

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

Quarterly report pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934

For the quarterly period ended
March 31, 2023

Commission file
number 1-5805

JPMorgan Chase & Co.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

383 Madison Avenue,
New York, New York
(Address of principal executive offices)

13-2624428
(I.R.S. employer
identification no.)

10179
(Zip Code)

Registrant's telephone number, including area code: (212) 270-6000
Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common stock	JPM	The New York Stock Exchange
Depository Shares, each representing a one-four hundredth interest in a share of 5.75% Non-Cumulative Preferred Stock, Series DD	JPM PR D	The New York Stock Exchange
Depository Shares, each representing a one-four hundredth interest in a share of 6.00% Non-Cumulative Preferred Stock, Series EE	JPM PR C	The New York Stock Exchange
Depository Shares, each representing a one-four hundredth interest in a share of 4.75% Non-Cumulative Preferred Stock, Series GG	JPM PR J	The New York Stock Exchange
Depository Shares, each representing a one-four hundredth interest in a share of 4.55% Non-Cumulative Preferred Stock, Series JJ	JPM PR K	The New York Stock Exchange
Depository Shares, each representing a one-four hundredth interest in a share of 4.625% Non-Cumulative Preferred Stock, Series LL	JPM PR L	The New York Stock Exchange
Depository Shares, each representing a one-four hundredth interest in a share of 4.20% Non-Cumulative Preferred Stock, Series MM	JPM PR M	The New York Stock Exchange
Alerian MLP Index ETNs due May 24, 2024	AMJ	NYSE Arca, Inc.
Guarantee of Callable Fixed Rate Notes due June 10, 2032 of JPMorgan Chase Financial Company LLC JPM/32		The New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

Number of shares of common stock outstanding as of March 31, 2023: 2,922,288,509

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JPMorgan Chase & Co.
Consolidated financial highlights (unaudited)

As of or for the period ended, (in millions, except per share, ratio, headcount data and where otherwise noted)	1Q23	4Q22	3Q22	2Q22	1Q22
Selected income statement data					
Total net revenue	\$ 38,349	\$ 34,547	\$ 32,716	\$ 30,715	\$ 30,717
Total noninterest expense	20,107	19,022	19,178	18,749	19,191
Pre-provision profit^(a)	18,242	15,525	13,538	11,966	11,526
Provision for credit losses	2,275	2,288	1,537	1,101	1,463
Income before income tax expense	15,967	13,237	12,001	10,865	10,063
Income tax expense	3,345	2,229	2,264	2,216	1,781
Net income	\$ 12,622	\$ 11,008	\$ 9,737	\$ 8,649	\$ 8,282
Earnings per share data					
Net income: Basic	\$ 4.11	\$ 3.58	\$ 3.13	\$ 2.77	\$ 2.64
Diluted	4.10	3.57	3.12	2.76	2.63
Average shares: Basic	2,968.5	2,962.9	2,961.2	2,962.2	2,977.0
Diluted	2,972.7	2,967.1	2,965.4	2,966.3	2,981.0
Market and per common share data					
Market capitalization	380,803	393,484	306,520	330,237	400,379
Common shares at period-end	2,922.3	2,934.3	2,933.2	2,932.6	2,937.1
Book value per share	94.34	90.29	87.00	86.38	86.16
Tangible book value per share ("TBVPS") ^(a)	76.69	73.12	69.90	69.53	69.58
Cash dividends declared per share	1.00	1.00	1.00	1.00	1.00
Selected ratios and metrics					
Return on common equity ("ROE") ^(b)	18 %	16 %	15 %	13 %	13 %
Return on tangible common equity ("ROTCE") ^{(a)(b)}	23	20	18	17	16
Return on assets ^(b)	1.38	1.16	1.01	0.89	0.86
Overhead ratio	52	55	59	61	62
Loans-to-deposits ratio	47	49	46	45	42
Firm Liquidity coverage ratio ("LCR") (average)	114	112	113	110	110
JPMorgan Chase Bank, N.A. LCR (average)	140	151	165	169	181
Common equity Tier 1 ("CET1") capital ratio ^(c)	13.8	13.2	12.5	12.2	11.9
Tier 1 capital ratio ^(c)	15.4	14.9	14.1	14.1	13.7
Total capital ratio ^(c)	17.4	16.8	16.0	15.7	15.4
Tier 1 leverage ratio ^(c)	6.9	6.6	6.2	6.2	6.2
Supplementary leverage ratio ("SLR") ^(c)	5.9	5.6	5.3	5.3	5.2
Selected balance sheet data (period-end)					
Trading assets	\$ 578,892	\$ 453,799	\$ 506,487	\$ 465,577	\$ 511,528
Investment securities, net of allowance for credit losses	610,075	631,162	618,246	663,718	679,460
Loans	1,128,896	1,135,647	1,112,633	1,104,155	1,073,285
Total assets	3,744,305	3,665,743	3,773,884	3,841,314	3,954,687
Deposits	2,377,253	2,340,179	2,408,615	2,471,544	2,561,207
Long-term debt	295,489	295,865	287,473	288,212	293,239
Common stockholders' equity	275,678	264,928	255,180	253,305	253,061
Total stockholders' equity	303,082	292,332	288,018	286,143	285,899
Headcount	296,877	293,723	288,474	278,494	273,948
Credit quality metrics					
Allowances for credit losses	\$ 22,774	\$ 22,204	\$ 20,797	\$ 20,019	\$ 19,591
Allowance for loan losses to total retained loans	1.85 %	1.81 %	1.70 %	1.69 %	1.69 %
Nonperforming assets	\$ 7,418	\$ 7,247	\$ 7,243	\$ 7,845	\$ 8,605
Net charge-offs	1,137	887	727	657	582
Net charge-off rate	0.43 %	0.33 %	0.27 %	0.25 %	0.24 %

(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 16-17 for a further discussion of these measures.

(b) Quarterly ratios are based upon annualized amounts.

(c) The ratios reflect the Current Expected Credit Losses ("CECL") capital transition provisions. Refer to Capital Risk Management on pages 36-41 of this Form 10-Q and pages 86-96 of JPMorgan Chase's 2022 Form 10-K for additional information.

INTRODUCTION

The following is Management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") for the first quarter of 2023.

This Quarterly Report on Form 10-Q for the first quarter of 2023 ("Form 10-Q") should be read together with JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2022 ("2022 Form 10-K"). Refer to the Glossary of terms and acronyms and line of business metrics on pages 168-176 for definitions of terms and acronyms used throughout this Form 10-Q.

This Form 10-Q 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-Q and are subject to significant risks and uncertainties. Refer to Forward-looking Statements on page 78 of this Form 10-Q; Part I, Item 1A, Risk Factors on pages 9-32 of the 2022 Form 10-K; and Part II, Item 1A, Risk Factors on page 177 of this Form 10-Q 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.

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 \$3.7 trillion in assets and \$303.1 billion in stockholders' equity as of March 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 segment is Consumer & Community Banking ("CCB"). The Firm's wholesale business segments are the Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset & Wealth Management ("AWM"). Refer to Business Segment Results on pages 18-34 and Note 25 of this Form 10-Q, and Note 32 of JPMorgan Chase's 2022 Form 10-K, 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 the substantial majority of assets and assumed the deposits and certain other liabilities of First Republic Bank from the Federal Deposit Insurance Corporation ("the Acquisition"). The financial information and other disclosures contained in this Form 10-Q do not give effect to the Acquisition.

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 is not incorporated by reference into this Form 10-Q or the Firm's other filings with the SEC.

EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and does not contain all of the information that is important to readers of this Form 10-Q. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm, this Form 10-Q and the 2022 Form 10-K should be read together and in their entirety.

Financial performance of JPMorgan Chase

(unaudited) As of or for the period ended, (in millions, except per share data and ratios)		Three months ended March 31,		
	2023	2022	Change	
Selected income statement data				
Noninterest revenue	\$ 17,638	\$ 16,845	5%	
Net interest income	20,711	13,872	49	
Total net revenue	38,349	30,717	25	
Total noninterest expense	20,107	19,191	5	
Pre-provision profit	18,242	11,526	58	
Provision for credit losses	2,275	1,463	56	
Net income	12,622	8,282	52	
Diluted earnings per share	4.10	2.63	56	
Selected ratios and metrics				
Return on common equity	18%	13%		
Return on tangible common equity	23	16		
Book value per share	\$ 94.34	\$ 86.16	9	
Tangible book value per share	76.69	69.58	10	
Capital ratios^(a)				
CET1 capital	13.8%	11.9%		
Tier 1 capital	15.4	13.7		
Total capital	17.4	15.4		
Memo:				
NII excluding Markets ^(b)	\$ 20,936	\$ 11,752	78	
NIR excluding Markets ^(b)	10,018	11,085	(10)	
Markets ^(b)	8,382	8,753	(4)	
Total net revenue - managed basis	\$ 39,336	\$ 31,590	25	

(a) The ratios reflect the CECL capital transition provisions. Refer to Capital Risk Management on pages 36-41 of this Form 10-Q and pages 86-96 of JPMorgan Chase's 2022 Form 10-K for additional information.

(b) 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 first quarter of 2023 versus the first quarter of 2022, unless otherwise specified.

Firmwide overview

For the first quarter of 2023, JPMorgan Chase reported net income of \$12.6 billion, up 52%, earnings per share of \$4.10, ROE of 18% and ROTCE of 23%.

- **Total net revenue** was \$38.3 billion, up 25%, reflecting:
 - Net interest income of \$20.7 billion, up 49%, driven by higher rates, partially offset by lower Markets net interest income and lower average deposit balances. Net interest income excluding Markets was \$20.9 billion, up 78%.
 - Noninterest revenue was \$17.6 billion, up 5%, driven by higher principal transactions revenue in Markets, predominantly offset by higher net investment

securities losses in Treasury and CIO, lower Investment Banking fees, lower auto operating lease income and lower production revenue in Home Lending.

- Total Markets revenue declined reflecting lower Markets NII, predominantly offset by higher NIR.
- **Noninterest expense** was \$20.1 billion, up 5%, driven by higher structural expense and continued investments in the business, primarily compensation expense reflecting headcount growth and wage inflation, as well as the impact of the increase in the Federal Deposit Insurance Corporation ("FDIC") assessment that was announced in 2022, partially offset by lower auto lease depreciation.
- The **provision for credit losses** was \$2.3 billion, reflecting a net addition of \$1.1 billion to the allowance for credit losses and \$1.1 billion of net charge-offs. The net addition to the allowance for credit losses was predominantly driven by a deterioration in the Firm's weighted-average economic outlook, including the impact from changes to the Firm's macroeconomic scenarios and increased probability of a moderate recession due to tightening financial conditions, and consisted of:
 - \$726 million in wholesale, which also reflected net downgrade activity, and \$416 million in consumer.
- Net charge-offs were up \$555 million predominantly driven by CCB, reflecting continued normalization in delinquencies.
- The prior year included a \$902 million net addition to the allowance for credit losses and net charge-offs of \$582 million.
- The total **allowance for credit losses** was \$22.8 billion at March 31, 2023. The Firm had an allowance for loan losses to retained loans coverage ratio of 1.85%, compared with 1.69% in the prior year.
- The Firm's **nonperforming assets** totaled \$7.4 billion at March 31, 2023, a net decrease of \$1.2 billion, predominantly driven by lower consumer nonaccrual loans, reflecting paydowns and loan sales, and lower nonperforming derivative receivables.
- Firmwide **average loans** of \$1.1 trillion were up 6%, driven by higher loans in CB, CCB and CIB, partially offset by lower loans in AWM.
- Firmwide **average deposits** of \$2.3 trillion were down 8%, predominantly driven by:
 - declines in CIB and CB due to attrition and in AWM due to migration into higher-yielding investments as a result of the rising interest rate environment, partially offset by net issuances of structured notes in CIB,
 - a decline in CCB from existing accounts primarily due to migration to higher-yielding investments and increased customer spending, and

– an increase in Corporate related to the Firm's ongoing international consumer initiatives.

Period-end deposits were up reflecting inflows in March 2023 as a result of disruptions in the market related to recent bank failures.

Selected capital and other metrics

- **CET1 capital** was \$227 billion, and the Standardized and Advanced CET1 ratios were 13.8% and 13.9%, respectively.
- **SLR** was 5.9%.
- **TBVPS** grew 10%, ending the first quarter of 2023 at \$76.69.
- As of March 31, 2023, the Firm had average eligible **High Quality Liquid Assets** ("HQLA") of approximately \$732 billion and **unencumbered marketable securities** with a fair value of approximately \$700 billion, resulting in approximately \$1.4 trillion of liquidity sources. Refer to Liquidity Risk Management on pages 42-47 for additional information.

Refer to Consolidated Results of Operations and Consolidated Balance Sheets Analysis on pages 10-12 and pages 13-14, respectively, for a further discussion of the Firm's results.

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 16-17 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 first quarter of 2023.

CCB ROE 40%	<ul style="list-style-type: none"> Average deposits down 4%; client investment assets down 1% Average loans up 5% year-over-year ("YoY") and flat quarter-over-quarter ("QoQ"); Card Services net charge-off rate of 2.07% Debit and credit card sales volume^(a) up 10% Active mobile customers^(b) up 9%
CIB ROE 16%	<ul style="list-style-type: none"> #1 ranking for Global Investment Banking fees with 8.7% Total Markets revenue of \$8.4 billion, down 4%, with Fixed Income Markets flat and Equity Markets down 12%
CB ROE 18%	<ul style="list-style-type: none"> Gross Investment Banking revenue of \$881 million, up 21% Average loans up 13% YoY and 1% QoQ; average deposits down 16%
AWM ROE 34%	<ul style="list-style-type: none"> Assets under management ("AUM") of \$3.0 trillion, up 2% Average loans down 1% YoY and QoQ; average deposits down 22%

(a) Excludes Commercial Card.

(b) Users of all mobile platforms who have logged in within the past 90 days.

Refer to the Business Segment Results on pages 18-34 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 the first three months of 2023, consisting of:

\$588 billion	Total credit provided and capital raised (including loans and commitments)
\$57 billion	Credit for consumers
\$9 billion	Credit for U.S. small businesses
\$232 billion	Credit for corporations
\$280 billion	Capital raised for corporate clients and non-U.S. government entities
\$10 billion	Credit and capital raised for nonprofit and U.S. government entities ^(a)

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

Recent events

- On May 1, 2023, the Firm acquired the substantial majority of assets and assumed the deposits and certain other liabilities of First Republic Bank from the FDIC (the "Acquisition"). The Firm believes that the Acquisition will be accretive to earnings, will help to further advance the Firm's wealth management strategy, and is expected to be complementary to the Firm's existing franchises.

The FDIC will provide loss sharing agreements with respect to the following loans acquired in the Acquisition: 80% of losses on single-family residential mortgage loans will be covered for seven years, and 80% of losses on commercial loans will be covered for five years.

The Firm is estimating the impact that the Acquisition will have on its financial statements, and expects to record an estimated \$2.6 billion post-tax bargain purchase gain in connection with the Acquisition. The Firm also expects to recognize restructuring costs of approximately \$2.0 billion over the course of 2023 and 2024. The Firm expects that these estimates will be further refined over the purchase accounting measurement period.

The Firm will repay the \$25 billion of deposits placed by large U.S. banks with First Republic Bank on March 16, 2023. The Firm will eliminate its \$5 billion deposit in consolidation and release the associated allowance for credit losses.

The financial information and other disclosures contained in this Form 10-Q do not give effect to the Acquisition. Refer to Note 26 for additional information concerning the Acquisition.

- On March 24, 2023, JPMorgan Chase obtained final approval from China's State Administration for Market Regulation to complete its acquisition of China International Fund Management Co., Ltd. ("CIFM").
- On March 22, 2023, JPMorgan Chase announced that it had entered into a definitive agreement to acquire Aumni, a provider of investment analytics software.

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-Q, and are subject to significant risks and uncertainties. Refer to Forward-Looking Statements on page 78, and page 154 and Risk Factors on pages 9-32 of the Firm's 2022 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 2023 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 2023 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.

The Firm expects to be subject to a special assessment by the FDIC as a result of the estimated losses incurred by the Deposit Insurance Fund from recent bank failures. The FDIC has expressed its intent to issue a notice of proposed rulemaking related to the special assessment in May 2023.

The full-year 2023 outlook does not include the effects of the First Republic Bank acquisition.

Full-year 2023

- Management expects both net interest income and net interest income excluding Markets to be approximately \$81 billion, market dependent.
- Management expects adjusted expense to be approximately \$81 billion, market dependent and excluding any FDIC special assessment.
- Management expects the net charge-off rate in Card Services to be approximately 2.6%.

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 16-17.

Business Developments

Current market and economic conditions

Refer to Part I, Item 1A, Risk Factors on pages 9-32 of JPMorgan Chase's 2022 Form 10-K and Part II, Item 1A, Risk Factors on page 177 of this Form 10-Q for a discussion of material risk factors that could affect the Firm. These risk factors include potential impacts to the Firm associated with current market and economic conditions, including inflationary pressures, rapidly rising interest rates, the failure of market participants and geopolitical tensions (including secondary effects of the war in Ukraine), any or all of which could result in additional market disruption, government actions (including with respect to monetary policies), ongoing impacts to global supply chains, and other geopolitical risks.

Interbank Offered Rate ("IBOR") transition

The Firm and other market participants are preparing for the final stages of the transition from the use of the London Interbank Offered Rate ("LIBOR") and other IBORs in accordance with the International Organization of Securities Commission's standards for transaction-based benchmark rates. The cessation of 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) ("LIBOR Cessation") is scheduled for June 30, 2023. On April 3, 2023, the U.K. Financial Conduct Authority announced that 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.

On March 1, 2023, the Firm announced that, after June 30, 2023, CME Term SOFR will be the replacement reference rate for certain outstanding floating rate and fixed-to-floating rate debt securities, preferred stock and certificates of deposit issued by JPMorgan Chase and certain of its subsidiaries that use U.S. dollar LIBOR as the reference rate and that are governed by New York or Delaware law. The Firm is prepared to participate in initiatives by the principal central counterparties ("CCPs") to convert cleared derivatives contracts linked to U.S. dollar LIBOR in the second quarter of 2023. The Firm continues its client outreach with respect to U.S. dollar LIBOR-linked products and continues to monitor and evaluate client, industry, market, regulatory and legislative developments. Refer to Business Developments on page 50 of JPMorgan Chase's 2022 Form 10-K for additional information.

CONSOLIDATED RESULTS OF OPERATIONS

This section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three months ended March 31, 2023 and 2022, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment's results. Refer to pages 74-76 of this Form 10-Q and pages 149-152 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations.

Revenue

(in millions)	Three months ended March 31,		
	2023	2022	Change
Investment banking fees	\$ 1,649	\$ 2,008	(18)%
Principal transactions	7,615	5,105	49
Lending- and deposit-related fees	1,620	1,839	(12)
Asset management fees	3,465	3,652	(5)
Commissions and other fees	1,695	1,710	(1)
Investment securities losses	(868)	(394)	(120)
Mortgage fees and related income	221	460	(52)
Card income	1,234	975	27
Other income ^(a)	1,007	1,490	(32)
Noninterest revenue	17,638	16,845	5
Net interest income	20,711	13,872	49
Total net revenue	\$ 38,349	\$ 30,717	25 %

(a) Included operating lease income of \$755 million and \$1.0 billion for the three months ended March 31, 2023 and 2022, respectively. Also includes losses on tax-oriented investments. Refer to Note 5 for additional information.

Quarterly results

Investment banking fees decreased in CIB, reflecting lower debt underwriting fees as challenging market conditions resulted in lower issuance activity. Refer to CIB segment results on pages 23-27 and Note 5 for additional information.

