13,169**	**197**	**13,366**	**43**	**33**
Leisure[b]	**8,784**	**160**	**8,944**	**25**	**47**
Total Consumer & Retail[c]	**$ 125,073**	**$ 2,013**	**$ 127,086**	**47 %**	**36 %**

	December 31, 2022				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Retail[a]	$ 33,891	$ 309	$ 34,200	50 %	33 %
Business and Consumer Services	31,256	384	31,640	50	40
Food and Beverage	31,706	736	32,442	59	39
Consumer Hard Goods	13,879	172	14,051	51	39
Leisure[b]	8,173	49	8,222	21	45
Total Consumer & Retail	$ 118,905	$ 1,650	$ 120,555	50 %	38 %

(a) Retail consists of Home Improvement & Specialty Retailers, Restaurants, Supermarkets, Discount & Drug Stores, Specialty Apparel and Department Stores.
(b) Leisure consists of Gaming, Arts & Culture, Travel Services and Sports & Recreation. As of December 31, 2023, approximately 90% of the noninvestment-grade Leisure portfolio is secured.
(c) Consumer & Retail exposure is approximately 59% secured; unsecured exposure is approximately 79% investment-grade.
(d) Represents drawn exposure as a percent of credit exposure.

Oil & Gas

Oil & Gas exposure was $34.5 billion as of December 31, 2023 of which $123 million was considered criticized.

	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[b]	**$ 33,770**	**$ 705**	**$ 34,475**	**53 %**	**25 %**

	December 31, 2022				
(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	$ 17,729	$ 4,666	$ 22,395	50 %	25 %
Other Oil & Gas[a]	15,818	455	16,273	57	25
Total Oil & Gas	$ 33,547	$ 5,121	$ 38,668	53 %	25 %

(a) Other Oil & Gas includes Integrated Oil & Gas companies, Midstream/Oil Pipeline companies and refineries.
(b) Oil & Gas exposure is approximately 35% secured, approximately half of which is reserve-based lending to the Exploration & Production sub-sector; unsecured exposure is approximately 61% 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, 2023 and 2022. Since December 31, 2022, nonaccrual loan exposure increased by $319 million driven by retained loans in Real Estate and Healthcare, reflecting downgrades, and Individuals largely driven by the impact of First Republic, partially offset by a single name upgrade in Civic Organizations.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	**2023**	2022
Beginning balance	**$ 2,395**	$ 2,445
Additions	**3,543**	2,119
Reductions:		
Paydowns and other	**1,336**	1,329
Gross charge-offs	**965**	213
Returned to performing status	**616**	594
Sales	**307**	33
Total reductions	**3,224**	2,169
Net changes	**319**	(50)
Ending balance	**$ 2,714**	$ 2,395

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2023 and 2022. 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)	**2023**	2022
Loans		
Average loans retained	**$ 646,875**	$ 582,021
Gross charge-offs	**1,011**	322
Gross recoveries collected	**(132)**	(141)
Net charge-offs/(recoveries)	**879**	181
Net charge-off/(recovery) rate	**0.14 %**	0.03 %

Modified wholesale loans

The amortized cost of wholesale FDMs was $2.1 billion for the year ended December 31, 2023. Refer to Note 1 and Note 12 for further information.

Wholesale TDRs were $801 million for the year ended December 31, 2022.

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. Refer to Note 12 for further information on TDRs in prior periods.

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, 2023 (in millions, except ratios)	1 year or less[g]	After 1 year through 5 years	After 5 years through 15 years	After 15 years	Total
Wholesale loans:					
Secured by real estate[a]	**$ 16,144**	**$ 61,764**	**$ 48,972**	**$ 42,417**	**$ 169,297**
Commercial and industrial	**52,351**	**112,339**	**8,469**	**35**	**173,194**
Other[b]	**173,752**	**141,760**	**38,558**	**5,929**	**359,999**
Total wholesale loans	**$ 242,247**	**$ 315,863**	**$ 95,999**	**$ 48,381**	**$ 702,490**
Loans due after one year at fixed interest rates					
Secured by real estate[c]		**$ 15,871**	**$ 11,185**	**$ 720**	
Commercial and industrial		**5,004**	**1,376**	**34**	
Other		**25,264**	**17,656**	**3,910**	
Loans due after one year at variable interest rates[d]					
Secured by real estate[e]		**$ 45,893**	**$ 37,787**	**$ 41,696**	
Commercial and industrial		**107,334**	**7,093**	**2**	
Other[f]		**116,497**	**20,902**	**2,019**	
Total wholesale loans		**$ 315,863**	**$ 95,999**	**$ 48,381**	

(a) Included $6.6 billion, $16.9 billion, and $9.7 billion of loans in 1 year or less, after 1 year through 5 years, and after 5 years though 15, respectively, associated with First Republic.
(b) Included $9.8 billion, and $4.1 billion of loans in 1 year or less, and after 1 year through 5 years, respectively, associated with First Republic.
(c) Included $9.7 billion, and $5.7 billion in after 1 year through 5 years, and after 5 years though 15, respectively, associated with First Republic.
(d) 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.
(e) Included $7.1 billion, and $4.0 billion in after 1 year through 5 years, and after 5 years though 15, respectively, associated with First Republic.
(f) Included $3.0 billion in after 1 year through 5 years associated with First Republic.
(g) 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 year ended December 31, 2023 and 2022.