Principal transactions revenue increased, reflecting:

- higher net revenue in Fixed Income Markets, driven by Rates benefiting from favorable market conditions early in the quarter and elevated volatility in March 2023, as well as in Securitized Products and Fixed Income Financing, partially offset by lower revenue in Currencies & Emerging Markets compared to a strong prior year,
- in Equity Markets, higher revenue in principal transactions, particularly in Prime Finance and Equity Derivatives, which was more than offset by losses in net interest income,
- a loss of \$153 million in Credit Adjustments & Other in CIB, compared with a loss of \$524 million in the prior year, and
- net gains on certain legacy private equity investments in Corporate, compared with net losses in the prior year.

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

Refer to CIB and Corporate segment results on pages 23-27 and pages 33-34, respectively, and Note 5 for additional information.

Lending- and deposit-related fees decreased due to lower cash management fees in CB and CIB associated with the higher level of credits earned by clients that reduce such fees. Refer to CIB and CB segment results on pages 23-27, pages 28-29 and Note 5 for additional information.

Asset management fees decreased driven by lower average market levels and lower performance fees, partially offset by the removal of most money market fund fee waivers in AWM, and to a lesser extent, the impact of lower market levels in CCB. Refer to AWM segment results on pages 30-32 and Note 5 for additional information.

Commissions and other fees: refer to CIB and AWM segment results on pages 23-27 and pages 30-32 and Note 5 for additional information.

Investment securities losses reflected higher net losses on sales of U.S. GSE and government agency MBS and U.S. Treasuries, associated with repositioning the investment securities portfolio in Treasury and CIO. Refer to Corporate segment results on pages 33-34 and Note 9 for additional information.

Mortgage fees and related income decreased driven by Home Lending, reflecting lower production revenue from a decline in volume, and lower net mortgage servicing revenue due to a net loss compared with a net gain in the prior year in MSR risk management. Refer to CCB segment results on pages 20-22 and Notes 5 and 14 for additional information.

Card income increased driven by:

- higher net interchange income largely due to a reduction in rewards costs and partner payments related to a periodic tax refund on airline miles redeemed, and higher annual fees, partially offset by higher amortization related to new account origination costs in CCB, and
- higher payments-related revenue on volume growth in Commercial Card in CIB.

Refer to CCB and CIB segment results on pages 20-22 and pages 23-27 and Note 5 for additional information.

Other income decreased reflecting:

- the absence of a gain on an equity investment in the prior year in CIB,
- lower auto operating lease income in CCB from a decline in volume, and
- the absence of proceeds from an insurance settlement in the prior year, partially offset by
- a gain of \$339 million in AWM on the original minority interest in CIFM upon the Firm's acquisition of the remaining 51% interest in the entity.

Net interest income increased driven by higher rates, partially offset by lower Markets net interest income and lower average deposit balances.

The Firm's average interest-earning assets were \$3.2 trillion, down \$185 billion, and the yield was 4.68%, up 282 basis points ("bps"). The net yield on these assets, on an FTE basis, was 2.63%, an increase of 96 bps. The net yield excluding Markets was 3.80%, up 185 bps.

Refer to the Consolidated average balance sheets, interest and rates schedule on page 167 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 16-17 for a further discussion of Net yield excluding Markets.

Provision for credit losses

(in millions)	Three months ended March 31,		
	2023	2022	Change
Consumer, excluding credit card	\$ 248	\$ 173	43 %
Credit card	1,222	506	142
Total consumer	1,470	679	116
Wholesale	804	785	2
Investment securities	1	(1)	NM
Total provision for credit losses	\$ 2,275	\$ 1,463	56 %

Quarterly results

The **provision for credit losses** was \$2.3 billion, reflecting a net addition of \$1.1 billion to the allowance for credit losses and \$1.1 billion of net charge-offs.

The net addition to the allowance for credit losses was predominantly driven by a deterioration in the Firm's weighted-average economic outlook, including the impact from changes to the Firm's macroeconomic scenarios and increased probability of a moderate recession due to tightening financial conditions, and consisted of:

- \$726 million in **wholesale**, which also reflected net downgrade activity, and an addition to the allowance for credit losses associated with Other assets in Corporate, and
- \$416 million in **consumer**.

Net charge-offs increased \$555 million, predominantly driven by CCB, reflecting continued normalization in delinquencies.

The prior year included a \$902 million net addition to the allowance for credit losses and net charge-offs of \$582 million.

Refer to CCB segment results on pages 20-22, CIB on pages 23-27, CB on pages 28-29, AWM on pages 30-32, Allowance for Credit Losses on pages 63-65, and Notes 9 and 12 for additional information on the credit portfolio and the allowance for credit losses.

Noninterest expense

(in millions)	Three months ended March 31,		
	2023	2022	Change
Compensation expense	\$ 11,676	\$ 10,787	8 %
Noncompensation expense:			
Occupancy	1,115	1,134	(2)
Technology, communications and equipment ^(a)	2,184	2,360	(7)
Professional and outside services	2,448	2,572	(5)
Marketing	1,045	920	14
Other expense ^(b)	1,639	1,418	16
Total noncompensation expense	8,431	8,404	—
Total noninterest expense	\$ 20,107	\$ 19,191	5 %

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

(b) Included Firmwide legal expense of \$176 million and \$119 million for the three months ended March 31, 2023 and 2022, respectively.

Quarterly results

Compensation expense increased driven by additional headcount, primarily in technology and operations, as well as front office, and the impact of wage inflation, partially offset by lower revenue-related compensation in CIB.

Noncompensation expense was flat and primarily included:

- higher investments in the business, including marketing and technology, and
- higher structural expense, including the impact of the increase in the FDIC assessment that was announced in 2022,

offset by

- lower volume-related expense, reflecting lower depreciation expense on lower Auto lease assets.

Income tax expense

(in millions)	Three months ended March 31,		
	2023	2022	Change
Income before income tax expense	\$ 15,967	\$ 10,063	59 %
Income tax expense	3,345	1,781	88
Effective tax rate	20.9 %	17.7 %	

Quarterly results

The **effective tax rate** increased driven by a higher level of pre-tax income that decreased the relative net impact of certain tax benefits and expenses, and the mix of income and expenses subject to U.S. federal and state and local taxes, as well as lower benefits related to the vesting of employee share based awards in the current period.

CONSOLIDATED BALANCE SHEETS AND CASH FLOWS ANALYSIS

Consolidated balance sheets analysis

The following is a discussion of the significant changes between March 31, 2023, and December 31, 2022.

Selected Consolidated balance sheets data

(in millions)	March 31, 2023	December 31, 2022	Change
Assets			
Cash and due from banks	\$ 25,098	\$ 27,697	(9) %
Deposits with banks	520,902	539,537	(3)
Federal funds sold and securities purchased under resale agreements	317,111	315,592	—
Securities borrowed	195,917	185,369	6
Trading assets	578,892	453,799	28
Available-for-sale securities	197,248	205,857	(4)
Held-to-maturity securities	412,827	425,305	(3)
Investment securities, net of allowance for credit losses	610,075	631,162	(3)
Loans	1,128,896	1,135,647	(1)
Allowance for loan losses	(20,053)	(19,726)	(2)
Loans, net of allowance for loan losses	1,108,843	1,115,921	(1)
Accrued interest and accounts receivable	115,316	125,189	(8)
Premises and equipment	28,266	27,734	2
Goodwill, MSRs and other intangible assets	62,090	60,859	2
Other assets	181,795	182,884	(1)
Total assets	\$ 3,744,305	\$ 3,665,743	2 %

Cash and due from banks and deposits with banks decreased primarily as a result of Markets activities, partially offset by the impact of higher deposits. Deposits with banks reflect the Firm's placement of its excess cash with various central banks, including the Federal Reserve Banks.

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

Refer to Note 10 for information on **securities purchased under resale agreements** and securities borrowed.

Trading assets increased due to higher levels of debt and equity instruments in Markets, reflecting strong client-driven market-making activities, including in the U.S. Treasury market, and when compared with the seasonally lower levels at year-end. Refer to Notes 2 and 4 for additional information.

Investment securities decreased primarily due to maturities and paydowns of U.S. Treasuries and U.S. GSE and government agency MBS in both available-for-sale ("AFS") and held-to-maturity ("HTM") securities. The decrease in AFS was also due to net sales, partially offset by the transfer of securities from HTM to AFS.

Refer to Corporate segment results on pages 33-34, Investment Portfolio Risk Management on page 66, and Notes 2 and 9 for additional information.

Loans were relatively flat, and included:

- lower wholesale loans in CIB,
 - lower balances in Card Services, reflecting the impact of seasonality, and
 - lower securities-based lending in AWM,
- predominantly offset by
- higher revolver utilization and originations in CB.

The **allowance for loan losses** increased, reflecting a net addition of \$914 million to the allowance for loan losses, predominantly driven by a deterioration in the Firm's weighted-average economic outlook, including the impact from changes to the Firm's macroeconomic scenarios and increased probability of a moderate recession due to tightening financial conditions, consisting of:

- \$499 million in **wholesale**, which also reflected net downgrade activity, and \$415 million in **consumer**.

The allowance for loan losses also reflected a reduction of \$587 million as a result of the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance. References in this Form 10-Q to "changes to the TDR accounting guidance" pertain to the Firm's adoption of this guidance.

Refer to Credit and Investment Risk Management on pages 48-66, and Notes 2, 3, 11 and 12 for additional information on loans and the total allowance for credit losses.

Accrued interest and accounts receivable decreased primarily due to lower receivables in Payments related to the timing of processing payment activities, with December 31, 2022 falling on a weekend.

Premises and equipment: refer to Note 16 for information on leases.

Goodwill, MSRs and other intangibles increased due to higher other intangibles and goodwill as a result of the Firm's acquisition of the remaining 51% interest in CIFM. Refer to Note 14 for additional information.

Selected Consolidated balance sheets data (continued)

(in millions)	March 31, 2023	December 31, 2022	Change
Liabilities			
Deposits	\$ 2,377,253	\$ 2,340,179	2 %
Federal funds purchased and securities loaned or sold under repurchase agreements	246,396	202,613	22
Short-term borrowings	42,241	44,027	(4)
Trading liabilities	189,864	177,976	7
Accounts payable and other liabilities	275,077	300,141	(8)
Beneficial interests issued by consolidated variable interest entities ("VIEs")	14,903	12,610	18
Long-term debt	295,489	295,865	—
Total liabilities	3,441,223	3,373,411	2
Stockholders' equity	303,082	292,332	4
Total liabilities and stockholders' equity	\$ 3,744,305	\$ 3,665,743	2 %

Deposits increased, reflecting inflows in March 2023, primarily in CCB and CB, as a result of disruptions in the market related to recent bank failures, which changed the outflow trend that started in the second half of 2022. AWM also experienced deposit inflows in March which were more than offset by migration to higher-yielding investments by month end. The increase in period-end deposits also reflected:

- net issuances of structured notes in CIB as a result of client demand, and
- an increase in Corporate related to the Firm's ongoing international consumer initiatives.

Federal funds purchased and securities loaned or sold under repurchase agreements increased due to higher secured financing of trading assets and the impact of a lower level of netting on client-driven market-making activities in Markets.

Refer to Liquidity Risk Management on pages 42-47 for additional information on deposits, federal funds purchased and securities loaned or sold under repurchase agreements, and **short-term borrowings**; and also to Notes 2 and 15 for deposits and Note 10 for federal funds purchased and securities loaned or sold under repurchase agreements.

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 as a result of market movements. Refer to Notes 2 and 4 for additional information.

Accounts payable and other liabilities decreased due to lower client payables related to client-driven activities in Markets, as well as lower payables in Payments related to the timing of processing payment activities, with December 31, 2022 falling on a weekend.

Beneficial interests issued by consolidated VIEs increased driven by higher levels of Firm-administered multi-seller conduit commercial paper held by third parties. Refer to Liquidity Risk Management on pages 42-47 and Notes 13 and 22 for additional information, specifically Firm-sponsored VIEs and loan securitization trusts.

Long-term debt: refer to Liquidity Risk Management on pages 42-47 for additional information.

Stockholders' equity: refer to Consolidated statements of changes in stockholders' equity on page 82, Capital Actions on page 40, and Note 19 for additional information.

Consolidated cash flows analysis

The following is a discussion of cash flow activities during the three months ended March 31, 2023 and 2022.

(in millions)	Three months ended March 31,	
	2023	2022
Net cash provided by/(used in)		
Operating activities	\$ (111,241)	\$ (41,917)
Investing activities	23,794	(72,608)
Financing activities	64,557	132,772
Effect of exchange rate changes on cash	1,656	(4,549)
Net increase/(decrease) in cash and due from banks and deposits with banks	\$ (21,234)	\$ 13,698

Operating activities

- In 2023, cash used resulted from higher trading assets and lower accounts payable and other liabilities, partially offset by lower other assets and accrued interest and accounts receivable.
- In 2022, cash used resulted from higher trading assets, and accrued interest and accounts receivable, largely offset by higher accounts payable and other liabilities and trading liabilities.

Investing activities

- In 2023, cash provided primarily reflected net proceeds from investment securities.
- In 2022, cash used resulted from higher securities purchased under resale agreements, net purchases of investment securities, and higher net originations of loans.

Financing activities

- In 2023, cash provided reflected higher securities loaned or sold under repurchase agreements and deposits, partially offset by net payments on long- and short-term borrowings.
- In 2022, cash provided reflected higher deposits and securities loaned or sold under repurchase agreements and net proceeds from long- and short-term borrowings.
- For both periods, cash was used for repurchases of common stock and cash dividends on common and preferred stock.

* * *

Refer to Consolidated Balance Sheets Analysis on pages 13-14, Capital Risk Management on pages 36-41, and Liquidity Risk Management on pages 42-47, and the Consolidated Statements of Cash Flows on page 83 of this Form 10-Q, and pages 97-104 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the activities affecting the Firm's cash flows.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated Financial Statements in accordance with U.S. GAAP and this presentation is referred to as "reported" basis; these financial statements appear on pages 79-83.

In addition to analyzing the Firm's results on a reported basis, the Firm also reviews and uses certain non-GAAP financial measures at the Firmwide and segment level. These non-GAAP measures include:

- Firmwide "managed" basis results, including the overhead ratio, which include certain reclassifications to present total net revenue from investments that receive tax credits and tax-exempt securities on a basis comparable to taxable investments and securities ("FTE" basis);
- Pre-provision profit, which represents total net revenue less total noninterest expense;
- Net interest income, net yield, and noninterest revenue excluding Markets;
- TCE, ROTCE, and TBVPS;
- Adjusted expense, which represents noninterest expense excluding Firmwide legal expense; and
- Allowance for loan losses to period-end loans retained, excluding trade finance and conduits.

Refer to Explanation and Reconciliation of the Firm's Use Of Non-GAAP Financial Measures and Key Performance Measures on pages 58-60 of JPMorgan Chase's 2022 Form 10-K for a further discussion of management's use of non-GAAP financial measures.

The following summary tables provide a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

(in millions, except ratios)	Three months ended March 31,					
	2023			2022		
	Reported	Fully taxable-equivalent adjustments ^(a)	Managed basis	Reported	Fully taxable-equivalent adjustments ^(a)	Managed basis
Other income	\$ 1,007	\$ 867	\$ 1,874	\$ 1,490	\$ 775	\$ 2,265
Total noninterest revenue	17,638	867	18,505	16,845	775	17,620
Net interest income	20,711	120	20,831	13,872	98	13,970
Total net revenue	38,349	987	39,336	30,717	873	31,590
Total noninterest expense	20,107	NA	20,107	19,191	NA	19,191
Pre-provision profit	18,242	987	19,229	11,526	873	12,399
Provision for credit losses	2,275	NA	2,275	1,463	NA	1,463
Income before income tax expense	15,967	987	16,954	10,063	873	10,936
Income tax expense	3,345	987	4,332	1,781	873	2,654
Net income	\$ 12,622	NA	\$ 12,622	\$ 8,282	NA	\$ 8,282
Overhead ratio	52 %	NM	51 %	62 %	NM	61 %

(a) Predominantly recognized in CIB, CB and Corporate.

The following table provides information on net interest income, net yield, and noninterest revenue excluding Markets.

(in millions, except rates)	Three months ended March 31,			Change
	2023	2022		
Net interest income – reported	\$ 20,711	\$ 13,872		49 %
Fully taxable-equivalent adjustments	120	98		22
Net interest income – managed basis^(a)	\$ 20,831	\$ 13,970		49
Less: Markets net interest income ^(b)	(105)	2,218		NM
Net interest income excluding Markets^(a)	\$ 20,936	\$ 11,752		78
Average interest-earning assets	\$ 3,216,757	\$ 3,401,951		(5)
Less: Average Markets interest-earning assets ^(b)	982,572	963,845		2
Average interest-earning assets excluding Markets	\$ 2,234,185	\$ 2,438,106		(8) %
Net yield on average interest-earning assets – managed basis	2.63 %	1.67 %		
Net yield on average Markets interest-earning assets ^(b)	(0.04)	0.93		
Net yield on average interest-earning assets excluding Markets	3.80 %	1.95 %		
Noninterest revenue – reported	\$ 17,638	\$ 16,845		5 %
Fully taxable-equivalent adjustments	867	775		12
Noninterest revenue – managed basis	\$ 18,505	\$ 17,620		5
Less: Markets noninterest revenue ^(b)	8,487	6,535		30
Noninterest revenue excluding Markets	\$ 10,018	\$ 11,085		(10)
Memo: Total Markets net revenue^(b)	\$ 8,382	\$ 8,753		(4)

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

(b) Refer to page 26 for further information on Markets.

The following summary table provides a reconciliation from the Firm's common stockholders' equity to TCE.

(in millions, except per share and ratio data)	Period-end		Average	
	Mar 31,	Dec 31,	Three months ended March 31,	
	2023	2022	2023	2022
Common stockholders' equity	\$ 275,678	\$ 264,928	\$ 271,197	\$ 252,506
Less: Goodwill	52,144	51,662	51,716	50,307
Less: Other intangible assets	2,191	1,224	1,296	896
Add: Certain deferred tax liabilities ^(a)	2,754	2,510	2,549	2,498
Tangible common equity	\$ 224,097	\$ 214,552	\$ 220,734	\$ 203,801
Return on tangible common equity	NA	NA	23 %	16 %
Tangible book value per share	\$ 76.69	\$ 73.12	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 currently 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 16-17 for a definition of managed basis.

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 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.

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 risk 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.

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 pages 67-72 for additional information.

Capital allocation

The amount of capital assigned to each business segment is referred to as equity. 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 39, and page 93 of JPMorgan Chase's 2022 Form 10-K for additional information on capital allocation.

Refer to Business Segment Results – Description of business segment reporting methodology on pages 61-62 and Note 32 of JPMorgan Chase's 2022 Form 10-K for a further discussion of those methodologies.

Segment results – managed basis

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

Three months ended March 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking		
	2023	2022	Change	2023	2022	Change	2023	2022	Change
Total net revenue	\$ 16,456	\$ 12,182 ^(a)	35%	\$ 13,600	\$ 13,576 ^(a)	—%	\$ 3,511	\$ 2,398	46%
Total noninterest expense	8,065	7,655 ^(a)	5	7,483	7,363 ^(a)	2	1,308	1,129	16
Pre-provision profit/(loss)	8,391	4,527	85	6,117	6,213	(2)	2,203	1,269	74
Provision for credit losses	1,402	678	107	58	445	(87)	417	157	166
Net income/(loss)	5,243	2,908 ^(a)	80	4,421	4,372 ^(a)	1	1,347	850	58
Return on equity ("ROE")	40 %	23 %		16 %	16 % ^(a)		18 %	13 %	

Three months ended March 31, (in millions, except ratios)	Asset & Wealth Management			Corporate			Total		
	2023	2022	Change	2023	2022	Change	2023	2022	Change
Total net revenue	\$ 4,784	\$ 4,315	11%	\$ 985	\$ (881)	NM	\$ 39,336	\$ 31,590	25%
Total noninterest expense	3,091	2,860	8	160	184	(13)	20,107	19,191	5
Pre-provision profit/(loss)	1,693	1,455	16	825	(1,065)	NM	19,229	12,399	55
Provision for credit losses	28	154	(82)	370	29	NM	2,275	1,463	56
Net income/(loss)	1,367	1,008	36	244	(856)	NM	12,622	8,282	52
ROE	34 %	23 %		NM	NM		18 %	13 %	

(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.

The following sections provide a comparative discussion of the Firm's results by segment as of or for the three months ended March 31, 2023 versus the corresponding period in the prior year, unless otherwise specified.

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

Three months ended March 31,	2023	2022
Client assets (in billions) ^(a)	\$ 2,594	\$ 2,389
Number of client advisors	8,314	7,614

(a) Consists of Global Private Bank in AWM and client investment assets in J.P. Morgan Wealth Management in CCB.

Selected metrics - J.P. Morgan Payments

Three months ended March 31, (in millions, except where otherwise noted)	2023	2022
Total net revenue ^(a)	\$ 4,458	\$ 2,595
Merchant processing volume (in billions)	558.8	490.2
Average deposits (in billions)	707	821

(a) Excludes the net impact of equity investments.

The following sections provide a comparative discussion of the Firm's results by segment as of or for the three months ended March 31, 2023 and 2022.

CONSUMER & COMMUNITY BANKING

Refer to pages 63-66 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on page 174 for a further discussion of the business profile of CCB.

Selected income statement data

(in millions, except ratios)	Three months ended March 31,		
	2023	2022	Change
Revenue			
Lending- and deposit-related fees	\$ 823	\$ 805	2 %
Asset management fees	676	726	(7)
Mortgage fees and related income	223	456	(51)
Card income	739	541	(d) 37
All other income ^(a)	1,162	1,327	(d) (12)
Noninterest revenue	3,623	3,855	(6)
Net interest income	12,833	8,327	54
Total net revenue	16,456	12,182	35
Provision for credit losses	1,402	678	107
Noninterest expense			
Compensation expense	3,545	3,171	12
Noncompensation expense ^(b)	4,520	4,484	(d) 1
Total noninterest expense	8,065	7,655	5
Income before income tax expense	6,989	3,849	82
Income tax expense	1,746	941	(d) 86
Net income	\$ 5,243	\$ 2,908	80
Revenue by line of business			
Banking & Wealth Management	\$ 10,041	\$ 6,015	(d) 67
Home Lending	720	1,169	(38)
Card Services & Auto	5,695	4,998	14
Mortgage fees and related income details:			
Production revenue	75	211	(64)
Net mortgage servicing revenue ^(c)	148	245	(40)
Mortgage fees and related income	\$ 223	\$ 456	(51) %
Financial ratios			
Return on equity	40 %	23 %	
Overhead ratio	49	63	

(a) Primarily includes operating lease income and commissions and other fees. For the three months ended March 31, 2023 and 2022, operating lease income was \$741 million and \$1.0 billion, respectively.

(b) Included depreciation expense on leased assets of \$407 million and \$694 million for the three months ended March 31, 2023 and 2022, respectively.

(c) Included MSR risk management results of \$(12) million and \$109 million for the three months ended March 31, 2023 and 2022, respectively.

(d) 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.

Quarterly results

Net income was \$5.2 billion, up 80%.

Net revenue was \$16.5 billion, an increase of 35%.

Net interest income was \$12.8 billion, up 54%, driven by:

- deposit margin expansion on higher rates, partially offset by lower average deposits in Banking & Wealth Management ("BWM"), and
- higher revolving loans in Card Services, partially offset by
- tighter loan spreads in Home Lending.

Noninterest revenue was \$3.6 billion, down 6%, driven by:

- lower auto operating lease income as a result of a decline in volume, and
- in Home Lending lower production revenue from a decline in volume and lower net mortgage servicing revenue, reflecting a net loss compared with a net gain in the prior year in MSR risk management, largely offset by
- an increase in card income driven by higher net interchange largely due to a reduction in rewards costs and partner payments related to a periodic tax refund on airline miles redeemed, and higher annual fees, partially offset by higher amortization related to new account origination costs, and
- higher travel-related commissions in Card Services.

Refer to Note 5 for additional information on card income, asset management fees, and commissions and other fees. Refer to Note 14 for further information regarding changes in the value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was \$8.1 billion, up 5%, largely driven by:

- higher compensation expense driven by wage inflation and headcount growth, as well as investments in the business,

largely offset by

- lower auto lease depreciation on lower auto lease assets.

The provision for credit losses was \$1.4 billion, and included:

- net charge-offs of \$1.1 billion, up \$499 million, predominantly driven by Card Services, reflecting continued normalization in delinquencies, and
- a \$350 million net addition to the allowance for credit losses, driven by a deterioration in the Firm's weighted-average economic outlook, including \$300 million in Card Services and \$50 million in Home Lending.

The prior year included a \$125 million addition to the allowance for credit losses across CCB.

Refer to Credit and Investment Risk Management on pages 48-66 and Allowance for Credit Losses on pages 63-65 for a further discussion of the credit portfolios and the allowance for credit losses.

Selected metrics

(in millions, except headcount)	As of or for the three months ended March 31,		
	2023	2022	Change
Selected balance sheet data (period-end)			
Total assets	\$ 506,382	\$ 486,183	4 %
Loans:			
Banking & Wealth Management ^(a)	28,038	32,772	(14)
Home Lending ^(b)	172,058	172,025	—
Card Services	180,079	152,283	18
Auto	69,556	69,251	—
Total loans	449,731	426,331	5
Deposits	1,147,474	1,189,308	(4)
Equity	52,000	50,000	4
Selected balance sheet data (average)			
Total assets	\$ 506,775	\$ 488,967	4
Loans:			
Banking & Wealth Management	28,504	33,742	(16)
Home Lending ^(c)	172,124	176,488	(2)
Card Services	180,451	149,398	21
Auto	68,744	69,250	(1)
Total loans	449,823	428,878	5
Deposits	1,112,967	1,153,513	(4)
Equity	52,000	50,000	4
Headcount	135,983	129,268	5 %

(a) At March 31, 2023 and 2022, included \$205 million and \$2.9 billion of loans, respectively, in Business Banking under the PPP. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the PPP.

(b) At March 31, 2023 and 2022, Home Lending loans held-for-sale and loans at fair value were \$4.2 billion and \$5.8 billion, respectively.

(c) Average Home Lending loans held-for sale and loans at fair value were \$3.5 billion and \$10.8 billion for the three months ended March 31, 2023 and 2022, respectively.

Selected metrics

(in millions, except ratio data)	As of or for the three months ended March 31,		
	2023	2022	Change
Credit data and quality statistics			
Nonaccrual loans ^{(a)(b)}	\$ 3,835	\$ 4,531	(15) %
Net charge-offs/(recoveries)			
Banking & Wealth Management	79	89	(11)
Home Lending	(18)	(69)	74
Card Services	922	506	82
Auto	69	27	156
Total net charge-offs/(recoveries)	\$ 1,052	\$ 553	90
Net charge-off/(recovery) rate			
Banking & Wealth Management ^(c)	1.12 %	1.07 %	
Home Lending	(0.04)	(0.17)	
Card Services	2.07	1.37	
Auto	0.41	0.16	
Total net charge-off/(recovery) rate	0.96 %	0.54 %	
30+ day delinquency rate			
Home Lending ^{(d)(e)}	0.81 %	1.03 %	
Card Services	1.68	1.09	
Auto	0.90	0.57	
90+ day delinquency rate - Card Services	0.83 %	0.54 %	
Allowance for loan losses			
Banking & Wealth Management	\$ 720	\$ 697	3
Home Lending	427	785	(46)
Card Services	11,400	10,250	11
Auto	716	738	(3)
Total allowance for loan losses	\$ 13,263 ^(f)	\$ 12,470	6 %

(a) At March 31, 2023 and 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of \$164 million and \$315 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 March 31, 2023 and 2022, generally excludes loans that were under payment deferral programs offered in response to the COVID-19 pandemic. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for further information on consumer assistance.

(c) At March 31, 2023 and 2022, included \$205 million and \$2.9 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. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the PPP.

(d) At March 31, 2023 and 2022, the principal balance of loans under payment deferral programs offered in response to the COVID-19 pandemic was \$353 million and \$728 million in Home Lending, respectively. Loans that are performing according to their modified terms are generally not considered delinquent. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for further information on consumer assistance.

(e) At March 31, 2023 and 2022, excluded mortgage loans insured by U.S. government agencies of \$219 million and \$370 million, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(f) 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

(in billions, except ratios and where otherwise noted)	As of or for the three months ended March 31,		
	2023	2022	Change
Business Metrics			
Number of branches	4,784	4,810	(1) %
Active digital customers (in thousands) ^(a)	64,998	60,286	8
Active mobile customers (in thousands) ^(b)	50,933	46,527	9
Debit and credit card sales volume	\$ 387.3	\$ 351.5	10
Total payments transaction volume (in trillions) ^(c)	1.4	1.3	8
Banking & Wealth Management			
Average deposits	\$ 1,098.5	\$ 1,136.1	(3)
Deposit margin	2.78 %	1.22 %	
Business Banking average loans	\$ 19.9	\$ 24.8	(20)
Business banking origination volume	1.0	1.0	—
Client investment assets ^(d)	690.8	696.3	(1)
Number of client advisors	5,125	4,816	6
Home Lending			
Mortgage origination volume by channel			
Retail	\$ 3.6	\$ 15.1	(76)
Correspondent	2.1	9.6	(78)
Total mortgage origination volume^(e)	\$ 5.7	\$ 24.7	(77)
Third-party mortgage loans serviced (period-end)	\$ 575.9	\$ 575.4	—
MSR carrying value (period-end)	7.7	7.3	5
Card Services			
Sales volume, excluding commercial card	\$ 266.2	\$ 236.4	13
Net revenue rate	10.38 %	9.87 %	
Net yield on average loans	9.89	9.99	
Auto			
Loan and lease origination volume	\$ 9.2	\$ 8.4	10
Average auto operating lease assets	11.5	16.4	(30) %

(a) Users of all web and/or mobile platforms who have logged in within the past 90 days.

(b) Users of all mobile platforms who have logged in within the past 90 days.

(c) Total payments transaction volume includes debit and credit card sales volume and gross outflows of ACH, ATM, teller, wires, BillPay, PayChase, Zelle, person-to-person and checks.

(d) Includes assets invested in managed accounts and J.P. Morgan mutual funds where AWM is the investment manager. Refer to AWM segment results on pages 30-32 for additional information.

(e) Firmwide mortgage origination volume was \$6.8 billion and \$30.2 billion for the three months ended March 31, 2023 and 2022, respectively.

CORPORATE & INVESTMENT BANK

Refer to pages 67-72 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on page 174 for a further discussion of the business profile of CIB.

Selected income statement data

Three months ended March 31,			
(in millions, except ratios)	2023	2022	Change
Revenue			
Investment banking fees ^(a)	\$ 1,654	\$ 2,050	(19) %
Principal transactions	7,408	5,223	42
Lending- and deposit-related fees	539	641	(16)
Commissions and other fees	1,234	1,332	(7)
Card income	315	266 ^(c)	18
All other income	373	492 ^(c)	(24)
Noninterest revenue	11,523	10,004	15
Net interest income	2,077	3,572	(42)
Total net revenue^(b)	13,600	13,576	—
Provision for credit losses	58	445	(87)
Noninterest expense			
Compensation expense	4,085	4,006	2
Noncompensation expense	3,398	3,357 ^(c)	1
Total noninterest expense	7,483	7,363	2
Income before income tax expense	6,059	5,768	5
Income tax expense	1,638	1,396 ^(c)	17
Net income	\$ 4,421	\$ 4,372	1 %
Financial ratios			
Return on equity	16 %	16 % ^(c)	
Overhead ratio	55	54	
Compensation expense as percentage of total net revenue	30	30	

(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 \$839 million and \$737 million for the three months ended March 31, 2023 and 2022, respectively.

(c) In the first quarter of 2023, the allocations of revenue and expense to OCB 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

Three months ended March 31,			
(in millions)	2023	2022	Change
Revenue by business			
Investment Banking	\$ 1,560	\$ 2,057	(24)%
Payments	2,396	1,901 ^(b)	26
Lending	267	321	(17)
Total Banking	4,223	4,279	(1)
Fixed Income Markets	5,699	5,698	—
Equity Markets	2,683	3,055	(12)
Securities Services	1,148	1,068	7
Credit Adjustments & Other ^(a)	(153)	(524)	71
Total Markets & Securities Services	9,377	9,297	1
Total net revenue	\$ 13,600	\$ 13,576	—%

(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.

(b) In the first quarter of 2023, the allocations of revenue and expense to OCB 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.

Quarterly results

Net income was \$4.4 billion, up 1%.

Net revenue was \$13.6 billion, flat compared to the prior year.

Banking revenue was \$4.2 billion, down 1%.

- Investment Banking revenue was \$1.6 billion, down 24%, predominantly driven by lower Investment Banking fees, down 19%, reflecting lower debt underwriting fees. The Firm ranked #1 for Global Investment Banking fees, according to Dealogic.
 - Debt underwriting fees were \$663 million, down 34%, and Equity underwriting fees were \$235 million, down 6%, as challenging market conditions resulted in lower issuance activity.
 - Advisory fees were \$756 million, down 6%, compared to a strong prior year, driven by a lower level of announced deals.
- Payments revenue was \$2.4 billion, up 26% and included a gain on an equity investment in the prior year. Excluding the net impact of equity investments, Payments revenue was up 55%, driven by deposit margin expansion on higher rates, partially offset by lower average deposits.
- Lending revenue was \$267 million, down 17%, and included \$103 million of fair value losses on hedges of retained loans.

Markets & Securities Services revenue was \$9.4 billion, up 1%. Markets revenue was \$8.4 billion, down 4%.

- Fixed Income Markets revenue was \$5.7 billion, flat compared to the prior year, reflecting:
 - lower revenue in Currencies & Emerging Markets compared to a strong prior year, and
 - higher revenue in Rates with favorable market conditions early in the quarter and elevated volatility in March 2023, as well as higher revenue in Credit Trading from higher client flows.
- Equity Markets revenue was \$2.7 billion, down 12%, driven by lower revenue in Equity Derivatives and Cash Equities, compared to a strong first quarter in the prior year.
- Securities Services revenue was \$1.1 billion, up 7%, driven by deposit margin expansion on higher rates, partially offset by lower average deposits and lower average market values of assets under custody.
- Credit Adjustments & Other was a loss of \$153 million, driven by losses on certain components of fair value option elected liabilities, compared with a loss of \$524 million in the prior year.

Noninterest expense was \$7.5 billion, up 2%, largely driven by higher compensation, including headcount growth and wage inflation, largely offset by lower revenue-related compensation.

The provision for credit losses was \$58 million, predominantly driven by net charge-offs of \$50 million. The net addition to the allowance for credit losses was driven by net downgrade activity and a deterioration in the Firm's weighted-average economic outlook, largely offset by a reduction in the allowance for client-specific exposures.

The prior year provision was \$445 million, driven by a net addition to the allowance for credit losses.

Refer to Credit and Investment Risk Management on pages 48-66 and Allowance for Credit Losses on pages 63-65 for further discussions of the credit portfolios and the allowance for credit losses.

Selected metrics

(in millions, except headcount)	As of or for the three months ended March 31,		
	2023	2022	Change
Selected balance sheet data (period-end)			
Total assets	\$ 1,436,237	\$ 1,460,463	(2) %
Loans:			
Loans retained ^(a)	187,133	167,791	12
Loans held-for-sale and loans at fair value ^(b)	38,335	47,260	(19)
Total loans	225,468	215,051	5
Equity	108,000	103,000	5
Selected balance sheet data (average)			
Total assets	\$ 1,429,662	\$ 1,407,835	2
Trading assets-debt and equity instruments	488,767	419,346	17
Trading assets-derivative receivables	64,016	66,692	(4)
Loans:			
Loans retained ^(a)	\$ 185,572	\$ 160,976	15
Loans held-for-sale and loans at fair value ^(b)	42,569	51,398	(17)
Total loans	\$ 228,141	\$ 212,374	7
Equity	108,000	103,000	5
Headcount	74,352	68,292	9 %

(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

(in millions, except ratios)	As of or for the three months ended March 31,		
	2023	2022	Change
Credit data and quality statistics			
Net charge-offs/(recoveries)	\$ 50	\$ 20	150 %
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained ^(a)	\$ 832	\$ 871	(4)
Nonaccrual loans held-for-sale and loans at fair value ^(b)	808	949	(15)
Total nonaccrual loans	1,640	1,820	(10)
Derivative receivables	291	597	(51)
Assets acquired in loan satisfactions	86	91	(5)
Total nonperforming assets	\$ 2,017	\$ 2,508	(20)
Allowance for credit losses:			
Allowance for loan losses	\$ 2,454	\$ 1,687	45
Allowance for lending-related commitments	1,301	1,459	(11)
Total allowance for credit losses	\$ 3,755	\$ 3,146	19 %
Net charge-off/(recovery) rate ^(c)	0.11 %	0.05 %	
Allowance for loan losses to period-end loans retained	1.31	1.01	
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits ^(d)	1.81	1.31	
Allowance for loan losses to nonaccrual loans retained ^(a)	295	194	
Nonaccrual loans to total period-end loans	0.73 %	0.85 %	

(a) Allowance for loan losses of \$153 million and \$226 million were held against these nonaccrual loans at March 31, 2023 and 2022, respectively.

(b) At March 31, 2023 and 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of \$99 million and \$283 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 OIB's allowance coverage ratio. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 16-17.

Investment banking fees

(in millions)	Three months ended March 31,		
	2023	2022	Change
Advisory	\$ 756	\$ 801	(6) %
Equity underwriting	235	249	(6)
Debt underwriting ^(a)	663	1,000	(34)
Total investment banking fees	\$ 1,654	\$ 2,050	(19) %

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

League table results – wallet share

	Three months ended March 31,					
	2023		2022		Full-year 2022	
	Rank	Share	Rank	Share	Rank	Share
Based on fees ^(a)						
M&A^(b)						
Global	# 2	10.1 %	# 3	7.5 %	2	8.1 %
U.S.	1	12.5	3	8.7	2	9.0
Equity and equity-related^(c)						
Global	2	6.6	1	5.4	2	5.7
U.S.	2	11.7	1	12.2	1	13.8
Long-term debt^(d)						
Global	1	6.7	1	7.9	1	6.9
U.S.	2	9.5	1	12.2	1	12.2
Loan syndications						
Global	1	13.7	1	10.7	1	11.1
U.S.	1	15.5	2	10.2	1	12.7
Global investment banking fees^(e)	# 1	8.7 %	# 1	7.9 %	1	7.9 %

(a) Source: Dealogic as of April 3, 2023. 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 may 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 5 and 6 for a description of the composition of these income statement line items. Refer to Markets revenue on page 70 of JPMorgan Chase's 2022 Form 10-K for further information.

For the periods presented below, the primary source of principal transactions revenue was the amount recognized upon executing new transactions.