	Year ended December 31,							
	Secured by real estate		Commercial and industrial		Other		Total	
(in millions, except ratios)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Net charge-offs/(recoveries)	**$ 178**	$ 6	**$ 370**	$ 145	**$ 331**	$ 30	**$ 879**	$ 181
Average retained loans	**151,214**	122,904	**170,503**	160,611	**325,158**	298,506	**646,875**	582,021
Net charge-off/(recovery) rate	**0.12 %**	– %	**0.22 %**	0.09 %	**0.10 %**	0.01 %	**0.14 %**	0.03 %

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 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 87% at both December 31, 2023 and 2022. Refer to Note 5 for additional information on the Firm's use of collateral agreements and further discussion of derivative contracts, counterparties and settlement types.

The fair value of derivative receivables reported on the Consolidated balance sheets was $54.9 billion and $70.9 billion at December 31, 2023 and 2022, respectively. The decrease 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)	2023	2022
Total, net of cash collateral	**$ 54,864**	$ 70,880
Liquid securities and other cash collateral held against derivative receivables	**(22,461)**	(23,014)
Total, net of liquid securities and other cash collateral	**$ 32,403**	$ 47,866
Other collateral held against derivative receivables	**(993)**	(1,261)
Total, net of collateral	**$ 31,410**	$ 46,605

Ratings profile of derivative receivables

	2023		2022	
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	**$ 24,004**	**76 %**	$ 35,097	75 %
Noninvestment-grade	**7,406**	**24**	11,508	25
Total	**$ 31,410**	**100 %**	$ 46,605	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 and is used as an input for aggregating derivative credit risk exposures with loans and other credit risk.

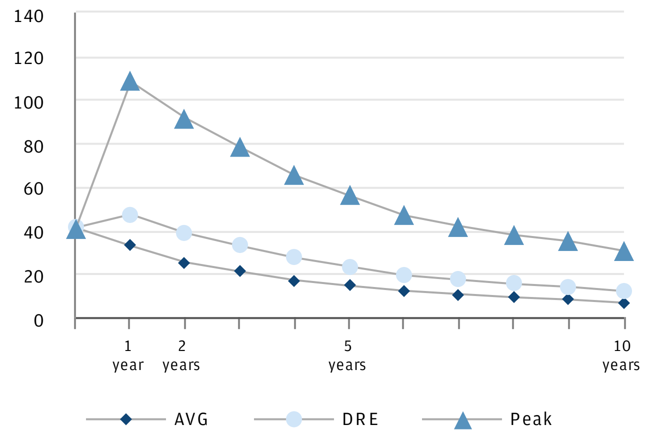
Finally, AVG is a measure of the expected fair value of the Firm's derivative exposures, including the benefit of collateral, at future time periods. AVG over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit risk capital and 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, 2023
(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

December 31, (in millions)	Notional amount of protection purchased and sold(a) 2023	2022
Credit derivatives and credit-related notes used to manage:		
Loans and lending-related commitments	**$ 24,157**	$ 6,422
Derivative receivables	**12,832**	11,721
Credit derivatives and credit-related notes used in credit portfolio management activities	**$ 36,989**	$ 18,143

(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.

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 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, 2023 was $24.8 billion, reflecting a net addition of $3.1 billion from December 31, 2022.

The net addition to the allowance for credit losses included $1.9 billion, consisting of:

- $1.3 billion in **consumer**, predominantly driven by CCB, comprised of $1.4 billion in Card Services, partially offset by a net reduction of $200 million in Home Lending. The net addition in Card Services was driven by loan growth, including an increase in revolving balances, partially offset by reduced borrower uncertainty. The net reduction in Home Lending was driven by improvements in the outlook for home prices, and
- $675 million in **wholesale**, driven by net downgrade activity, the net effect of changes in the Firm's weighted average macroeconomic outlook, including deterioration in the outlook for commercial real estate in CB, and an addition for certain accounts receivable in CIB, partially offset by the impact of changes in the loan and lending-related commitment portfolios.

The net addition also included $1.2 billion to establish the allowance for the First Republic loans and lending-related commitments in the second quarter of 2023.

The changes in the Firm's weighted average macroeconomic outlook also included updates to the central scenario in the third quarter of 2023 to reflect a lower forecasted unemployment rate consistent with a higher growth rate in GDP, and the impact of the additional weight placed on the adverse scenarios in the first quarter of 2023, reflecting elevated recession risks due to high inflation and tightening financial conditions.

The allowance for credit losses also reflected a reduction of $587 million as a result of the adoption of changes to the TDR accounting guidance on January 1, 2023. Refer to Note 1 for further information.

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 2024, and a weighted average U.S. real GDP level that is 1.5% lower than the central case at the end of the second quarter of 2025.

The following table presents the Firm's central case assumptions for the periods presented:

	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 %**
	Central case assumptions at December 31, 2022		
	2Q23	4Q23	2Q24
U.S. unemployment rate[(a)]	3.8 %	4.3 %	5.0 %
YoY growth in U.S. real GDP[(b)]	1.5 %	0.4 %	– %

(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 Critical Accounting Estimates Used by the Firm on pages 155-158 for further information on the allowance for credit losses and related management judgments. Refer to Consumer Credit Portfolio on pages 114–119, Wholesale Credit Portfolio on pages 120–130 for additional information on the consumer and wholesale credit portfolios.

Allowance for credit losses and related information

Year ended December 31, (in millions, except ratios)	2023 Consumer, excluding credit card	2023 Credit card	2023 Wholesale	2023 Total	2022 Consumer, excluding credit card	2022 Credit card	2022 Wholesale	2022 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 2,040**	**$ 11,200**	**$ 6,486**	**$ 19,726**	$ 1,765	$ 10,250	$ 4,371	$ 16,386
Cumulative effect of a change in accounting principle[a]	(489)	(100)	2	(587)	NA	NA	NA	NA
Gross charge-offs	**1,151**	**5,491**	**1,011**	**7,653**	812	3,192	322	4,326
Gross recoveries collected	**(519)**	**(793)**	**(132)**	**(1,444)**	(543)	(789)	(141)	(1,473)
Net charge-offs	**632**	**4,698**	**879**	**6,209**	269	2,403	181	2,853
Provision for loan losses	**936**	**6,048**	**2,484**	**9,468**	543	3,353	2,293	6,189
Other	**1**	**–**	**21**	**22**	1	–	3	4
Ending balance at December 31,	**$ 1,856**	**$ 12,450**	**$ 8,114**	**$ 22,420**	$ 2,040	$ 11,200	$ 6,486	$ 19,726
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 76**	**$ –**	**$ 2,306**	**$ 2,382**	$ 113	$ –	$ 2,148	$ 2,261
Provision for lending-related commitments	**(1)**	**–**	**(407)**	**(408)**	(37)	–	157	120
Other	**–**	**–**	**–**	**–**	–	–	1	1
Ending balance at December 31,	**$ 75**	**$ –**	**$ 1,899**	**$ 1,974**	$ 76	$ –	$ 2,306	$ 2,382
Impairment methodology								
Asset-specific[b]	**$ (876)**	**$ –**	**$ 392**	**$ (484)**	$ (624)	$ 223	$ 467	$ 66
Portfolio-based	**2,732**	**12,450**	**7,722**	**22,904**	2,664	10,977	6,019	19,660
Total allowance for loan losses	**$ 1,856**	**$ 12,450**	**$ 8,114**	**$ 22,420**	$ 2,040	$ 11,200	$ 6,486	$ 19,726
Impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 89**	**$ 89**	$ –	$ –	$ 90	$ 90
Portfolio-based	**75**	**–**	**1,810**	**1,885**	76	–	2,216	2,292
Total allowance for lending-related commitments	**$ 75**	**$ –**	**$ 1,899**	**$ 1,974**	$ 76	$ –	$ 2,306	$ 2,382
Total allowance for investment securities	**NA**	**NA**	**NA**	**$ 128**	NA	NA	NA	$ 96
Total allowance for credit losses[c][d]	**$ 1,931**	**$ 12,450**	**$ 10,013**	**$ 24,522**	$ 2,116	$ 11,200	$ 8,792	$ 22,204
Memo:								
Retained loans, end of period	**$ 397,275**	**$ 211,123**	**$ 672,472**	**$ 1,280,870**	$ 300,753	$ 185,175	$ 603,670	$ 1,089,598
Retained loans, average	**364,061**	**191,412**	**646,875**	**1,202,348**	299,409	163,335	582,021	1,044,765
Credit ratios								
Allowance for loan losses to retained loans	**0.47 %**	**5.90 %**	**1.21 %**	**1.75 %**	0.68 %	6.05 %	1.07 %	1.81 %
Allowance for loan losses to retained nonaccrual loans[e]	**51**	**NA**	**346**	**374**	53	NM	330	338
Allowance for loan losses to retained nonaccrual loans excluding credit card	**51**	**NA**	**346**	**166**	53	NM	330	146
Net charge-off rates	**0.17**	**2.45**	**0.14**	**0.52**	0.09	1.47	0.03	0.27