(in millions)	Three months ended March 31,			Three months ended March 31,		
	2023			2022		
	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	\$ 4,398	\$ 3,029	\$ 7,427	\$ 3,389	\$ 2,284	\$ 5,673
Lending- and deposit-related fees	70	7	77	78	4	82
Commissions and other fees	144	522	666	157	547	704
All other income	331	(14)	317	116	(40)	76
Noninterest revenue	4,943	3,544	8,487	3,740	2,795	6,535
Net interest income ^(a)	756	(861)	(105)	1,958	260	2,218
Total net revenue	\$ 5,699	\$ 2,683	\$ 8,382	\$ 5,698	\$ 3,055	\$ 8,753

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

Selected metrics

(in millions, except where otherwise noted)	As of or for the three months ended March 31,		
	2023	2022	Change
Assets under custody ("AUC") by asset class (period-end) (in billions):			
Fixed Income	\$ 14,660	\$ 15,489	(5) %
Equity	11,320	12,156	(7)
Other ^(a)	3,745	3,926	(5)
Total AUC	\$ 29,725	\$ 31,571	(6)
Merchant processing volume (in billions) ^(b)	\$ 558.8	\$ 490.2	14
Client deposits and other third-party liabilities (average) ^(c)	\$ 633,729	\$ 709,121	(11) %

(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

(in millions, except where otherwise noted)	As of or for the three months ended March 31,		
	2023	2022	Change
Total net revenue^(a)			
Europe/Middle East/Africa	\$ 4,268	\$ 4,692	(9) %
Asia-Pacific	2,133	1,985	7
Latin America/Caribbean	562	677	(17)
Total international net revenue	6,963	7,354	(5)
North America	6,637	6,222 ^(c)	7
Total net revenue	\$ 13,600	\$ 13,576	—
Loans retained (period-end)^(a)			
Europe/Middle East/Africa	\$ 38,568	\$ 38,393	—
Asia-Pacific	14,633	17,926	(18)
Latin America/Caribbean	8,070	8,098	—
Total international loans	61,271	64,417	(5)
North America	125,862	103,374	22
Total loans retained	\$ 187,133	\$ 167,791	12
Client deposits and other third-party liabilities (average)^(b)			
Europe/Middle East/Africa	\$ 230,833	\$ 246,497	(6)
Asia-Pacific	126,026	134,767	(6)
Latin America/Caribbean	38,738	43,666	(11)
Total international	\$ 395,597	\$ 424,930	(7)
North America	238,132	284,191	(16)
Total client deposits and other third-party liabilities	\$ 633,729	\$ 709,121	(11)
AUC (period-end)^(b) (in billions)			
North America	\$ 19,883	\$ 20,723	(4)
All other regions	9,842	10,848	(9)
Total AUC	\$ 29,725	\$ 31,571	(6) %

(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 CCB. Prior-period amounts have been revised to conform with the current presentation.

COMMERCIAL BANKING

Refer to pages 73-75 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on page 175 for a discussion of the business profile of CB.

Selected income statement data

(in millions)	Three months ended March 31,		
	2023	2022	Change
Revenue			
Lending- and deposit-related fees	\$ 227	\$ 364	(38) %
Card income	173	167	4
All other income	381	336	13
Noninterest revenue	781	867	(10)
Net interest income	2,730	1,531	78
Total net revenue^(a)	3,511	2,398	46
Provision for credit losses	417	157	166
Noninterest expense			
Compensation expense	641	553	16
Noncompensation expense	667	576	16
Total noninterest expense	1,308	1,129	16
Income before income tax expense	1,786	1,112	61
Income tax expense	439	262	68
Net income	\$ 1,347	\$ 850	58 %

(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 \$82 million and \$69 million for the three months ended March 31, 2023 and 2022, respectively.

Selected income statement data (continued)

(in millions, except ratios)	Three months ended March 31,		
	2023	2022	Change
Revenue by product			
Lending	\$ 1,222	\$ 1,105	11 %
Payments	2,028	1,022	98
Investment banking ^(a)	250	219	14
Other	11	52	(79)
Total net revenue	\$ 3,511	\$ 2,398	46
Investment banking revenue, gross ^(b)	\$ 881	\$ 729	21
Revenue by client segments			
Middle Market Banking	\$ 1,681	\$ 980	72
Corporate Client Banking	1,176	830	42
Commercial Real Estate Banking	642	581	10
Other	12	7	71
Total net revenue	\$ 3,511	\$ 2,398	46 %
Financial ratios			
Return on equity	18 %	13 %	
Overhead ratio	37	47	

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

(b) Includes gross revenues earned by the Firm that are subject to a revenue sharing arrangement with the CIB, for products sold to CB clients through the Investment Banking, Markets or Payments businesses. This includes revenues related to fixed income and equity markets products. Refer to Business Segment Results on page 18 for discussion of revenue sharing.

Quarterly results

Net income was \$1.3 billion, up 58%.

Net revenue was \$3.5 billion, up 46%. Net interest income was \$2.7 billion, up 78%, driven by deposit margin expansion on higher rates, partially offset by lower average deposits.

Noninterest revenue was \$781 million, down 10%, driven by lower deposit-related fees due to the higher level of credits earned by clients that reduce such fees, partially offset by higher investment banking revenue.

Noninterest expense was \$1.3 billion, up 16%, largely driven by higher compensation, including headcount growth, as well as higher volume-related expense.

The provision for credit losses was \$417 million, reflecting a net addition to the allowance for credit losses, predominantly driven by a deterioration in the Firm's weighted-average economic outlook and net downgrade activity.

The provision for credit losses in the prior year was \$157 million, driven by a net addition to the allowance for credit losses.

Refer to Credit and Investment Risk Management on pages 48-66 and Allowance for Credit Losses on pages 63-65 for further discussions of the credit portfolios and the allowance for credit losses.

Selected metrics

(in millions, except headcount)	As of or for the three months ended March 31,		
	2023	2022	Change
Selected balance sheet data (period-end)			
Total assets	\$ 261,181	\$ 235,127	11 %
Loans:			
Loans retained	238,752	213,073	12
Loans held-for-sale and loans at fair value	1,538	1,743	(12)
Total loans	\$ 240,290	\$ 214,816	12
Equity	28,500	25,000	14
Period-end loans by client segment			
Middle Market Banking ^(a)	\$ 73,329	\$ 64,306	14
Corporate Client Banking	58,256	46,720	25
Commercial Real Estate Banking	108,582	103,685	5
Other	123	105	17
Total loans^(a)	\$ 240,290	\$ 214,816	12
Selected balance sheet data (average)			
Total assets	\$ 255,468	\$ 233,474	9
Loans:			
Loans retained	236,808	208,540	14
Loans held-for-sale and loans at fair value	1,155	2,147	(46)
Total loans	\$ 237,963	\$ 210,687	13
Average loans by client segment			
Middle Market Banking	\$ 73,030	\$ 62,437	17
Corporate Client Banking	56,581	45,595	24
Commercial Real Estate Banking	108,143	102,498	6
Other	209	157	33
Total loans	\$ 237,963	\$ 210,687	13
Client deposits and other third-party liabilities	\$ 265,971	\$ 316,921	(16)
Equity	28,500	25,000	14
Headcount	15,026	13,220	14 %

(a) At March 31, 2023 and 2022, total loans included \$88 million and \$640 million of loans, respectively, under the PPP, of which \$80 million and \$604 million were in Middle Market Banking, respectively. Refer to Credit Portfolio on pages 108-109 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the PPP.

Selected metrics (continued)

(in millions, except ratios)	As of or for the three months ended March 31,		
	2023	2022	Change
Credit data and quality statistics			
Net charge-offs/(recoveries)	\$ 37	\$ 6	NM
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained ^(a)	\$ 918	\$ 751	22 %
Nonaccrual loans held-for-sale and loans at fair value	—	—	—
Total nonaccrual loans	\$ 918	\$ 751	22
Assets acquired in loan satisfactions	—	17	NM
Total nonperforming assets	\$ 918	\$ 768	20
Allowance for credit losses:			
Allowance for loan losses	\$ 3,566	\$ 2,357	51
Allowance for lending-related commitments	966	762	27
Total allowance for credit losses	\$ 4,532	\$ 3,119	45 %
Net charge-off/(recovery) rate ^(b)	0.06 %	0.01 %	
Allowance for loan losses to period-end loans retained	1.49	1.11	
Allowance for loan losses to nonaccrual loans retained ^(a)	388	314	
Nonaccrual loans to period-end total loans	0.38	0.35	

(a) Allowance for loan losses of \$170 million and \$104 million was held against nonaccrual loans retained at March 31, 2023 and 2022, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET & WEALTH MANAGEMENT

Refer to pages 76-78 of JPMorgan Chase's 2022 Form 10-K and Line of Business Metrics on pages 175-176 for a discussion of the business profile of AWM.

Selected income statement data

(in millions, except ratios)	Three months ended March 31,		
	2023	2022	Change
Revenue			
Asset management fees	\$ 2,761	\$ 2,899	(5) %
Commissions and other fees	181	216	(16)
All other income	391	124	215
Noninterest revenue	3,333	3,239	3
Net interest income	1,451	1,076	35
Total net revenue	4,784	4,315	11
Provision for credit losses	28	154	(82)
Noninterest expense			
Compensation expense	1,735	1,530	13
Noncompensation expense	1,356	1,330	2
Total noninterest expense	3,091	2,860	8
Income before income tax expense	1,665	1,301	28
Income tax expense	298	293	2
Net income	\$ 1,367	\$ 1,008	36
Revenue by line of business			
Asset Management	\$ 2,434	\$ 2,314	5
Global Private Bank	2,350	2,001	17
Total net revenue	\$ 4,784	\$ 4,315	11 %
Financial ratios			
Return on equity	34 %	23 %	
Overhead ratio	65	66	
Pre-tax margin ratio:			
Asset Management	37	33	
Global Private Bank	33	27	
Asset & Wealth Management	35	30	

Quarterly results

Net income was \$1.4 billion, up 36%.

Net revenue was \$4.8 billion, up 11%. Net interest income was \$1.5 billion, up 35%. Noninterest revenue was \$3.3 billion, up 3%.

Revenue from Asset Management was \$2.4 billion, up 5%, 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, partially offset by
- lower performance fees, and
- lower management fees reflecting a decline in market levels, predominantly offset by the removal of most money market fund fee waivers.

Revenue from Global Private Bank was \$2.4 billion, up 17%, driven by:

- deposit margin expansion reflecting higher rates on lower average deposit balances, partially offset by
- an investment valuation loss, and
- tighter spreads on lower average loans.

Noninterest expense was \$3.1 billion, up 8%, predominantly driven by higher compensation due to headcount growth, higher revenue-related compensation and the impact of acquisitions.

The provision for credit losses was \$28 million.

Refer to Credit and Investment Risk Management on pages 48-66 and Allowance for Credit Losses on pages 63-65 for further discussions of the credit portfolios and the allowance for credit losses.

Selected metrics

(in millions, except ranking data, headcount and ratios)	As of or for the three months ended March 31,		
	2023	2022	Change
% of JPM mutual fund assets rated as 4- or 5-star ^(a)	68 %	73 %	
% of JPM mutual fund assets ranked in 1 st or 2 nd quartile ^(b)			
1 year	64	62	
3 years	65	73	
5 years	77	81	
Selected balance sheet data (period-end)^(c)			
Total assets	\$ 232,516	\$ 233,070	— %
Loans	211,140	215,130	(2)
Deposits	225,831	287,293	(21)
Equity	16,000	17,000	(6)
Selected balance sheet data (average)^(c)			
Total assets	\$ 228,823	\$ 232,310	(2)
Loans	211,469	214,611	(1)
Deposits	224,354	287,756	(22)
Equity	16,000	17,000	(6)
Headcount	26,773	23,366	15
Number of Global Private Bank client advisors	3,189	2,798	14
Credit data and quality statistics^(c)			
Net charge-offs/(recoveries)	\$ (2)	\$ (1)	(100)
Nonaccrual loans	477	626	(24)
Allowance for credit losses:			
Allowance for loan losses	\$ 526	\$ 516	2
Allowance for lending-related commitments	19	19	—
Total allowance for credit losses	\$ 545	\$ 535	2%
Net charge-off/(recovery) rate	— %	— %	
Allowance for loan losses to period-end loans	0.25	0.24	
Allowance for loan losses to nonaccrual loans	110	82	
Nonaccrual loans to period-end loans	0.23	0.29	

(a) Represents the Morningstar Rating for all domiciled funds except for Japan domiciled funds which use Nomura. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.

(b) Quartile ranking sourced from Morningstar, Lipper and Nomura based on country of domicile. Includes only Asset Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil domiciled funds.

(c) Loans, deposits and related credit data and quality statistics relate to the Global Private Bank business.

Client assets

Assets under management of \$3.0 trillion were up 2%, while client assets of \$4.3 trillion were up 6%, driven by continued net inflows and the impact of the acquisition of Global Shares, partially offset by lower market levels.

Client assets

(in billions)	As of March 31,		
	2023	2022	Change
Assets by asset class			
Liquidity	\$ 761	\$ 657	16 %
Fixed income	682	657	4
Equity	733	739	(1)
Multi-asset	627	699	(10)
Alternatives	203	208	(2)
Total assets under management	3,006	2,960	2
Custody/brokerage/administration/deposits	1,341 ^(b)	1,156	16
Total client assets^(a)	\$ 4,347	\$ 4,116	6
Assets by client segment			
Private Banking	\$ 826	\$ 777	6
Global Institutional	1,347	1,355	(1)
Global Funds	833	828	1
Total assets under management	\$ 3,006	\$ 2,960	2
Private Banking	\$ 2,090 ^(b)	\$ 1,880	11
Global Institutional	1,417	1,402	1
Global Funds	840	834	1
Total client assets^(a)	\$ 4,347	\$ 4,116	6 %

(a) Includes CCB client investment assets invested in managed accounts and J.P. Morgan mutual funds where AVMM is the investment manager.

(b) Includes the impact of the acquisition of Global Shares.

Client assets (continued)

(in billions)	Three months ended March 31,	
	2023	2022
Assets under management rollforward		
Beginning balance	\$ 2,766	\$ 3,113
Net asset flows:		
Liquidity	93	(52)
Fixed income	26	(3)
Equity	22	11
Multi-asset	(2)	6
Alternatives	1	5
Market/performance/other impacts	100	(120)
Ending balance, March 31	\$ 3,006	\$ 2,960
Client assets rollforward		
Beginning balance	\$ 4,048	\$ 4,295
Net asset flows	152	(5)
Market/performance/other impacts	147	(174)
Ending balance, March 31	\$ 4,347	\$ 4,116

International

(in millions)	Three months ended March 31,		
	2023	2022	Change
Total net revenue^(a)			
Europe/Middle East/Africa	\$ 847	\$ 770	10 %
Asia-Pacific	477	460	4
Latin America/Caribbean	240	251	(4)
Total international net revenue	1,564	1,481	6
North America	3,220	2,834	14
Total net revenue^(a)	\$ 4,784	\$ 4,315	11 %

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

(in billions)	As of March 31,		
	2023	2022	Change
Assets under management			
Europe/Middle East/Africa	\$ 515	\$ 532	(3) %
Asia-Pacific	244	237	3
Latin America/Caribbean	74	75	(1)
Total international assets under management	833	844	(1)
North America	2,173	2,116	3
Total assets under management	\$ 3,006	\$ 2,960	2
Client assets			
Europe/Middle East/Africa	\$ 649	\$ 653	(1)
Asia-Pacific	367	354	4
Latin America/Caribbean	204	190	7
Total international client assets	1,220	1,197	2
North America	3,127	2,919	7
Total client assets	\$ 4,347	\$ 4,116	6 %

CORPORATE

Refer to pages 79-80 of JPMorgan Chase's 2022 Form 10-K for a discussion of Corporate.

Selected income statement and balance sheet data

(in millions, except headcount)	As of or for the three months ended March 31,		
	2023	2022	Change
Revenue			
Principal transactions	\$ 82	\$ (161)	NM
Investment securities losses	(868)	(394)	(120)%
All other income	31	210	(85)
Noninterest revenue	(755)	(345)	(119)
Net interest income	1,740	(536)	NM
Total net revenue^(a)	985	(881)	NM
Provision for credit losses	370	29	NM
Noninterest expense	160	184	(13)
Income/(loss) before income tax expense/(benefit)	455	(1,094)	NM
Income tax expense/(benefit)	211	(238)	NM
Net income/(loss)	\$ 244	\$ (856)	NM
Total net revenue			
Treasury and CIO	\$ 1,106	\$ (944)	NM
Other Corporate	(121)	63	NM
Total net revenue	\$ 985	\$ (881)	NM
Net income/(loss)			
Treasury and CIO	\$ 624	\$ (748)	NM
Other Corporate	(380)	(108)	(252)
Total net income/(loss)	\$ 244	\$ (856)	NM
Total assets (period-end)	\$ 1,307,989	\$ 1,539,844	(15)
Loans (period-end)	2,267	1,957	16
Deposits (period-end) ^(b)	19,458	1,434	NM
Headcount	44,743	39,802	12 %

(a) Included tax-equivalent adjustments, driven by tax-exempt income from municipal bonds, of \$56 million and \$58 million for the three months ended March 31, 2023 and 2022, respectively.

(b) Predominantly relates to the Firm's international consumer initiatives.

Quarterly results

Net income was \$244 million, compared with a net loss of \$856 million in the prior year.

Net revenue was \$985 million, compared with a net loss of \$881 million in the prior year, driven by higher net interest income due to higher rates.

Noninterest revenue was a loss of \$755 million, compared with a loss of \$345 million in the prior year, driven by:

- higher net investment securities losses on sales of U.S. GSE and government agency MBS and U.S. Treasuries, associated with repositioning the investment securities portfolio, and
- the absence of proceeds from an insurance settlement in the prior year partially offset by
- higher net gains on certain legacy private equity investments, compared with net losses in the prior year.

Noninterest expense of \$160 million was down \$24 million.

The provision for credit losses was \$370 million, reflecting an addition to the allowance for credit losses, including an allowance for credit losses associated with Other assets.

Refer to Note 9 for additional information on the investment securities portfolio, and Note 12 for additional information on the allowance for credit losses.

The change in the current period tax expense was driven by the level and mix of income and expenses subject to U.S. federal and state and local taxes that also impacted the Firm's tax reserves.

Other Corporate also reflects the Firm's international consumer growth 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 40% ownership stake in C6 Bank, a digital bank in Brazil.

Treasury and CIO overview

At March 31, 2023, the average credit rating of the Treasury and CIO investment securities comprising the portfolio in the table below was AA+ (based upon external ratings where available and, where not available, based primarily upon internal risk ratings). Refer to Note 9 for further information on the Firm's investment securities portfolio and internal risk ratings.

Refer to Liquidity Risk Management on pages 42-47 for further information on liquidity and funding risk. Refer to Market Risk Management on pages 67-72 for information on interest rate and foreign exchange risks.

Selected income statement and balance sheet data

(in millions)	As of or for the three months ended March 31,		
	2023	2022	Change
Investment securities losses	\$ (868)	\$ (394)	(120)%
Available-for-sale securities (average)	\$ 202,776	\$ 304,314	(33)
Held-to-maturity securities (average) ^(a)	417,350	364,814	14
Investment securities portfolio (average)	\$ 620,126	\$ 669,128	(7)
Available-for-sale securities (period-end)	\$ 195,228	\$ 310,909	(37)
Held-to-maturity securities (period-end) ^(a)	412,827	366,585	13
Investment securities portfolio, net of allowance for credit losses (period-end) ^(b)	\$ 608,055	\$ 677,494	(10)%

(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, the Firm transferred \$78.3 billion of investment securities from AFS to HTM for capital management purposes. Refer to Note 1 and Note 9 for additional information on the new hedge accounting guidance.