(a) Represents the impact to the allowance for loan losses upon the adoption of changes to the TDR accounting guidance on January 1, 2023. 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 for all periods presented. Prior periods also include non collateral-dependent TDRs or reasonably expected TDRs and modified PCD loans.
(c) At December 31, 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 $243 million and $21 million, respectively, associated with certain accounts receivable in CIB.
(d) As of December 31, 2023, included the allowance for credit losses associated with First Republic.
(e) 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)	2023 Allowance for loan losses	2023 Percent of retained loans to total retained loans	2022 Allowance for loan losses	2022 Percent of retained loans to total retained loans
Residential real estate	**$ 817**	**25 %**	$ 1,070	22 %
Auto and other	**1,039**	**6**	970	6
Consumer, excluding credit card	**1,856**	**31**	2,040	28
Credit card	**12,450**	**16**	11,200	17
Total consumer	**14,306**	**47**	13,240	45
Secured by real estate	**2,997**	**13**	1,782	12
Commercial and industrial	**3,519**	**13**	3,507	15
Other	**1,598**	**27**	1,197	28
Total wholesale	**8,114**	**53**	6,486	55
Total[(a)]	**$ 22,420**	**100 %**	$ 19,726	100 %

(a) As of December 31, 2023, included the allowance for loan losses associated with First Republic.

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, 2023, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was $569.2 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 segment results on pages 84–85 and Note 10 for further information on the investment securities portfolio and internal risk ratings. Refer to Liquidity Risk Management on pages 102–109 for further information on related liquidity risk. Refer to Market Risk Management on pages 135–143 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, including the Firm's environmental and social goals.

The table below presents the aggregate carrying values of the principal investment portfolios as of December 31, 2023 and 2022.

(in billions)		**December 31, 2023**		December 31, 2022
Tax-oriented investments, primarily in alternative energy and affordable housing[(a)]	**$**	**28.8**	$	26.2
Private equity, various debt and equity instruments, and real assets		**10.5**		10.8
Total carrying value	**$**	**39.3**	$	37.0

(a) As of December 31, 2023, included approximately $1.0 billion in tax-oriented investments in CIB associated with First Republic.

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 manage risk, 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, monitoring and controlling 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 154.

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 134 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[(a)]	• Retained loan portfolio • Deposits	• Fair value option elected liabilities DVA[(a)]
CIB	• 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[(a)] • Certain fair value option elected loans • Derivative CVA and associated hedges • Marketable equity investments	• Retained loan portfolio • 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[(a)] • Credit risk component of CVA and associated hedges for counterparties with credit spreads that have widened to elevated levels
CB	• Originates loans and takes deposits	• Interest rate risk and prepayment risk	• Marketable equity investments[(b)]	• Retained loan portfolio • Deposits	
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[(b)] • Trading assets/liabilities - derivatives that hedge the retained loan portfolio[(b)]	• Retained loan portfolio • 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)
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 • Investment securities portfolio and related interest rate hedges • Long-term debt and related interest rate hedges • Deposits	• 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) Reflects structured notes in Risk Management VaR and the DVA on structured notes in other sensitivity-based measures.
(b) The AWM and CB contributions to Firmwide average VaR were not material for the years ended December 31, 2023 and 2022.

Value-at-risk

JPMorgan Chase 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 154 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 JPMorgan Chase'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,	2023			2022		
(in millions)	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type						
Fixed income	**$ 49**	**$ 31**	**$ 71**	$ 59	$ 33	$ 82
Foreign exchange	**12**	**6**	**26**	8	3	15
Equities	**7**	**3**	**11**	12	7	20
Commodities and other	**11**	**6**	**19**	15	10	28
Diversification benefit to CIB trading VaR [(a)]	**(42)**	**NM**	**NM**	(43)	NM	NM
CIB trading VaR	**37**	**24**	**55**	51	34	69
Credit Portfolio VaR[(b)]	**14**	**8**	**26**	16	4	235 [(d)]
Diversification benefit to CIB VaR[(a)]	**(11)**	**NM**	**NM**	(10)	NM	NM
CIB VaR	**40**	**23**	**58**	57	35	240
CCB VaR	**7**	**1**	**15**	6	2	20
Corporate and other LOB VaR[(c)]	**12**	**9**	**17**	12	9	16
Diversification benefit to other VaR[(a)]	**(5)**	**NM**	**NM**	(4)	NM	NM
Other VaR	**14**	**9**	**22**	14	10	24
Diversification benefit to CIB and other VaR[(a)]	**(11)**	**NM**	**NM**	(13)	NM	NM
Total VaR	**$ 43**	**$ 26**	**$ 57**	$ 58	$ 34	$ 242 [(d)]

(a) 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.
(b) Credit Portfolio VaR includes the derivative CVA, hedges of the CVA and hedges of the retained loan portfolio, 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.
(c) Corporate and other LOB VaR includes a legacy private equity position in Corporate which is publicly traded.
(d) In March 2022, the effects of nickel price increases and the associated volatility in the nickel market resulted in elevated maximum Credit Portfolio VaR, as well as maximum Total VaR.

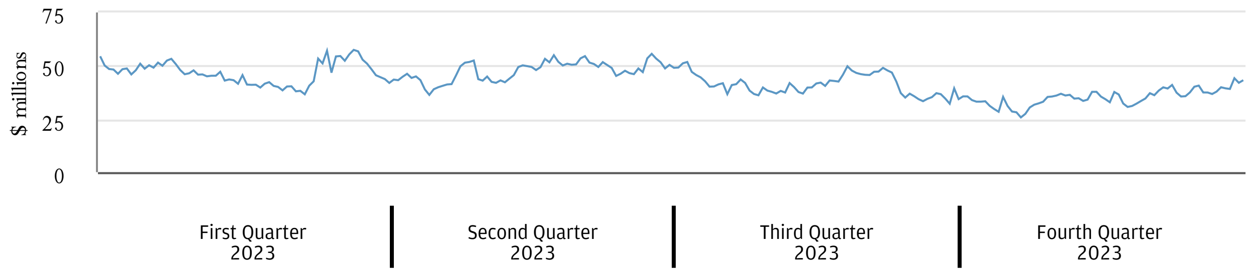
2023 compared with 2022

Average Total VaR decreased by $15 million for the year ended December 31, 2023 when compared with the prior year.

The decrease was driven by reduced market volatility and risk reductions predominantly impacting fixed income, commodities and equities.

The following graph presents daily Risk Management VaR for the four trailing quarters.

Daily Risk Management VaR



VaR backtesting

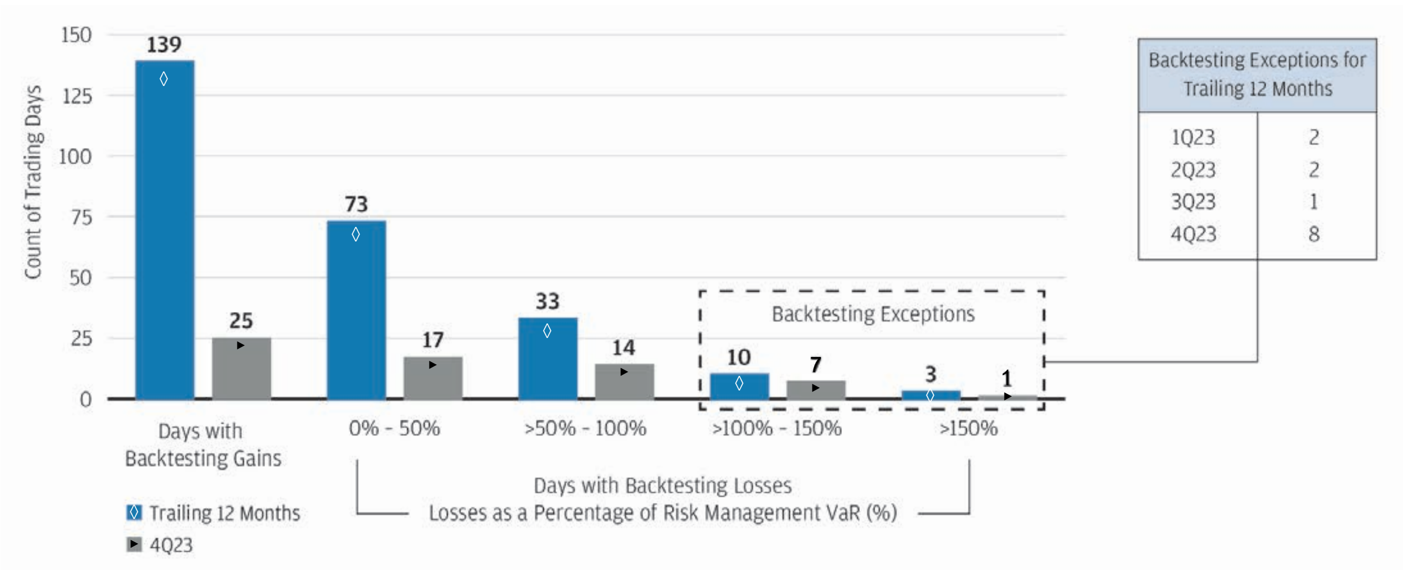
The Firm performs daily VaR model backtesting, which compares the daily Risk Management VaR results with the daily gains and losses that are utilized for VaR backtesting purposes. The gains and losses depicted in the chart below do not reflect the Firm's reported revenue as they exclude certain components 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, 2023, the Firm posted backtesting gains on 139 of the 258 days, and observed 13 VaR backtesting exceptions, of which eight were in the three months ended December 31, 2023. 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, 2023. 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



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 scenarios are governed by the overall stress framework, under the oversight of Market Risk Management, and the models to calculate the stress results are subject to the Firm's Estimations and Model Risk Management Policy. 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.

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 136 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 loans, deposits, deposits with banks, investment securities, long-term debt and any related interest rate hedges, and funds transfer pricing of other positions in risk management VaR and other sensitivity-based measures as described on page 136. These simulations exclude hedges of exposure from non-U.S. dollar foreign exchange risk arising from the Firm's capital investments. The inclusion of the hedges in these simulations would increase U.S. dollar sensitivities and decrease non-U.S. dollar sensitivities. Refer to non-U.S. dollar foreign exchange risk on page 145 for more information.