(b) At March 31, 2023 and 2022, the allowance for credit losses on investment securities was \$61 million and \$41 million, respectively.

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.



Refer to pages 81-84 of JPMorgan Chase's 2022 Form 10-K for a further discussion of Firmwide risk management governance and oversight.

Risk governance and oversight functions

The following sections of this Form 10-Q and the 2022 Form 10-K discuss the risk governance and oversight functions in place to manage the risks inherent in the Firm's business activities.

Risk governance and oversight functions	Form 10-Q page reference	Form 10-K page reference
Strategic Risk		85
Capital Risk	36-41	86-96
Liquidity Risk	42-47	97-104
Reputation Risk		105
Consumer Credit Risk	50-53	110-115
Wholesale Credit Risk	54-62	116-126
Investment Portfolio Risk	66	130
Market Risk	67-72	131-138
Country Risk	73	139-140
Climate Risk		141
Operational Risk		142-148
Compliance Risk		145
Conduct Risk		146
Legal Risk		147
Estimations and Model Risk		148

CAPITAL RISK MANAGEMENT

Capital risk is the risk 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.

Refer to pages 86-96 of JPMorgan Chase's 2022 Form 10-K, Note 21 of this Form 10-Q and the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website, for a further discussion of the Firm's capital risk.

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. Bank Holding Companies ("BHCs") and banks, including the Firm and its insured depository institution ("IDI") subsidiaries, including JPMorgan Chase Bank, N.A. The minimum amount of regulatory capital that must be held by BHCs and banks is determined by calculating risk-weighted assets ("RWA"), which are on-balance sheet assets and off-balance sheet exposures, weighted according to risk. Two comprehensive approaches are prescribed for calculating RWA: a standardized approach ("Basel III Standardized"), and an advanced approach ("Basel III Advanced"). For each of the risk-based capital ratios, the capital adequacy of the Firm is evaluated against the lower of the Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements. The Firm's Basel III Standardized risk-based ratios are currently more binding than the Basel III Advanced risk-based ratios.

Basel III also includes a requirement for Advanced Approaches banking organizations, including the Firm, to calculate its SLR. Refer to SLR on page 39 for additional information.

Key Regulatory Developments

CECL regulatory capital transition

Beginning January 1, 2022, the \$2.9 billion CECL capital benefit, provided by the Federal Reserve in response to the COVID-19 pandemic, is being phased out at 25% per year over a three-year period. As of March 31, 2023, the Firm's CET1 capital reflected the remaining \$1.4 billion benefit associated with the CECL capital transition provisions.

Additionally, effective January 1, 2023, the Firm phased out 50% of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.

Refer to Capital Risk Management on pages 86-96 and Note 1 of JPMorgan Chase's 2022 Form 10-K for further information on CECL capital transition provisions and the CECL accounting guidance.

Risk-based Capital Targets

The Firm's current target for its Basel III Standardized CET1 capital ratio is 13.0%, which the Firm surpassed in both the fourth quarter of 2022 and the first quarter of 2023. With consideration for an increase in the global systemically important banks ("GSIB") surcharge in 2024, the Firm has maintained a target ratio of 13.5% for the first quarter of 2024, which assumes no change in the Stress Capital Buffer ("SCB"). The Firm's quarterly capital ratios may vary from these targets dependent on market conditions. These targets are based on the Basel III capital rules currently in effect.

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 Capital Risk Management on pages 86-96 of JPMorgan Chase's 2022 Form 10-K for a further discussion of these capital metrics. Refer to Note 21 for JPMorgan Chase Bank, N.A.'s risk-based and leverage-based capital metrics.

(in millions, except ratios)	Standardized			Advanced		
	March 31, 2023	December 31, 2022	Capital ratio requirements ^(b)	March 31, 2023	December 31, 2022	Capital ratio requirements ^(b)
Risk-based capital metrics: ^(a)						
CET1 capital	\$ 227,144	\$ 218,934		\$ 227,144	\$ 218,934	
Tier 1 capital	253,837	245,631		253,837	245,631	
Total capital	286,398	277,769		273,122	264,583	
Risk-weighted assets	1,647,363	1,653,538		1,633,774	1,609,773	
CET1 capital ratio	13.8 %	13.2 %	12.5 %	13.9 %	13.6 %	11.0 %
Tier 1 capital ratio	15.4	14.9	14.0	15.5	15.3	12.5
Total capital ratio	17.4	16.8	16.0	16.7	16.4	14.5

(a) The capital metrics reflect the CECL capital transition provisions.

(b) Represents minimum requirements and regulatory buffers applicable to the Firm for the period ended March 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 21 for additional information.

Three months ended (in millions, except ratios)				March 31, 2023	December 31, 2022	Capital ratio requirements ^(c)
Leverage-based capital metrics: ^(a)						
Adjusted average assets ^(b)			\$	3,656,598	\$ 3,703,873	
Tier 1 leverage ratio				6.9 %	6.6 %	4.0 %
Total leverage exposure			\$	4,327,863	\$ 4,367,092	
SLR				5.9 %	5.6 %	5.0 %

(a) The capital metrics reflect the CECL capital transition provisions.

(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.

(c) Represents minimum requirements and regulatory buffers applicable to the Firm. Refer to Note 21 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 March 31, 2023 and December 31, 2022.

(in millions)	March 31, 2023	December 31, 2022
Total stockholders' equity	\$ 303,082	\$ 292,332
Less: Preferred stock	27,404	27,404
Common stockholders' equity	275,678	264,928
Add:		
Certain deferred tax liabilities ^(a)	2,754	2,510
Other CET1 capital adjustments ^(b)	4,939	6,221
Less:		
Goodwill ^(c)	54,036	53,501
Other intangible assets	2,191	1,224
Standardized/Advanced CET1 capital	\$ 227,144	\$ 218,934
Add: Preferred stock	27,404	27,404
Less: Other Tier 1 adjustments	711	707
Standardized/Advanced Tier 1 capital	\$ 253,837	\$ 245,631
Long-term debt and other instruments qualifying as Tier 2 capital	\$ 13,725	\$ 13,569
Qualifying allowance for credit losses ^(d)	19,616	19,353
Other	(780)	(784)
Standardized Tier 2 capital	\$ 32,561	\$ 32,138
Standardized Total capital	\$ 286,398	\$ 277,769
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital ^(e)	(13,276)	(13,186)
Advanced Tier 2 capital	\$ 19,285	\$ 18,952
Advanced Total capital	\$ 273,122	\$ 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 March 31, 2023 and December 31, 2022, includes a net benefit associated with cash flow hedges and debit valuation adjustments ("DVA") related to structured notes recorded in AOCI of \$4.6 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 Principal investment risk on page 66 for additional information.

(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.

(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.

Capital rollforward

The following table presents the changes in Basel III CET1 capital, Tier 1 capital and Tier 2 capital for the three months ended March 31, 2023.

Three months ended March 31, (in millions)	2023
Standardized/Advanced CET1 capital at December 31, 2022	\$ 218,934
Net income applicable to common equity	12,266
Dividends declared on common stock	(2,963)
Net purchase of treasury stock	(2,036)
Changes in additional paid-in capital	111
Changes related to AOCI applicable to capital:	
Unrealized gains/(losses) on investment securities	2,212
Translation adjustments, net of hedges ^(a)	197
Fair value hedges	(21)
Defined benefit pension and other postretirement employee benefit ("OPEB") plans	(55)
Changes related to other CET1 capital adjustments ^(b)	(1,501)
Change in Standardized/Advanced CET1 capital	8,210
Standardized/Advanced CET1 capital at March 31, 2023	\$ 227,144
Standardized/Advanced Tier 1 capital at December 31, 2022	\$ 245,631
Change in CET1 capital ^(b)	8,210
Redemptions of noncumulative perpetual preferred stock	—
Other	(4)
Change in Standardized/Advanced Tier 1 capital	8,206
Standardized/Advanced Tier 1 capital at March 31, 2023	\$ 253,837
Standardized Tier 2 capital at December 31, 2022	\$ 32,138
Change in long-term debt and other instruments qualifying as Tier 2	156
Change in qualifying allowance for credit losses ^(b)	263
Other	4
Change in Standardized Tier 2 capital	423
Standardized Tier 2 capital at March 31, 2023	\$ 32,561
Standardized Total capital at March 31, 2023	\$ 286,398
Advanced Tier 2 capital at December 31, 2022	\$ 18,952
Change in long-term debt and other instruments qualifying as Tier 2	156
Change in qualifying allowance for credit losses ^(b)	173
Other	4
Change in Advanced Tier 2 capital	333
Advanced Tier 2 capital at March 31, 2023	\$ 19,285
Advanced Total capital at March 31, 2023	\$ 273,122

(a) Includes foreign currency translation adjustments and the impact of related derivatives.

(b) Includes the impact of the CECL capital transition provisions and the cumulative effect of changes in accounting principles. Refer to Note 1 for additional information.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced approaches for the three months ended March 31, 2023. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Three months ended March 31, 2023 (in millions)	Standardized			Advanced			
	Credit risk RWA ^(c)	Market risk RWA	Total RWA	Credit risk RWA ^(c)	Market risk RWA	Operational risk RWA	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)	(5,120)	(839)	(5,959)	(1,555)	(839)	—	(2,394)
Movement in portfolio levels ^(b)	3,166	(3,382)	(216)	28,636	(3,580)	1,339	26,395
Changes in RWA	(1,954)	(4,221)	(6,175)	27,081	(4,419)	1,339	24,001
March 31, 2023	\$ 1,566,582	\$ 80,781	\$ 1,647,363	\$ 1,105,157	\$ 81,013	\$ 447,604	\$ 1,633,774

(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 including position rollofs in legacy portfolios in Home Lending, changes in composition and credit quality, market movements, and deductions for excess eligible credit reserves 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 March 31, 2023 and December 31, 2022, the Basel III Standardized Credit risk RWA included wholesale and retail off balance-sheet RWA of \$208.7 billion and \$210.1 billion, respectively; and the Basel III Advanced Credit risk RWA included wholesale and retail off balance-sheet RWA of \$184.6 billion and \$180.8 billion, respectively.

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

Refer to Supplementary Leverage Ratio on page 93 of JPMorgan Chase's 2022 Form 10-K for additional information.

The following table presents the components of the Firm's SLR.

Three months ended (in millions, except ratio)	March 31, 2023	December 31, 2022
Tier 1 capital	\$ 253,837	\$ 245,631
Total average assets	3,709,977	3,755,271
Less: Regulatory capital adjustments ^(a)	53,379	51,398
Total adjusted average assets ^(b)	3,656,598	3,703,873
Add: Off-balance sheet exposures ^(c)	671,265	663,219
Total leverage exposure	\$ 4,327,863	\$ 4,367,092
SLR	5.9 %	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.

(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. Refer to line of business equity on page 93 of JPMorgan Chase's 2022 Form 10-K for additional information on capital allocation.

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

Line of business equity (Allocated capital)

(in billions)	March 31, 2023	December 31, 2022
Consumer & Community Banking	\$ 52.0	\$ 50.0
Corporate & Investment Bank	108.0	103.0
Commercial Banking	28.5	25.0
Asset & Wealth Management	16.0	17.0
Corporate	71.2	69.9
Total common stockholders' equity	\$ 275.7	\$ 264.9

Capital actions

Common stock dividends

The Firm's quarterly common stock dividend is currently \$1.00 per share. The Firm's dividends are subject to approval by the Board of Directors on a quarterly basis.

Common stock

The Firm is authorized to purchase up to \$30 billion under its common share repurchase program previously approved by the Board of Directors.

The following table sets forth the Firm's repurchases of common stock for the three months ended March 31, 2023 and 2022.

(in millions)	Three months ended March 31,	
	2023	2022
Total number of shares of common stock repurchased	22.0	18.1
Aggregate purchase price of common stock repurchases	\$ 2,940	\$ 2,500

Refer to Capital actions on page 94 of JPMorgan Chase's 2022 Form 10-K for additional information.

Refer to Part II, Item 2: Unregistered Sales of Equity Securities and Use of Proceeds and Part II, Item 5: Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities on pages 177-178 of this Form 10-Q and page 34 of JPMorgan Chase's 2022 Form 10-K, respectively, for additional information regarding repurchases of the Firm's equity securities.

Preferred stock

Preferred stock dividends declared were \$356 million and \$397 million for the three months ended March 31, 2023 and 2022, respectively.

Refer to Note 17 of this Form 10-Q and Note 21 of JPMorgan Chase's 2022 Form 10-K 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 46 of this Form 10-Q and Note 20 of JPMorgan Chase's 2022 Form 10-K for additional information on the Firm's subordinated debt.

Capital planning and stress testing

Comprehensive Capital Analysis and Review

On April 5, 2023, the Firm submitted its 2023 Capital Plan to the Federal Reserve under the Federal Reserve's Comprehensive Capital Analysis and Review ("CCAR") process. The Firm anticipates that the Federal Reserve will disclose summary information regarding the Firm's stress test results by June 30, 2023. Following the Federal Reserve's disclosure, the Firm expects to disclose its indicative SCB requirement, which will become effective October 1, 2023. The Firm's SCB is currently 4.0%.

Refer to Capital planning and stress testing on pages 86-87 of JPMorgan Chase's 2022 Form 10-K for additional information on CCAR.

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 ("eligible LTD").

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 March 31, 2023 and December 31, 2022.

(in billions, except ratio)	March 31, 2023		December 31, 2022	
	External TLAC	LTD	External TLAC	LTD
Total eligible amount	\$ 488.2	222.1	486.9	228.5
% of RWA	29.6%	13.5%	29.4%	13.8%
Regulatory requirements	23.0	10.0	22.5	9.5
Surplus/(shortfall)	\$ 109.2	57.4	114.9	71.4
% of total leverage exposure	11.3%	5.1%	11.1%	5.2%
Regulatory requirements	9.5	4.5	9.5	4.5
Surplus/(shortfall)	\$ 77.3	27.4	71.2	32.0

Effective January 1, 2023, the Firm's regulatory requirements for TLAC to RWA and 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 89-90 of JPMorgan Chase's 2022 Form 10-K for further information on the GSIB surcharge.

Refer to Liquidity Risk Management on pages 42-47 for further information on long-term debt issued by the Parent Company.

Refer to Part I, Item 1A: Risk Factors on pages 9-32 of JPMorgan Chase's 2022 Form 10-K for information on the financial consequences to holders of the Firm's debt and equity securities in a resolution scenario.

Refer to other capital requirements on page 95 of JPMorgan Chase's 2022 Form 10-K for additional information on TLAC.

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").

The following table presents J.P. Morgan Securities' net capital:

March 31, 2023			
(in millions)		Actual	Minimum
Net Capital	\$	24,588	5,675

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 March 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 leverage capital 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:

March 31, 2023			
(in millions, except ratios)		Estimated	Regulatory Minimum ratios ^(a)
Total capital	\$	56,532	
CET1 capital ratio		17.9%	4.5 %
Tier 1 capital ratio		23.0	6.0
Total capital ratio		29.2	8.0
Tier 1 leverage ratio		7.1	3.3 ^(b)

(a) Represents minimum Pillar 1 requirements specified by the FRA. J.P. Morgan Securities plc's capital ratios as of March 31, 2023 exceeded the minimum requirements, including the additional capital requirements specified by the FRA.

(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 March 31, 2023, JPMSE was compliant with its MREL requirements.

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

March 31, 2023			
(in millions, except ratios)		Estimated	Regulatory Minimum ratios ^(a)
Total capital	\$	39,572	
CET1 capital ratio		18.8%	4.5 %
Tier 1 capital ratio		18.8	6.0
Total capital ratio		32.2	8.0
Tier 1 leverage ratio		5.2	3.0

(a) Represents minimum Pillar 1 requirements specified by the EU CRR. J.P. Morgan SE's capital and leverage ratios as of March 31, 2023 exceeded the minimum requirements, including the additional capital requirements specified by the European Banking Authority.

Refer to U.S. broker-dealer and Non-U.S. subsidiary regulatory capital on page 96 of JPMorgan Chase's 2022 Form 10-K for further information.

LIQUIDITY RISK MANAGEMENT

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent financial obligations 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. Refer to pages 97-104 of JPMorgan Chase's 2022 Form 10-K and the Firm's U.S. LCR Disclosure reports, which are available on the Firm's website, for a further discussion of the Firm's liquidity risk.

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.

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. 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 March 31, 2023, December 31, 2022 and March 31, 2022 based on the Firm's interpretation of the LCR framework.

Average amount (in millions)	Three months ended		
	March 31, 2023	December 31, 2022	March 31, 2022
JPMorgan Chase & Co.:			
HQLA			
Eligible cash ^(a)	\$ 453,287	\$ 542,847	\$ 680,003
Eligible securities ^{(b)(c)}	278,223	190,201	42,512
Total HQLA^{(d)(e)}	\$ 731,510	\$ 733,048	\$ 722,515
Net cash outflows	\$ 642,650	\$ 652,580	\$ 658,998
LCR	114 %	112 %	110 %
Net excess eligible HQLA^(d)	\$ 88,860	\$ 80,468	\$ 63,517
JPMorgan Chase Bank N.A.:			
LCR	140 %	151 %	181 %
Net excess eligible HQLA	\$ 278,651	\$ 356,733	\$ 560,987

(a) Represents cash on deposit at central banks, primarily the Federal Reserve Banks.

(b) Predominantly U.S. Treasuries, U.S. GSE and government agency MBS, and sovereign bonds net of applicable haircuts under the LCR rule.

(c) 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.

(d) Excludes average excess eligible HQLA at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.

(e) End of period HQLA balances were \$758.9 billion, \$735.5 billion, and \$735.8 billion for March 31, 2023, December 31, 2022 and March 31, 2022, respectively.

The Firm's average LCR increased during the three months ended March 31, 2023, compared with the three months period ended December 31, 2022, primarily due to a return of funds from JPMorgan Chase Bank, N.A. as a result of a dividend payment to the Parent Company.

The Firm's average LCR increased during the three months ended March 31, 2023, compared with the prior year period largely driven by an increase in HQLA from long-term debt issuances.

JPMorgan Chase Bank, N.A.'s average LCR decreased during the three months ended March 31, 2023, compared with the three months ended December 31, 2022 reflecting a decrease in JPMorgan Chase Bank, N.A.'s HQLA, primarily due to a reduction in cash associated with a decline in average deposits, a dividend payment to the Parent Company, and higher average loans.

JPMorgan Chase Bank, N.A.'s average LCR for the three months ended March 31, 2023 decreased when compared with the same period in the prior year, reflecting a decrease in JPMorgan Chase Bank, N.A.'s HQLA as a result of a reduction in cash from a decline in deposits and loan growth, as well as lower market values of HQLA-eligible investment securities. Refer to Note 9 for additional information on the Firm's investment securities portfolio.

Each of the Firm and JPMorgan Chase Bank, N.A.'s average LCR fluctuates from period to period due to changes in their respective eligible HQLA and estimated net cash outflows as a result of ongoing business activity.

Refer to page 98 of JPMorgan Chase's 2022 Form 10-K and the Firm's U.S. LCR Disclosure reports for additional information on HQLA and net cash outflows.

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 scenarios are produced on a regular basis, and other stress tests are performed in response to specific market events or concerns. Results of stress tests are considered in the formulation of the Firm's funding plan and assessment of its liquidity position.

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.

Other 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 \$700 billion and \$694 billion as of March 31, 2023 and December 31, 2022, respectively, although the amount of liquidity that could be raised at any particular time would be dependent on prevailing market conditions.

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 \$330 billion and \$323 billion as of March 31, 2023 and December 31, 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. 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.

As of March 31, 2023, the Firm and JPMorgan Chase Bank, N.A. were compliant with the 100% minimum NSFR requirement, based on the Firm's current interpretation of the final rule. The Firm will be required to publicly disclose its quarterly average NSFR semiannually beginning in the second half of 2023.

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, through the issuance of unsecured long-term

debt, or from borrowings from the Intermediate Holding Company ("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 22 for additional information on off-balance sheet obligations.

Deposits

The table below summarizes, by LOB and Corporate, the period-end deposit balances as of March 31, 2023, and December 31, 2022, and the average deposit balances for the three months ended March 31, 2023 and 2022, respectively.

Deposits (in millions)	March 31, 2023	December 31, 2022	Three months ended March 31,	
			Average	
			2023	2022
Consumer & Community Banking	\$ 1,147,474	\$ 1,131,611	\$ 1,112,967	\$ 1,153,513
Corporate & Investment Bank	705,145	689,893	699,586	756,643
Commercial Banking	279,345	271,342	265,943	316,787
Asset & Wealth Management	225,831	233,130	224,354	287,756
Corporate	19,458	14,203	17,629	854
Total Firm	\$ 2,377,253	\$ 2,340,179	\$ 2,320,479	\$ 2,515,553

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.

Refer to pages 100-101 of JPMorgan Chase's 2022 Form 10-K for additional disclosure on the Firm's deposit balances.

The table below shows the loan and deposit balances, the loans-to-deposits ratios, and deposits as a percentage of total liabilities, as of March 31, 2023 and December 31, 2022.

(in billions except ratios)	March 31, 2023	December 31, 2022
Deposits	\$ 2,377.3	\$ 2,340.2
Deposits as a % of total liabilities	69 %	69 %
Loans	\$ 1,128.9	\$ 1,135.6
Loans-to-deposits ratio	47 %	49 %

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 those trends could be affected.

Average deposits were lower for the three months ended March 31, 2023 compared to the three months ended March 31, 2022. The decrease was predominantly driven by:

- declines in CIB and CB due to attrition and in AWM due to migration into higher-yielding investments as a result of the rising interest rate environment, partially offset by net issuances of structured notes in CIB,
- a decline in CCB from existing accounts primarily due to migration to higher-yielding investments and increased customer spending, and
- an increase in Corporate related to the Firm's ongoing international consumer initiatives.

Period-end deposits increased, reflecting inflows in March 2023, primarily in CCB and CB, as a result of disruptions in the market related to recent bank failures, which changed the outflow trend that started in the second half of 2022. AWM also experienced deposit inflows in March which were more than offset by migration to higher-yielding investments by month end. The increase in period-end deposits also reflected:

- net issuances of structured notes in CIB as a result of client demand, and
- an increase in Corporate related to the Firm's ongoing international consumer initiatives.

Refer to the Firm's Consolidated Balance Sheets Analysis and the Business Segment Results on pages 13-14 and pages 18-34, respectively, for further information on deposit and liability balance trends. Refer to Note 3 for further information on structured notes.

The following table summarizes short-term and long-term funding, excluding deposits, as of March 31, 2023, and December 31, 2022, and average balances for the three months ended March 31, 2023 and 2022, respectively. Refer to the Consolidated Balance Sheets Analysis on pages 13-14 and Note 10 for additional information.

Sources of funds (excluding deposits) (in millions)	March 31, 2023	December 31, 2022	Three months ended March 31, Average	
			2023	2022
Commercial paper	\$ 12,092	\$ 12,557	\$ 12,813	\$ 14,577
Other borrowed funds	9,069	8,418	10,073	13,595
Federal funds purchased	1,732	1,684	1,896	1,697
Total short-term unsecured funding	\$ 22,893	\$ 22,659	\$ 24,782	\$ 29,869
Securities sold under agreements to repurchase ^(a)	\$ 240,663	\$ 198,382	\$ 246,281	\$ 243,615
Securities loaned ^(a)	4,001	2,547	4,133	4,903
Other borrowed funds	21,080	23,052	22,905	27,936
Obligations of Firm-administered multi-seller conduits ^(b)	12,175	9,236	10,491	6,470
Total short-term secured funding	\$ 277,919	\$ 233,217	\$ 283,810	\$ 282,924
Senior notes	\$ 183,508	\$ 188,025	\$ 184,972	\$ 190,434
Subordinated debt	21,987	21,803	21,829	20,244
Structured notes ^(c)	74,618	70,839	73,744	71,173
Total long-term unsecured funding	\$ 280,113	\$ 280,667	\$ 280,545	\$ 281,851
Credit card securitization ^(d)	\$ 999	\$ 1,999	\$ 1,177	\$ 2,275
FHLB advances	11,091	11,093	11,092	11,109
Other long-term secured funding ^(e)	4,285	4,105	4,156	3,908
Total long-term secured funding	\$ 16,375	\$ 17,197	\$ 16,425	\$ 17,292
Preferred stock^(e)	\$ 27,404	\$ 27,404	\$ 27,404	\$ 33,526
Common stockholders' equity^(e)	\$ 275,678	\$ 264,928	\$ 271,197	\$ 252,506

(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) Includes long-term structured notes which are secured.

(e) Refer to Capital Risk Management on pages 36-41, Consolidated statements of changes in stockholders' equity on page 82 of this Form 10-Q, and Note 21 and Note 22 of JPMorgan Chase's 2022 Form 10-K for additional information on preferred stock and common stockholders' equity.

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 March 31, 2023, compared with December 31, 2022, due to higher secured financing of trading assets and the impact of a lower level of netting on client-driven market-making activities in Markets.

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 decrease in commercial paper at March 31, 2023 from December 31, 2022, and for the average three months ended March 31, 2023 compared to the prior year period, was due to lower net issuance levels resulting from short-term liquidity management.

The decrease in average unsecured other borrowed funds for the three months ended March 31, 2023 compared to the prior year period was due to lower levels of overdrafts as well as net maturities of structured notes classified as other borrowed funds in CIB.

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 long-term unsecured funding is issued by the Parent Company to provide flexibility in support of the funding needs of both bank and non-bank subsidiaries. The Parent Company advances substantially all net funding proceeds to its subsidiary, the IHC. The IHC does not issue debt to external counterparties. The following table summarizes long-term unsecured issuance and maturities or redemptions for the three months ended March 31, 2023 and 2022. Refer to Liquidity Risk Management on pages 97-104 and Note 20 of JPMorgan Chase's 2022 Form 10-K for additional information on the IHC and long-term debt.

Long-term unsecured funding

		Three months ended March 31,		Three months ended March 31,	
		2023	2022	2023	2022
(Notional in millions)		Parent Company		Subsidiaries	
Issuance					
Senior notes issued in the U.S. market	\$	—	\$ 8,100	\$	— \$ —
Senior notes issued in non-U.S. markets		—	2,752		— —
Total senior notes		—	10,852		— —
Structured notes ^(a)		881	1,156	7,718	8,449
Total long-term unsecured funding – issuance	\$	881	\$ 12,008	\$ 7,718	\$ 8,449
Maturities/redemptions					
Senior notes	\$	7,098	\$ 3,693	\$ 65	\$ 64
Structured notes		447	977	7,502	7,647
Total long-term unsecured funding – maturities/redemptions	\$	7,545	\$ 4,670	\$ 7,567	\$ 7,711

(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 and FHLB advances and their respective maturities or redemptions for the three months ended March 31, 2023 and 2022, respectively.

Long-term secured funding

	Three months ended March 31,			
	Issuance		Maturities/Redemptions	
(in millions)	2023	2022	2023	2022
Credit card securitization	\$ —	\$ —	\$ 1,000	\$ 650
FHLB advances	—	—	2	2
Other long-term secured funding ^(a)	151	202	54	61
Total long-term secured funding	\$ 151	\$ 202	\$ 1,056	\$ 713

(a) 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 of JPMorgan Chase's 2022 Form 10-K 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 liquidity risk and credit-related contingent features in Note 4 for additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements.

The credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries as of March 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		
	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
March 31, 2023									
Moody's Investors Service	A1	P-1	Stable	Aa2	P-1	Stable	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.

Refer to page 104 of JPMorgan Chase's 2022 Form 10-K for a discussion of the factors that could affect the credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries.

CREDIT AND INVESTMENT RISK MANAGEMENT

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. Refer to Consumer Credit Portfolio, Wholesale Credit Portfolio and Allowance for Credit Losses on pages 50-65 for a further discussion of Credit Risk.

Refer to page 66 for a further discussion of Investment Portfolio Risk. Refer to Credit and Investment Risk Management on pages 106-130 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's Credit and Investment Risk Management framework.

CREDIT PORTFOLIO

Credit risk is the risk associated with the default or change in credit profile of a client, counterparty or customer.

In the following tables, total loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. The following tables do not include loans which the Firm accounts for at fair value and classifies as trading assets; refer to Notes 2 and 3 for further information regarding these loans. Refer to Notes 11, 22 and 4 for additional information on the Firm's loans, lending-related commitments and derivative receivables.

Refer to Note 9 for information regarding the credit risk inherent in the Firm's investment securities portfolio; and refer to Note 10 for information regarding the credit risk inherent in the securities financing portfolio. Refer to Consumer Credit Portfolio on pages 50-53 and Note 11 for further discussions of the consumer credit environment and consumer loans. Refer to Wholesale Credit Portfolio on pages 54-62 and Note 11 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 for 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 will differ from those previously considered TDRs. Refer to Note 1 and Note 11 for further information.

Total credit portfolio

(in millions)	Credit exposure		Nonperforming ^(c)	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Loans retained	\$ 1,084,850	\$ 1,089,598	\$ 6,054	\$ 5,837
Loans held-for-sale	5,500	3,970	51	54
Loans at fair value	38,546	42,079	790	829
Total loans	1,128,896	1,135,647	6,895	6,720
Derivative receivables	59,274	70,880	291	296
Receivables from customers ^(a)	43,943	49,257	—	—
Total credit-related assets	1,232,113	1,255,784	7,186	7,016
Assets acquired in loan satisfactions				
Real estate owned	NA	NA	195	203
Other	NA	NA	37	28
Total assets acquired in loan satisfactions	NA	NA	232	231
Lending-related commitments	1,383,325	1,326,782	401	455
Total credit portfolio	\$ 2,615,438	\$ 2,582,566	\$ 7,819	\$ 7,702
Credit derivatives and credit-related notes used in credit portfolio management activities ^(b)	\$ (30,794)	\$ (19,330)	\$ —	\$ —
Liquid securities and other cash collateral held against derivatives	(20,923)	(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) At March 31, 2023, and December 31, 2022, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of \$263 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 about the Firm's net charge-offs and recoveries.

(in millions, except ratios)	Three months ended March 31,	
	2023	2022
Net charge-offs	\$ 1,137	\$ 582
Average retained loans	1,082,437	1,004,253
Net charge-off rates	0.43 %	0.24 %

CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of loans and lending-related commitments for residential real estate, credit card, scored auto and business banking. The Firm's focus is on serving primarily the prime segment of the consumer credit market. Refer to Note 11 of this Form 10-Q; and Consumer Credit Portfolio on pages 110-115 and Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on consumer loans, as well as the Firm's nonaccrual and charge-off accounting policies. Refer to Note 22 of this Form 10-Q and Note 28 of JPMorgan Chase's 2022 Form 10-K for further information on lending-related commitments.

The following tables present consumer credit-related information with respect to the scored credit portfolios held in CCB, AWM, CIB and Corporate.

Consumer credit portfolio

(in millions)	Credit exposure		Nonaccrual loans ^{(a)(k)}	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Consumer, excluding credit card				
Residential real estate ^(a)	\$ 236,115	\$ 237,561	\$ 3,710	\$ 3,745
Auto and other ^{(b)(c)}	64,332	63,192	133	129
Total loans - retained	300,447	300,753	3,843	3,874
Loans held-for-sale	572	618	25	28
Loans at fair value ^(d)	10,414	10,004	427	423
Total consumer, excluding credit card loans	311,433	311,375	4,295	4,325
Lending-related commitments ^(e)	37,568	33,518		
Total consumer exposure, excluding credit card	349,001	344,893		
Credit card				
Loans retained ^(f)	180,079	185,175	NA	NA
Total credit card loans	180,079	185,175	NA	NA
Lending-related commitments ^{(e)(g)}	861,218	821,284		
Total credit card exposure	1,041,297	1,006,459		
Total consumer credit portfolio	\$ 1,390,298	\$ 1,351,352	\$ 4,295	\$ 4,325
Credit-related notes used in credit portfolio management activities ^(h)	\$ (1,082)	\$ (1,187)		

(in millions, except ratios)	Three months ended March 31,					
	Net charge-offs/(recoveries)		Average loans - retained		Net charge-off/(recovery) rate ⁽ⁱ⁾	
	2023	2022	2023	2022	2023	2022
Consumer, excluding credit card						
Residential real estate	\$ (20)	\$ (67)	\$ 236,781	\$ 225,932	(0.03) %	(0.12) %
Auto and other	152	113	63,804	69,528	0.97	0.66
Total consumer, excluding credit card - retained	132	46	300,585	295,460	0.18	0.06
Credit card - retained	922	506	180,451	149,398	2.07	1.37
Total consumer - retained	\$ 1,054	\$ 552	\$ 481,036	\$ 444,858	0.89 %	0.50 %

(a) Includes scored mortgage and home equity loans held in CCB and AWM, and scored mortgage loans held in Corporate.

(b) At March 31, 2023 and December 31, 2022, excluded operating lease assets of \$11.3 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 16 for further information.

(c) Includes scored auto and business banking loans and overdrafts.

(d) Includes scored mortgage loans held in CCB and 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 22 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 March 31, 2023 and December 31, 2022, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of \$263 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.

(j) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.

(k) At March 31, 2023 and December 31, 2022, nonaccrual loans excluded \$54 million and \$101 million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA.

(l) Average consumer loans held-for-sale and loans at fair value were \$11.0 billion and \$23.9 billion for the three months ended March 31, 2023 and 2022, respectively. These amounts were excluded when calculating net charge-off/(recovery) rates.

Consumer, excluding credit card

Portfolio analysis

Loans were relatively flat compared to December 31, 2022 driven by higher auto loans and loans at fair value, predominantly offset by lower retained residential real estate loans.

Residential real estate: The residential real estate portfolio, including loans held-for-sale and loans at fair value, predominantly consists of prime mortgage loans and home equity lines of credit.

Retained loans decreased compared to December 31, 2022, reflecting paydowns, net of originations. Net recoveries were lower for the three months ended March 31, 2023 compared to the same period in 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, largely offset by lower CIB loans as sales outpaced purchases.

The carrying value of home equity lines of credit outstanding was \$14.9 billion at March 31, 2023. This amount included \$4.8 billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified and \$4.8 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.

At March 31, 2023 and December 31, 2022, the carrying value of interest-only residential mortgage loans was \$36.4 billion and \$36.3 billion, respectively. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers, predominantly in AWM. The credit performance of this portfolio is comparable with the performance of the broader prime mortgage portfolio.

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)	March 31, 2023	December 31, 2022
Current	\$ 549	\$ 659
30-89 days past due	117	136
90 or more days past due	263	302
Total government guaranteed loans	\$ 929	\$ 1,097

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

Refer to Note 11 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 three months ended March 31, 2023, residential real estate FDMs were \$38 million. In addition to FDMs, the Firm also had \$23 million of loans subject to trial modification where the terms of the loans have not been permanently modified, as well as \$2 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 11 for further information.

For the three months ended March 31, 2022, residential real estate TDRs were \$118 million. Refer to Note 11 for further information on TDRs in prior periods.

Auto and other: The auto and other loan portfolio, including loans at fair value consists of prime-quality scored auto and business banking loans, as well as overdrafts. The portfolio increased when compared to December 31, 2022 due to originations of scored Auto loans, predominantly offset by paydowns. Net charge-offs for the three months ended March 31, 2023 increased compared to the same period in the prior year due to higher scored Auto charge-offs as delinquency levels increased and vehicle valuations declined. The scored Auto net charge-off rates were 0.47% and 0.18% for the three months ended March 31, 2023 and 2022, respectively.

Nonperforming assets

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

Nonperforming assets^(a)

(in millions)	March 31, 2023	December 31, 2022
Nonaccrual loans		
Residential real estate ^(b)	\$ 4,162	\$ 4,196
Auto and other ^(c)	133	129
Total nonaccrual loans	4,295	4,325
Assets acquired in loan satisfactions		
Real estate owned	123	129
Other	37	28
Total assets acquired in loan satisfactions	160	157
Total nonperforming assets	\$ 4,455	\$ 4,482

(a) At March 31, 2023 and December 31, 2022, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of \$263 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 March 31, 2023 and December 31, 2022, nonaccrual loans excluded \$54 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 three months ended March 31, 2023 and 2022.

Nonaccrual loan activity

Three months ended March 31, (in millions)	2023	2022
Beginning balance	\$ 4,325	\$ 5,350
Additions	601	638
Reductions:		
Principal payments and other ^(a)	205	363
Charge-offs	101	66
Returned to performing status	273	495
Foreclosures and other liquidations	52	54
Total reductions	631	978
Net changes	(30)	(340)
Ending balance	\$ 4,295	\$ 5,010

(a) Other reductions include loan sales.

Refer to Note 11 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 decreased from December 31, 2022 reflecting the impact of seasonality. The March 31, 2023 30+ and 90+ day delinquency rates of 1.68% and 0.83%, respectively, increased compared to the December 31, 2022 30+ and 90+ day delinquency rates of 1.45% and 0.68% as delinquencies continued to normalize but remained below pre-pandemic levels. Net charge-offs increased for the three months ended March 31, 2023 compared to the same period in the prior year reflecting continued normalization in delinquencies.

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. Refer to Note 11 for further information about this portfolio, including information about delinquencies.

Geographic and FICO composition of credit card loans

Refer to Note 11 for information on the geographic and FICO composition of the Firm's credit card loans.

Modifications of credit card loans

For the three months ended March 31, 2023, credit card FDMs were \$163 million. In addition to FDMs, the Firm also had \$24 million of loans subject to trial modification where the terms of the loans have not been permanently modified. 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 three months ended March 31, 2022, credit card TDRs were \$82 million.

Refer to Note 1 and Note 11 for further information.

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 56-59 for further information.

The Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM and Corporate, as well as risk-rated BWM and auto dealer exposure held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.

For the three months ended March 31, 2023, credit continued to perform well with charge-offs remaining low.

As of March 31, 2023, the increase in nonperforming exposure was driven by loans, resulting from client-specific downgrades in CIB and CB, partially offset by a reduction in lending-related commitments.

As of March 31, 2023, retained loans increased \$654 million driven by CB, largely offset by a decline in AWM. Lending-related commitments increased \$12.6 billion driven by net portfolio activity in CB and CIB, including an increase in held-for-sale positions in the bridge financing portfolio in CB.