Earnings-at-risk scenarios estimate the potential change to a net interest income 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 reversal of Quantitative Easing that are highly uncertain and require management judgment. Therefore, the actual amount of deposits held by the Firm at any particular time could be impacted by actions the Federal Reserve may take as part of monetary policy, including through the use of the Reverse Repurchase Facility. In addition, there are other factors that impact the amount of deposits held at the Firm such as the level of loans across the industry 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. As part of the Firm's continuous evaluation and periodic enhancements to its earnings-at-risk calculations, the Firm updated its model in the second quarter of 2023 to incorporate deposit repricing lags impacting both consumer and wholesale deposits. The model change incorporated observed pricing and customer behavior in both rising and falling interest rate environments. 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. While a relevant measure of the Firm's interest rate exposure, the earnings-at-risk analysis does not represent a forecast of the Firm's net interest income (Refer to Outlook on page 52 for additional information).

The Firm's U.S. dollar and non-U.S. dollar sensitivities are presented in the table below.

December 31, (in billions)		**2023**		2022
U.S. dollar: [(a)]				
Parallel shift: [(b)]				
+100 bps shift in rates	$	**2.4**	$	(2.0)
-100 bps shift in rates		**(2.1)**		2.4
+200 bps shift in rates		**4.8**		(4.2)
-200 bps shift in rates		**(4.6)**		3.3
Steeper yield curve:				
+100 bps shift in long-term rates		**0.6**		0.8
-100 bps shift in short-term rates		**(1.5)**		3.2
Flatter yield curve:				
+100 bps shift in short-term rates		**1.8**		(2.8)
-100 bps shift in long-term rates		**(0.5)**		(0.9)
Non-U.S. dollar:				
Parallel shift: [(b)]				
+100 bps shift in rates	$	**0.7**	$	0.7
-100 bps shift in rates		**(0.7)**		(0.6)

(a) Reflects the impact of the aforementioned model update to incorporate deposit repricing lags. Prior periods have not been revised.
(b) Reflects the simultaneous shift of U.S. dollar and non-U.S. dollar rates.

In the absence of the model update to incorporate deposit repricing lags in the second quarter of 2023, the Firm's U.S. dollar sensitivities as of December 31, 2023, would have been lower by $4.1 billion to the +100 basis points shift in short-term and parallel rate scenarios and higher by $3.7 billion to the -100 basis points shift in short-term and parallel rate scenarios.

The change in the Firm's U.S. dollar sensitivities as of December 31, 2023 compared to December 31, 2022 also reflected the impact of changes in the Firm's balance sheet including the impact of the First Republic acquisition.

As of December 31, 2023, the Firm's sensitivity to a parallel shift in rates is primarily the result of a greater impact from assets repricing compared to the impact of liabilities repricing.

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. In accordance with the CTC interest rate risk management policy, the Firm has established limits on EVS as a percentage of TCE. Additional information on long-term debt and held to maturity investment securities is disclosed on page 195 in Note 2 financial instruments that are not carried at fair value on the Consolidated balance sheets.

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 Results on page 66 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 136 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, 2023 and 2022, 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, 2023**	December 31, 2022
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	**$ (61)**	$ (56)
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	**(1,044)**	(1,046)
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	**(12)**	(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	**16**	3
Derivatives – funding spread risk	Impact of changes in the spread related to derivatives FVA[(c)]	1 basis point parallel increase in spread	**(3)**	(4)
CVA - counterparty credit risk[(b)]	Credit risk component of CVA and associated hedges	10% credit spread widening	**—**	(1)
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	**46**	43
Fair value option elected liabilities – interest rate sensitivity	Interest rate sensitivity on fair value option elected liabilities resulting from a change in the Firm's own credit spread[(e)]	1 basis point parallel increase in spread	**—**	—
	Interest rate sensitivity related to risk management of changes in the Firm's own credit spread on the fair value option elected liabilities noted above[(c)]	1 basis point parallel increase in spread	**—**	—

(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 other sensitivity-based measures.
(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, manages 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 Special Administrative Regions ("SAR") and dependent territories, 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, 2023, and their comparative exposures as of December 31, 2022. 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 decrease in exposure to Japan when compared to December 31, 2022, was driven by a reduction in cash placed with the central bank of Japan as a result of liquidity management activities undertaken by the Firm.

The decrease in exposure to Australia when compared to December 31, 2022, was predominantly driven by a reduction in cash placed with the central bank of Australia due to client-driven activities resulting from changes in interest rates.

The Firm continues to monitor its exposure to Russia which was approximately $350 million as of December 31, 2023. This amount excludes certain deposits placed on behalf of clients at the Depository Insurance Agency of Russia.