Wholesale credit portfolio

(in millions)	Credit exposure		Nonperforming	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Loans retained	\$ 604,324	\$ 603,670	\$ 2,211	\$ 1,963
Loans held-for-sale	4,928	3,352	26	26
Loans at fair value	28,132	32,075	363	406
Loans	637,384	639,097	2,600	2,395
Derivative receivables	59,274	70,880	291	296
Receivables from customers ^(a)	43,943	49,257	—	—
Total wholesale credit-related assets	740,601	759,234	2,891	2,691
Assets acquired in loan satisfactions				
Real estate owned	NA	NA	72	74
Other	NA	NA	—	—
Total assets acquired in loan satisfactions	NA	NA	72	74
Lending-related commitments	484,539	471,980	401	455
Total wholesale credit portfolio	\$ 1,225,140	\$ 1,231,214	\$ 3,364	\$ 3,220
Credit derivatives and credit-related notes used in credit portfolio management activities ^(b)	\$ (29,712)	\$ (18,143)	\$ —	\$ —
Liquid securities and other cash collateral held against derivatives	(20,923)	(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 62 and Note 4 for additional information.

Wholesale credit exposure – maturity and ratings profile

The following tables present the maturity and internal risk ratings profiles of the wholesale credit portfolio as of March 31, 2023, and December 31, 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 of JPMorgan Chase's 2022 Form 10-K for further information on internal risk ratings.

March 31, 2023 (in millions, except ratios)	Maturity profile ^(a)				Ratings profile			
	1 year or less	1 year through 5 years	After 5 years	Total	Investment-grade	Noninvestment-grade	Total	Total % of IG
Loans retained	\$ 207,707	\$ 250,242	\$ 146,375	\$ 604,324	\$ 424,855	\$ 179,469	\$ 604,324	70 %
Derivative receivables				59,274			59,274	
Less: Liquid securities and other cash collateral held against derivatives				(20,923)			(20,923)	
Total derivative receivables, net of collateral	10,120	11,450	16,781	38,351	29,340	9,011	38,351	77
Lending-related commitments	114,538	347,309	22,692	484,539	336,215	148,324	484,539	69
Subtotal	332,365	609,001	185,848	1,127,214	790,410	336,804	1,127,214	70
Loans held-for-sale and loans at fair value ^(a)				33,060			33,060	
Receivables from customers				43,943			43,943	
Total exposure – net of liquid securities and other cash collateral held against derivatives				\$ 1,204,217			\$ 1,204,217	
Credit derivatives and credit-related notes used in credit portfolio management activities ^{(b)(c)}	\$ (6,686)	\$ (18,424)	\$ (4,602)	\$ (29,712)	\$ (25,754)	\$ (3,958)	\$ (29,712)	87 %

December 31, 2022 (in millions, except ratios)	Maturity profile ^(a)				Ratings profile			
	1 year or less	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 March 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 deemed 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 \$34.4 billion and \$31.3 billion at March 31, 2023 and December 31, 2022, representing approximately 3.0% and 2.7% of total wholesale credit exposure, respectively. Criticized exposure increased, driven by client-specific downgrades largely in Real Estate, Consumer and Retail, Industrials, and Healthcare, partially offset by client-specific upgrades. Of the \$34.4 billion of criticized exposure at March 31, 2023, approximately half was undrawn and \$31.5 billion was performing.

The table below summarizes by industry the Firm's exposures as of March 31, 2023 and December 31, 2022. The industry of risk category is generally based on the client or counterparty's primary business activity. Refer to Note 4 of JPMorgan Chase's 2022 Form 10-K for additional information on industry concentrations.

Wholesale credit exposure – industries^(a)

Noninvestment-grade						Selected metrics				
						30 days or more past due and accruing loans	Net charge-offs/(recoveries)	Credit derivative hedges and credit-related notes ^(h)	Liquid securities and other cash collateral held against derivative receivables	
As of or for the three months ended										
March 31, 2023	Credit exposure ^{(f)(g)}	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming					
(in millions)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Real Estate	170,779	129,980	36,017	4,282	500	464	18	(726)		—
Individuals and Individual Entities ^(b)	127,352	109,577	17,199	224	352	1,296	—	—		—
Consumer & Retail	123,237	62,484	52,596	7,496	661	353	25	(2,886)		—
Asset Managers	94,870	78,263	16,538	64	5	174	—	—		(7,354)
Technology, Media & Telecommunications	79,342	44,217	27,467	7,394	264	164	45	(2,820)		—
Industrials	71,764	39,666	28,694	3,146	258	204	3	(1,946)		—
Healthcare	66,249	44,004	19,940	2,145	160	119	7	(2,392)		—
Banks & Finance Cos	53,942	29,958	22,938	1,025	21	1	—	(343)		(1,201)
Utilities	35,238	25,013	9,322	767	136	68	(2)	(1,595)		—
Oil & Gas	33,994	19,160	14,289	485	60	16	—	(1,204)		—
State & Municipal Govt ^(c)	33,256	32,426	706	123	1	62	—	(10)		(3)
Automotive	33,079	23,843	8,709	403	124	68	—	(694)		—
Chemicals & Plastics	21,302	12,276	8,141	882	3	14	—	(694)		—
Insurance	20,894	14,720	5,833	341	—	48	—	(457)		(6,615)
Metals & Mining	16,213	8,964	6,738	476	35	14	(6)	(199)		(1)
Central Govt	15,543	15,199	220	124	—	—	—	(4,239)		(137)
Transportation	14,118	6,654	5,497	1,887	80	24	(4)	(429)		—
Securities Firms	7,977	3,997	3,980	—	—	—	—	(15)		(2,609)
Financial Markets Infrastructure	4,223	4,111	112	—	—	—	—	—		—
All other ^(d)	124,765	106,186	18,137	199	243	9	(3)	(9,063)		(3,003)
Subtotal	\$ 1,148,137	\$ 810,698	\$ 303,073	\$ 31,463	\$ 2,903	\$ 3,098	\$ 83	\$ (29,712)	\$	(20,923)
Loans held-for-sale and loans at fair value	33,060									
Receivables from customers	43,943									
Total ^(a)	\$ 1,225,140									

(continued from previous page)

						Selected metrics				
Noninvestment-grade						30 days or more past due and accruing ⁽¹⁾ loans	Net charge-offs/ (recoveries)	Credit derivative hedges and credit-related notes ^(h)	Liquid securities and other cash collateral held against derivative receivables	
As of or for the year ended December 31, 2022 (in millions)	Credit exposure ^{(f)(g)}	Investment- grade	Noncriticized	Criticized performing	Criticized nonperforming					
Real Estate	\$ 170,857	\$ 129,866	\$ 36,945	\$ 3,609	\$ 437	\$ 543	\$ 19	\$ (113)	\$ —	
Individuals and Individual Entities ^(a)	130,815	112,006	18,104	360	345	1,038	1	—	—	
Consumer & Retail	120,555	60,781	51,871	7,295	608	321	49	(1,157)	—	
Asset Managers	95,656	78,925	16,665	61	5	15	(1)	—	(8,278)	
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 Cos	51,816	27,811	22,994	961	50	36	—	(262)	(994)	
Utilities	36,218	25,981	9,294	807	136	21	15	(607)	(1)	
Oil & Gas	38,668	20,547	17,616	474	31	57	(6)	(414)	—	
State & Municipal Govt ^(c)	33,847	33,191	529	126	1	36	—	(9)	(5)	
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)	
Metals & Mining	15,915	8,825	6,863	222	5	7	(1)	(27)	(4)	
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)	—	
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 March 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 trust.

(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) noted above, the Firm held \$6.1 billion and \$6.6 billion of trading assets at March 31, 2023, and December 31, 2022, respectively; \$13.5 billion and \$6.8 billion, respectively, of AFS securities; and \$12.3 billion and \$19.7 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 9 for further information.

(d) All other includes: SPFs, and Private education and civic organizations, representing approximately 95% and 5% at both March 31, 2023 and December 31, 2022.

(e) Excludes cash and other deposits placed with banks of \$541.5 billion and \$556.6 billion, at March 31, 2023, and December 31, 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) 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 \$170.8 billion as of March 31, 2023. Criticized exposure increased by \$736 million from \$4.0 billion at December 31, 2022 to \$4.8 billion at March 31, 2023, driven by client-specific downgrades, partially offset by client-specific upgrades.

March 31, 2023						
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn ^(d)	
Multifamily ^(a)	\$ 98,713	\$ 25	\$ 98,738	81 %	88 %	
Industrial	15,964	6	15,970	73	73	
Office	15,106	19	15,125	74	75	
Services and Non Income Producing	14,334	66	14,400	67	52	
Other Income Producing Properties ^(b)	12,484	192	12,676	71	63	
Retail	10,498	16	10,514	75	68	
Lodging	3,330	26	3,356	7	40	
Total Real Estate Exposure^(c)	\$ 170,429	\$ 350	\$ 170,779	76 %	78 %	

December 31, 2022						
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn ^(d)	
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 78% secured; unsecured exposure is approximately 78% investment-grade.

(d) Represents drawn exposure as a percentage of credit exposure.

Consumer & Retail

Consumer & Retail exposure was \$123.2 billion as of March 31, 2023. Criticized exposure increased by \$254 million from \$7.9 billion at December 31, 2022 to \$8.2 billion at March 31, 2023, driven by client-specific downgrades largely offset by client-specific upgrades and net portfolio activity.

March 31, 2023						
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn ^(d)	
Retail ^(a)	\$ 36,022	\$ 268	\$ 36,290	53 %	31 %	
Business and Consumer Services	32,012	409	32,421	49	40	
Food and Beverage	31,264	874	32,138	58	40	
Consumer Hard Goods	13,957	171	14,128	47	38	
Leisure ^(b)	8,184	76	8,260	25	40	
Total Consumer & Retail^(c)	\$ 121,439	\$ 1,798	\$ 123,237	51 %	37 %	

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 March 31, 2023 approximately 89% of the noninvestment-grade Leisure portfolio is secured.

(c) Consumer & Retail exposure is approximately 57% secured; unsecured exposure is approximately 79% investment-grade.

(d) Represents drawn exposure as a percent of credit exposure.

Oil & Gas

Oil & Gas exposure was \$34.0 billion as of March 31, 2023 of which \$545 million was considered criticized exposure.

March 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	\$ 16,364	\$ 1,847	\$ 18,211	53 %	29 %	
Other Oil & Gas ^(a)	15,544	239	15,783	61	27	
Total Oil & Gas^(b)	\$ 31,908	\$ 2,086	\$ 33,994	56 %	28 %	

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 40% secured, over half of which is reserve-based lending to the Exploration & Production sub-sector; unsecured exposure is approximately 68% 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 11 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 three months ended March 31, 2023 and 2022. Since March 31, 2022, nonaccrual loan exposure decreased by \$148 million driven by Transportation, civic organizations and SPEs, due to paydowns, predominantly offset by Consumer & Retail and Industrials due to client-specific downgrades.

Wholesale nonaccrual loan activity

Three months ended March 31, (in millions)	2023	2022
Beginning balance	\$ 2,395	\$ 2,445
Additions	672	866
Reductions:		
Paydowns and other	267	357
Gross charge-offs	95	17
Returned to performing status	53	186
Sales	52	3
Total reductions	467	563
Net changes	205	303
Ending balance	\$ 2,600	\$ 2,748

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the three months ended March 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)

(in millions, except ratios)	Three months ended March 31,	
	2023	2022
Loans		
Average loans retained	\$ 601,401	\$ 559,395
Gross charge-offs	105	52
Gross recoveries collected	(22)	(22)
Net charge-offs/(recoveries)	83	30
Net charge-off/(recovery) rate	0.06 %	0.02 %

Modified wholesale loans

The amortized cost of wholesale FDMs was \$437 million for the three months ended March 31, 2023. Refer to Note 1 and Note 11 for further information.

Wholesale TDRs were \$418 million for the three months ended March 31, 2022. Refer to Note 11 for further information on TDRs in prior periods.

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 22 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 (e.g., cash on deposit, and liquid and readily marketable debt or equity securities). Because of this collateralization, no allowance for credit losses is generally held against these receivables. 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. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

Derivative contracts

Derivatives enable clients and counterparties to manage risk including credit risk and risks arising from fluctuations in interest rates, foreign exchange and equities and commodities prices. The Firm makes markets in derivatives in order to meet these needs and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. The Firm also uses derivative instruments to manage its own credit risk and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For over-the-counter ("OTC") derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options, and cleared over-the-counter ("OTC-cleared") derivatives, the Firm can also be exposed to the credit risk of the relevant central counterparty clearing house ("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 over-the-counter 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 89% and 87% at March 31, 2023, and December 31, 2022, respectively. Refer to Note 4 for additional information on the Firm's use of collateral agreements and for a further discussion of derivative contracts, counterparties and settlement types.

The fair value of derivative receivables reported on the Consolidated balance sheets was \$59.3 billion and \$70.9 billion at March 31, 2023, and December 31, 2022, respectively. The decrease was primarily driven by market movements in CIB Markets. 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 held 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 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 4 for additional information on the Firm's use of collateral agreements.

The following tables summarize the net derivative receivables and the internal ratings profile for the periods presented.

Derivative receivables

(in millions)		March 31, 2023	December 31, 2022
Total, net of cash collateral	\$	59,274	\$ 70,880
Liquid securities and other cash collateral held against derivative receivables		(20,923)	(23,014)
Total, net of liquid securities and other cash collateral	\$	38,351	\$ 47,866
Other collateral held against derivative receivables		(1,234)	(1,261)
Total, net of collateral	\$	37,117	\$ 46,605

Ratings profile of derivative receivables

	March 31, 2023		December 31, 2022	
(in millions, except ratios)	Exposure net of collateral	% of exposure net of collateral	Exposure net of collateral	% of exposure net of collateral
Investment-grade	\$ 28,199	76 %	\$ 35,097	75 %
Noninvestment-grade	8,918	24	11,508 (a)	25
Total	\$ 37,117	100 %	\$ 46,605	100 %

Credit portfolio management activities

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 traditional lending activities (loans and lending-related commitments) and derivatives counterparty exposure in the Firm's wholesale businesses. In addition, the Firm obtains credit protection against certain loans in the retained wholesale portfolio through the issuance of credit-related notes. Information on credit portfolio management activities is provided in the table below.

Credit derivatives and credit-related notes used in credit portfolio management activities

	Notional amount of protection purchased and sold ^(a)	
(in millions)	March 31, 2023	December 31, 2022
Credit derivatives and credit-related notes used to manage:		
Loans and lending-related commitments	\$ 13,923	\$ 6,422
Derivative receivables	15,789	11,721
Credit derivatives and credit-related notes used in credit portfolio management activities	\$ 29,712	\$ 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.

Refer to Credit derivatives in Note 4 of this Form 10-Q and Note 5 of JPMorgan Chase's 2022 Form 10-K 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 allowance for credit losses generally consists of:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated),
- the allowance for lending-related commitments, which is 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 March 31, 2023 was \$22.8 billion, reflecting a net addition of \$1.1 billion from December 31, 2022. The net addition to the allowance for credit losses was predominantly driven by a deterioration in the Firm's weighted-average economic outlook, including the impact from changes to the Firm's macroeconomic scenarios, and the additional weight placed on the relative adverse scenario. The additional weight placed on the relative adverse scenario reflects an increased probability of a moderate recession due to tightening financial conditions, including higher inflation, changes in monetary policy, and geopolitical risks.

The net addition to the allowance consisted of:

- \$726 million in **wholesale**, which also reflected net downgrade activity, and an addition to the allowance for credit losses associated with Other assets in Corporate, and
- \$416 million in **consumer**.

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. 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 5.8% in the third quarter of 2024, and a 1.2% lower U.S. real GDP exiting the second quarter of 2024.

The Firm's central case assumptions reflected U.S. unemployment rates and U.S. real GDP as follows:

	Assumptions at March 31, 2023		
	2Q23	4Q23	2Q24
U.S. unemployment rate ^(a)	3.5 %	4.1 %	4.9 %
YoY growth in U.S. real GDP ^(b)	2.0 %	0.4 %	— %

	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 Note 13 and Note 10 of JPMorgan Chase's 2022 Form 10-K for a description of the policies, methodologies and judgments used to determine the Firm's allowances for credit losses on loans, lending-related commitments, and investment securities.

Refer to Consumer Credit Portfolio on pages 50-53, Wholesale Credit Portfolio on pages 54-62 and Note 11 for additional information on the consumer and wholesale credit portfolios.

Refer to Critical Accounting Estimates Used by the Firm on pages 74-76 for further information on the allowance for credit losses and related management judgments.

Allowance for credit losses and related information

Three months ended March 31, (in millions, except ratios)	2023				2022			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	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	235	1,111	105	1,451	204	720	52	976
Gross recoveries collected	(103)	(189)	(22)	(314)	(158)	(214)	(22)	(394)
Net charge-offs/(recoveries)	132	922	83	1,137	46	506	30	582
Provision for loan losses	247	1,222	578	2,047	175	506	687	1,368
Other	—	—	4	4	—	—	20	20
Ending balance at March 31,	\$ 1,666	\$ 11,400	\$ 6,987	\$ 20,053	\$ 1,894	\$ 10,250	\$ 5,048	\$ 17,192
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	—	(14)	(13)	(2)	—	98	96
Other	—	—	1	1	—	—	1	1
Ending balance at March 31,	\$ 77	\$ —	\$ 2,293	\$ 2,370	\$ 111	\$ —	\$ 2,247	\$ 2,358
Impairment methodology								
Asset-specific ^(b)	\$ (1,030)	\$ —	\$ 437	\$ (593)	\$ (644)	\$ 262	\$ 485	\$ 103
Portfolio-based	2,696	11,400	6,550	20,646	2,538	9,988	4,563	17,089
Total allowance for loan losses	\$ 1,666	\$ 11,400	\$ 6,987	\$ 20,053	\$ 1,894	\$ 10,250	\$ 5,048	\$ 17,192
Impairment methodology								
Asset-specific	\$ —	\$ —	\$ 45	\$ 45	\$ —	\$ —	\$ 139	\$ 139
Portfolio-based	77	—	2,248	2,325	111	—	2,108	2,219
Total allowance for lending-related commitments	\$ 77	\$ —	\$ 2,293	\$ 2,370	\$ 111	\$ —	\$ 2,247	\$ 2,358
Total allowance for investment securities	NA	NA	NA	\$ 90	NA	NA	NA	\$ 41
Total allowance for credit losses^(c)	\$ 1,743	\$ 11,400	\$ 9,280	\$ 22,513	\$ 2,005	\$ 10,250	\$ 7,295	\$ 19,591
Memo:								
Retained loans, end of period	\$ 300,447	\$ 180,079	\$ 604,324	\$ 1,084,850	\$ 296,161	\$ 152,283	\$ 569,953	\$ 1,018,397
Retained loans, average	300,585	180,451	601,401	1,082,437	295,460	149,398	559,395	1,004,253
Credit ratios								
Allowance for loan losses to retained loans	0.55 %	6.33 %	1.16 %	1.85 %	0.64 %	6.73 %	0.89 %	1.69 %
Allowance for loan losses to retained nonaccrual loans ^(d)	43	NM	316	331	42	NM	221	254
Allowance for loan losses to retained nonaccrual loans excluding credit card	43	NM	316	143	42	NM	221	102
Net charge-off/(recovery) rates	0.18	2.07	0.06	0.43	0.06	1.37	0.02	0.24

- (a) Represents the impact to the allowance for loan losses upon the Firm's adoption of changes to the TDR accounting guidance on January 1, 2023. The adoption of this guidance eliminated the existing accounting and disclosure requirements for TDRs, including the requirement to measure the allowance using a discounted cash flow ("DCF") methodology. The Firm elected to change from an asset-specific allowance approach to its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except collateral-dependent loans and nonaccrual risk-rated loans, for which the asset-specific allowance approach will continue to apply. 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 purchased credit deteriorated ("PCD") loans.
- (c) At March 31, 2023, in addition to the allowance for credit losses in the table above, the Firm also had an allowance for credit losses of \$241 million associated with Other assets in Corporate and \$20 million associated with certain accounts receivable in CIB.
- (d) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Allocation of allowance for loan losses

The table below presents a breakdown of the allowance for loan losses by loan class. Refer to Note 11 for further information on loan classes.