Top 20 country exposures (excluding the U.S.)[a]

December 31, (in billions)	2023					2022[f]
	Deposits with banks[b]	Lending[c]	Trading and investing[d]	Other[e]	Total exposure	Total exposure
Germany	**$ 69.8**	**$ 12.1**	**$ 2.1**	**$ 0.8**	**$ 84.8**	$ 93.2
United Kingdom	**36.4**	**25.5**	**13.5**	**1.7**	**77.1**	70.1
Japan	**29.4**	**2.4**	**3.9**	**0.3**	**36.0**	55.8
Australia	**9.7**	**6.9**	**1.7**	**—**	**18.3**	25.7
Brazil	**5.2**	**5.3**	**6.2**	**—**	**16.7**	17.8
Canada	**2.3**	**11.4**	**2.0**	**0.3**	**16.0**	14.4
China	**3.5**	**5.5**	**5.0**	**—**	**14.0**	13.7
Switzerland	**5.2**	**3.6**	**1.2**	**0.9**	**10.9**	15.3
France	**0.6**	**10.9**	**(2.2)**	**0.8**	**10.1**	18.1
Singapore	**1.9**	**3.8**	**3.8**	**0.3**	**9.8**	9.9
India	**1.2**	**3.8**	**4.3**	**0.4**	**9.7**	9.0
Mexico	**1.1**	**3.7**	**3.4**	**—**	**8.2**	5.4
Belgium	**5.6**	**2.1**	**0.3**	**—**	**8.0**	9.2
South Korea	**0.8**	**3.2**	**3.5**	**0.3**	**7.8**	10.0
Saudi Arabia	**0.6**	**5.2**	**1.9**	**—**	**7.7**	7.9
Spain	**0.3**	**5.2**	**0.8**	**—**	**6.3**	3.4
Italy	**0.1**	**5.9**	**(0.2)**	**0.2**	**6.0**	5.8
Netherlands	**0.1**	**6.4**	**(1.2)**	**0.3**	**5.6**	7.1
Malaysia	**3.5**	**0.2**	**0.4**	**0.1**	**4.2**	5.3
Luxembourg	**0.9**	**2.2**	**0.9**	**—**	**4.0**	4.2

(a) Country exposures presented in the table reflect 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 both December 31, 2023 and 2022.
(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 clearing house guarantee funds and physical commodities.
(f) The country rankings presented in the table as of December 31, 2022, are based on the country rankings of the corresponding exposures at December 31, 2023, not actual rankings of such exposures at December 31, 2022.

CLIMATE RISK MANAGEMENT

Climate risk is the risk associated with the impacts of climate change on the Firm's 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 refers to economic costs and financial loss associated with 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 refers to the financial and economic implications associated with a societal adjustment to a low-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. The Climate Risk Management function engages across the Firm to help integrate climate risk considerations into existing risk management frameworks, as appropriate.

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 adherence to applicable climate-related laws, rules and regulations.

Governance and oversight

The Firm's approach to managing climate risk is consistent with the Firm's risk governance structure. The LOBs and Corporate are responsible for integrating climate risk management into existing governance frameworks, or creating new governance frameworks, as appropriate.

The LOBs, Corporate and Climate Risk Management are responsible for providing the Board Risk Committee with 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 91-101 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 151, 152, 153 and 154, 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.

War in Ukraine and Sanctions
In response to the war in Ukraine, numerous financial and economic sanctions have been imposed on Russia and Russia-associated entities and individuals by various governments around the world, including the authorities in the U.S., U.K. and EU. These sanctions are complex and continue to evolve. The Firm continues to face increased operational and other risks associated with addressing these complex compliance-related matters. To manage this increased risk, the Firm has implemented controls reasonably designed to mitigate the risk of non-compliance and to prevent dealing with sanctioned persons or in property subject to sanctions, as well as to block or restrict payments as required by the applicable regulations.

Business and technology resiliency risk
Disruptions 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 Firmwide Business Resiliency Program is designed to enable the Firm to prepare for, adapt to, withstand and recover from business disruptions including occurrence of extraordinary events beyond its control that may impact critical business functions and supporting assets including staff, technology, facilities and third parties. The program includes governance, awareness training, planning and testing of recovery strategies, as well as strategic and tactical initiatives to identify, assess, and manage business resiliency risks. The program is required to be managed 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 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. CTOC members have extensive experience and qualifications in various technology and information security disciplines, including relevant experience at the Firm, at other financial services companies or in other highly-regulated industries.

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, any Firm policy, or any law or regulation 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 upon 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 or the internet. The Hotline is anonymous, where permitted by law, and is available at all times globally, with 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 151 for further discussion of the Code.

Governance and oversight

The Firm maintains oversight and coordination of its conduct risk through the CCOR Management Framework.

The Firm has a senior forum that provides oversight of the Firm's conduct initiatives to develop a more holistic view of conduct risks and to connect key programs across the Firm in order to identify opportunities and emerging areas of focus. This forum is responsible for setting overall program direction for strategic enhancements to the Firm's employee conduct framework and reviewing the consolidated Firmwide Conduct Risk Appetite Assessment.

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, 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 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.

The governance of analytical and judgment-based estimations within MRGR's scope follows a consistent approach which is used for models, as described in detail below.

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 155–158 and Note 2 for a summary of model-based valuations and other valuation techniques.

JPMorgan Chase’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 of each portfolio 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. Given the 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 measured based on other facilities underwritten by the Firm with similar risk characteristics and not based on modeled estimates. As such, the First Republic wholesale portfolio is excluded from the modeled estimates sensitivity analysis below. The allowance for credit losses for predominantly all of the consumer portfolio was measured using the Firm’s modeled approach, as the consumer portfolio is predominantly residential real estate that has more commonly defined risk characteristics including loan to value ratio and credit score, and therefore is reflected in the 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 131 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 2.7% in the fourth quarter of 2024; lower U.S. real GDP with a slower recovery, remaining nearly 3.3% lower at the end of the eight-quarter forecast, with a peak difference of approximately 3.9% in the fourth quarter of 2024; and lower HPI with a peak difference of approximately 17.9% in the third 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, 2023, 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, 2023, 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 $3.1 billion for credit card loans
- An increase of approximately $3.9 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, 2023.

Fair value

JPMorgan Chase 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, 2023 (in millions, except ratios)	Total assets at fair value	Total level 3 assets
Federal funds sold and securities purchased under resale agreements	$ 259,813	$ –
Securities borrowed	70,086	–
Trading assets:		
Trading-debt and equity instruments	485,701	2,373
Derivative receivables[(a)]	54,864	8,924
Total trading assets	540,565	11,297
AFS securities	201,704	–
Loans	38,851	3,079
MSRs	8,522	8,522
Other	11,322	758
Total assets measured at fair value on a recurring basis	1,130,863	23,656
Total assets measured at fair value on a nonrecurring basis	3,141	2,490
Total assets measured at fair value	$ 1,134,004	$ 26,146
Total Firm assets	$ 3,875,393	
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 $8.9 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, 2023, 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, 2023. For each of the reporting units, fair value exceeded carrying value by at least 9% 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, 2023.

Credit card rewards liability

JPMorgan Chase 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 $13.2 billion and $11.3 billion at December 31, 2023 and 2022, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets. The increase in the liability was predominantly driven by continued growth in rewards points earned on higher spend and promotional offers outpacing redemptions throughout 2023, and, to a lesser extent, adjustments to certain reward program terms in the second quarter of 2023.

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, 2023, a combined increase of 25 basis points in RR and 1 basis point in CPP would increase the rewards liability by approximately $376 million.

Income taxes

JPMorgan Chase 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, JPMorgan Chase 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.

JPMorgan Chase'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. JPMorgan Chase 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, 2023, 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 JPMorgan Chase'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, 2021

Standard	Summary of guidance	Effects on financial statements
Reference Rate Reform *Issued March 2020 and updated January 2021 and December 2022*	• Provides optional expedients and exceptions to current accounting guidance when financial instruments, hedge accounting relationships, and other transactions are amended due to reference rate reform.	• Issued and effective March 12, 2020. The January 7, 2021 and December 21, 2022 updates were effective when issued.

FASB Standards Adopted since January 1, 2023

Standard	Summary of guidance	Effects on financial statements
Derivatives and Hedging: Fair Value Hedging – Portfolio Layer Method *Issued March 2022*	• Expands the ability to hedge a portfolio of fixed-rate assets to allow more types of assets to be included in the portfolio, and to allow more of the portfolio to be hedged. • Clarifies the types of derivatives that can be used as hedges, and the balance sheet presentation and disclosure requirements for the hedge accounting adjustments. • Allows a one-time reclassification from HTM to AFS upon adoption.	• Adopted prospectively on January 1, 2023. • Refer to Note 1 for further information.
Financial Instruments – Credit Losses: Troubled Debt Restructurings and Vintage Disclosures *Issued March 2022*	• Eliminates existing accounting and disclosure requirements for Troubled Debt Restructurings, including the requirement to measure the allowance using a discounted cash flow methodology. • Requires disclosure of loan modifications for borrowers experiencing financial difficulty involving principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications. • Requires disclosure of current period loan charge-off information by origination year. • May be adopted prospectively, or by using 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, 2023. • Refer to Note 1 for further information.

FASB Standards Issued but not yet Adopted as of December 31, 2023

Standard	Summary of guidance	Effects on 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 for more types of tax-oriented investments (beyond low income housing tax credit investments) on a program-by-program basis. • 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, which resulted in a decrease to retained earnings of approximately $200 million.
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.	• Required effective date: Annual financial statements for the year ending December 31, 2024 and interim financial statements for the year ending December 31, 2025.[(a)] • The Firm is currently assessing the potential impact on its segment disclosures.
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.[(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 JPMorgan Chase’s current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase’s disclosures in this 2023 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. JPMorgan Chase’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 JPMorgan Chase’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 and diverse 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 JPMorgan Chase’s 2023 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 JPMorgan Chase 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.