(in millions, except ratios)	March 31, 2023		December 31, 2022	
	Allowance for loan losses	Percent of retained loans to total retained loans	Allowance for loan losses	Percent of retained loans to total retained loans
Residential real estate	\$ 655	22 %	\$ 1,070	22 %
Auto and other	1,011	6	970	6
Consumer, excluding credit card	1,666	28	2,040	28
Credit card	11,400	17	11,200	17
Total consumer	13,066	44	13,240	45
Secured by real estate	1,865	12	1,782	12
Commercial and industrial	3,644	16	3,507	15
Other	1,478	28	1,197	28
Total wholesale	6,987	56	6,486	55
Total	\$ 20,053	100 %	\$ 19,726	100 %

INVESTMENT PORTFOLIO RISK MANAGEMENT

Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio or from principal investments. The investment securities portfolio is predominantly held by Treasury and CIO in connection with the Firm's balance sheet and asset-liability management objectives. Principal investments are predominantly privately-held financial instruments and are managed in the LOBs and Corporate. Investments are typically intended to be held over extended periods and, accordingly, the Firm has no expectation for short-term realized gains with respect to these investments.

Investment securities risk

Investment securities risk includes the exposure associated with a default in the payment of principal and interest. This risk is mitigated given that the investment securities portfolio held by Treasury and CIO predominantly consists of high-quality securities. At March 31, 2023, the Treasury and CIO investment securities portfolio, net of the allowance for credit losses, was \$608.1 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 33-34 and Note 9 for further information on the investment securities portfolio and internal risk ratings. Refer to Liquidity Risk Management on pages 42-47 for further information on related liquidity risk. Refer to Market Risk Management on pages 67-72 for further information on the market risk inherent in the portfolio.

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 in line with its strategies, including the Firm's commitment to support underserved communities and minority-owned businesses.

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

(in billions)	March 31, 2023	December 31, 2022
Tax-oriented investments, primarily in alternative energy and affordable housing	\$ 26.1	\$ 26.2
Private equity, various debt and equity instruments, and real assets ^(a)	10.5	10.8
Total carrying value	\$ 36.6	\$ 37.0

(a) Includes the Firm's 40% ownership in C6 Bank and 49% ownership in Viva Wallet.

Refer to page 130 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's Investment Portfolio Risk Management governance and oversight.

MARKET RISK MANAGEMENT

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. Refer to Market Risk Management on pages 131-138 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's Market Risk Management organization, market risk measurement, risk monitoring and control, and predominant business activities that give rise to market risk.

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 148 of JPMorgan Chase's 2022 Form 10-K.

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.

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 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. For risk management purposes, the Firm believes this methodology 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 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.

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 148 of JPMorgan Chase's 2022 Form 10-K for information regarding model reviews and approvals.

Refer to page 133 of JPMorgan Chase's 2022 Form 10-K for further information regarding VaR, including the inherent limitations, and the key differences between Risk Management VaR and Regulatory VaR. 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). Refer to Other risk measures on pages 136-138 of JPMorgan Chase's 2022 Form 10-K for further information regarding nonstatistical market risk measures used by the Firm.

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

(in millions)	Three months ended								
	March 31, 2023			December 31, 2022			March 31, 2022		
	Avg.	Min	Max	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type									
Fixed income	\$ 56	\$ 45	\$ 71	\$ 66	\$ 54	\$ 80	\$ 47	\$ 33	\$ 64
Foreign exchange	10	6	17	11	7	14	4	3	7
Equities	7	5	10	13	7	20	12	9	18
Commodities and other	15	11	19	18	14	28	15	10	23
Diversification benefit to CIB trading VaR	(44) ^(a)	NM ^(f)	NM ^(f)	(50) ^(a)	NM ^(f)	NM ^(f)	(33) ^(a)	NM ^(f)	NM ^(f)
CIB trading VaR	44	34	55	58	49	68	45	34	59
Credit Portfolio VaR	11 ^{(b)(c)}	8 ^(b)	17 ^{(b)(c)}	10 ^(b)	8 ^(b)	16 ^(b)	29 ^{(b)(c)}	4 ^(b)	235 ^{(b)(c)}
Diversification benefit to CIB VaR	(10) ^(a)	NM ^(f)	NM ^(f)	(8) ^(a)	NM ^(f)	NM ^(f)	(10) ^(a)	NM ^(f)	NM ^(f)
CIB VaR	45	35	58	60	51	72	64	35	240
OCB VaR	11 ^(d)	6	15	8	6	20	4 ^(d)	2	5
Corporate and other LOB VaR	15 ^(e)	13	17	13	10	15	13 ^(e)	10	16
Diversification benefit to other VaR	(8) ^(a)	NM ^(f)	NM ^(f)	(5) ^(a)	NM ^(f)	NM ^(f)	(4) ^(a)	NM ^(f)	NM ^(f)
Other VaR	18	14	22	16	13	24	13	10	17
Diversification benefit to CIB and other VaR	(16) ^(a)	NM ^(f)	NM ^(f)	(15) ^(a)	NM ^(f)	NM ^(f)	(14) ^(a)	NM ^(f)	NM ^(f)
Total VaR	\$ 47	\$ 37	\$ 57	\$ 61	\$ 51	\$ 71	\$ 63	\$ 34	\$ 242

- (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.
- (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 the first quarter of 2022, 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) For the three months ended March 31, 2022, the effects of nickel price increases and the associated volatility in the nickel market resulted in elevated average and maximum Credit Portfolio VaR. For the three months ended March 31, 2023, average and maximum Credit Portfolio VaR have decreased driven by a reduction in nickel-related exposure when compared to the same period in the prior year.
- (d) The increase in OCB VaR is driven by interest rate volatility impacting Home Lending warehouse loans, MSR, and related hedges.
- (e) The increase in Corporate and other LOB VaR is driven by higher market values for a legacy private equity position in Corporate which is publicly traded.
- (f) The maximum and minimum VaR for each portfolio may have occurred on different trading days than the components and consequently diversification benefit is not meaningful.

Quarter over quarter results

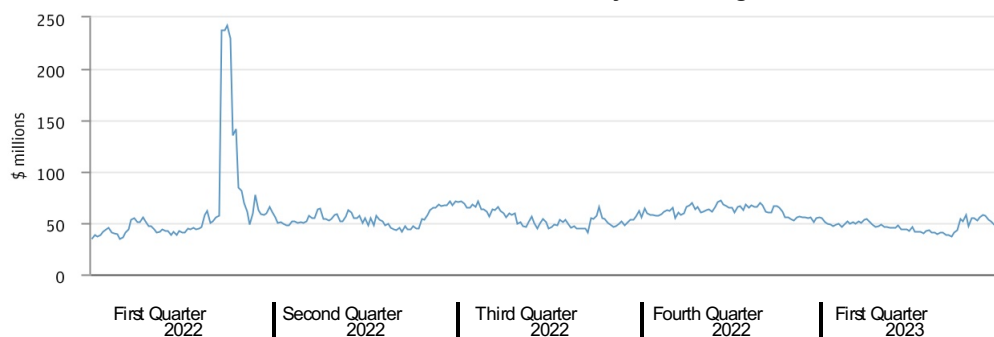
Average total VaR decreased by \$14 million for the three months ended March 31, 2023 when compared with December 31, 2022, reflecting reductions in exposure across fixed income, equities, and commodities.

Year over year results

Average total VaR decreased by \$16 million for the three months ended March 31, 2023, compared with the same period in the prior year predominantly due to a reduction in the nickel-related counterparty exposure in Credit Portfolio VaR.

The following graph presents daily Risk Management VaR for the five trailing quarters. The movement in VaR in March 2022 was driven by changes in nickel-related counterparty exposure in the Firm's Credit Portfolio.

Daily Risk Management VaR



VaR backtesting

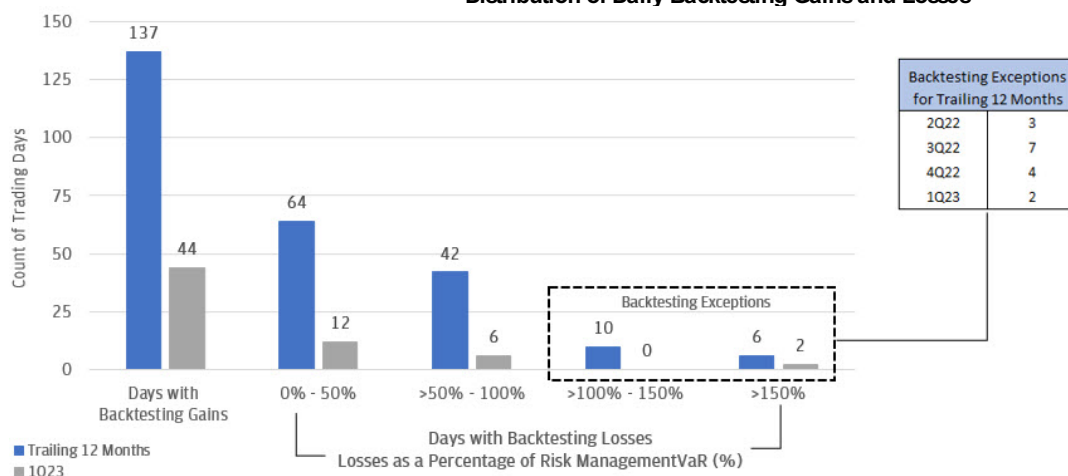
The Firm performs daily VaR model backtesting, which compares the daily Risk Management VaR results with the daily gains and losses that are utilized for VaR backtesting purposes. The gains and losses depicted in the chart below do not reflect the Firm's reported revenue as they exclude certain components 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 March 31, 2023, the Firm posted backtesting gains on 137 of the 259 days, and observed 16 VaR backtesting exceptions. For the three months ended March 31, 2023, the Firm posted backtesting gains on 44 of the 64 days, and observed two VaR backtesting exceptions.

The following chart presents the distribution of Firmwide daily backtesting gains and losses for the trailing 12 months and three months ended March 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



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 but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits, issuing debt and the investment securities portfolio.

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 132 of JPMorgan Chase's 2022 Form 10-K.

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. The deposit rates paid in these scenarios differ from actual deposit rates paid, due to repricing lags and other factors.

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. The Firm is currently evaluating the modeling of repricing lags for deposits in its earnings-at-risk scenarios. Incorporating repricing lags, in the current environment, would significantly affect the U.S. dollar interest rate scenarios, with higher interest rate scenarios expected to result in a positive sensitivity, and lower interest rate scenarios expected to result in a negative sensitivity, on the Firm's earnings-at-risk. 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 8 for additional information.

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

(in billions)	March 31, 2023	December 31, 2022
Parallel shift:		
+100 bps shift in rates	\$ (1.6)	\$ (2.0)
-100 bps shift in rates	1.7	2.4
Steeper yield curve:		
+100 bps shift in long-term rates	0.7	0.8
-100 bps shift in short-term rates	2.4	3.2
Flatter yield curve:		
+100 bps shift in short-term rates	(2.3)	(2.8)
-100 bps shift in long-term rates	(0.7)	(0.9)

The change in the Firm's U.S. dollar sensitivities as of March 31, 2023 compared to December 31, 2022 primarily reflected the impact of changes in the Firm's balance sheet.

As of March 31, 2023, the Firm's sensitivity to the +/-100 basis points parallel and short-term shift in rates is primarily the result of a greater impact from liabilities repricing compared to the impact of assets repricing, while a +/-100 basis points shift in long-term rates is primarily the result of a greater impact from assets repricing compared to the impact of liabilities repricing.

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

(in billions)	March 31, 2023	December 31, 2022
Parallel shift:		
+100 bps shift in rates	\$ 0.8	\$ 0.7
-100 bps shift in rates	(0.8)	(0.6)
Steeper yield curve:		
-100 bps shift in short-term rates	(0.7)	(0.6)
Flatter yield curve:		
+100 bps shift in short-term rates	0.7	0.6

The results of the non-U.S. dollar interest rate scenario involving a steeper/flatter yield curve with long-term rates increasing/decreasing by 100 basis points and short-term rates staying at current levels were not material to the Firm's earnings-at-risk at March 31, 2023 and December 31, 2022.

In addition to earnings-at-risk, 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 structural interest rate risk policy, the Firm has established limits on EVS as a percentage of CET1.

Refer to Other Risk Measures on pages 136–138 of JPMorgan Chase's 2022 Form 10-K 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 138 of JPMorgan Chase's 2022 Form 10-K 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 March 31, 2023 and December 31, 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)				December 31,
Activity	Description	Sensitivity measure	March 31, 2023	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	\$ (47)	\$ (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	(1,055)	(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 ^(b)	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 ^(b)	10% depreciation of currency	7	3
Derivatives – funding spread risk	Impact of changes in the spread related to derivatives FVA ^(c)	1 basis point parallel increase in spread	(4)	(4)
CVA - counterparty credit risk ^(b)	Credit risk component of CVA and associated hedges	10% credit spread widening	(1)	(1)
Fair value option elected liabilities – funding spread risk	Impact of changes in the spread related to fair value option elected liabilities DVA ^(c)	1 basis point parallel increase in spread	45	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 ^(c)	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 the first quarter of 2022, 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.

Refer to pages 139-140 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's country risk management.

Risk Reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of March 31, 2023 and their comparative exposures as of December 31, 2022. The selection of countries represents the Firm's largest total exposures by individual country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any existing or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

The increase in exposure to Germany was predominantly driven by increases in cash placed with the central bank of Germany and in debt securities, due to client-driven market-making activities.

The decrease in exposure to Australia 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 potential impacts to the Firm associated with the war in Ukraine. As of March 31, 2023, exposure to Russia was approximately \$500 million. 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)

(in billions)	March 31, 2023					December 31, 2022 ^(f)
	Deposits with banks ^(b)	Lending ^(c)	Trading and investing ^(d)	Other ^(e)	Total exposure	Total exposure
Germany	\$ 95.0	\$ 13.4	\$ 5.4	\$ 0.5	\$ 114.3	\$ 93.2
United Kingdom	35.7	25.6	13.7	2.2	77.2	70.1
Japan	44.1	2.6	2.8	0.3	49.8	55.8
Canada	1.5	10.4	5.0	0.2	17.1	14.4
Brazil	3.1	4.4	9.5	—	17.0	17.8
Switzerland	8.7	3.8	1.4	2.1	16.0	15.3
China	3.8	5.7	4.3	0.1	13.9	13.7
Australia	4.8	6.4	2.3	—	13.5	25.7
France	0.4	10.4	—	1.0	11.8	18.1
India	1.4	4.2	4.7	0.5	10.8	9.0
Singapore	2.2	3.8	3.3	0.9	10.2	9.9
Belgium	6.6	1.6	1.9	—	10.1	9.2
South Korea	2.1	3.8	3.2	0.2	9.3	10.0
Netherlands	—	7.5	(0.2)	0.4	7.7	7.1
Mexico	0.6	4.5	2.4	—	7.5	5.4
Saudi Arabia	0.6	4.6	2.2	—	7.4	7.9
Spain	0.2	5.2	1.2	—	6.6	5.8
Luxembourg	0.9	3.0	1.1	—	5.0	5.3
Sweden	1.2	2.9	0.1	—	4.2	4.4
Malaysia	3.0	0.2	1.0	—	4.2	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 March 31, 2023 and December 31, 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 inventory, investment securities, and counterparty exposure on derivative and securities financings net of eligible collateral and hedging. Includes exposure from single reference entity ("single-name"), index and other multiple reference entity transactions for which one or more of the underlying reference entities is in a country listed in the above table.

(e) Includes physical commodities inventory and clearing house guarantee funds.

(f) The country rankings presented in the table as of December 31, 2022, are based on the country rankings of the corresponding exposures at March 31, 2023, not actual rankings of such exposures at December 31, 2022.

CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

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 consists of:

- The allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated).
- The allowance for lending-related commitments, which is 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.

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 of JPMorgan Chase's 2022 Form 10-K 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; and refer to Allowance for credit losses on pages 63-65 and Note 12 of this Form 10-Q for further information.

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 and HPI.
- Key MEVs for the wholesale portfolio include U.S. unemployment, U.S. real GDP, U.S. equity prices, U.S. interest rates, corporate credit spreads, oil prices, commercial real estate prices and 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.

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 63 and in Note 12, the Firm's relative adverse scenario assumes an elevated U.S. unemployment rate, averaging approximately 1.9% higher over the eight-quarter forecast, with a peak difference of 2.6% in the fourth quarter of 2023; lower

U.S. real GDP with a slower recovery, remaining approximately 3.0% lower at the end of the eight-quarter forecast, with a peak difference of approximately 3.3% in the first quarter of 2024; and lower national HPI with a peak difference of approximately 9.3% in the fourth quarter of 2024.

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 March 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 March 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 \$650 million for residential real estate loans and lending-related commitments
- An increase of approximately \$2.5 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, particularly in light of the recent economic conditions, 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 March 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.

March 31, 2023 (in millions, except ratios)	Total assets at fair value	Total level 3 assets
Federal funds sold and securities purchased under resale agreements	\$ 309,336	\$ —
Securities borrowed	68,514	—
Trading assets:		
Trading—debt and equity instruments	519,578	3,139
Derivative receivables ^(a)	59,274	10,730
Total trading assets	578,852	13,869
AFS securities	197,248	250
Loans	38,546	1,479
MSRs	7,755	7,755
Other	13,498	406
Total assets measured at fair value on a recurring basis	1,213,749	23,759
Total assets measured at fair value on a nonrecurring basis	1,743	1,012
Total assets measured at fair value	1,215,492	24,771
Total Firm assets	3,744,305	
Level 3 assets at fair value as a percentage of total Firm assets ^(a)		0.7 %
Level 3 assets at fair value as a percentage of total Firm assets at fair value ^(a)		2.0 %

- (a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the \$10.7 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

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 speed, 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.

Credit card rewards liability

The credit card rewards liability was \$11.5 billion and \$11.3 billion at March 31, 2023 and December 31, 2022, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets. Refer to page 151 of JPMorgan Chase's 2022 Form 10-K for a description of the significant assumptions and sensitivities, associated with the Firm's credit card rewards liability.

Income taxes

Refer to Income taxes on page 152 of JPMorgan Chase's 2022 Form 10-K for a description of the significant assumptions, judgments and interpretations associated with the accounting for income taxes.

Goodwill impairment

Management applies significant judgment when testing goodwill for impairment. Refer to Goodwill impairment on page 151 of JPMorgan Chase's 2022 Form 10-K for a description of the significant valuation judgments associated with goodwill impairment.

Refer to Note 14 for additional information on goodwill, including the goodwill impairment assessment as of March 31, 2023.

Litigation reserves

Refer to Note 24 of this Form 10-Q, and Note 30 of JPMorgan Chase's 2022 Form 10-K for a description of the significant estimates and judgments associated with establishing litigation reserves.

ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board ("FASB") Standards Adopted since January 1, 2021

Standard	Summary of guidance	Effects on financial statements
Reference Rate Reform <i>Issued March 2020 and updated January 2021 and December 2022</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Issued and effective March 12, 2020. The January 7, 2021 and December 21, 2022 updates were effective when issued. Refer to Accounting and Reporting Developments on page 153 of JPMorgan Chase's 2022 Form 10-K for further information.

FASB Standards Adopted since January 1, 2023

Standard	Summary of guidance	Effects on financial statements
Derivatives and Hedging: Fair Value Hedging – Portfolio Layer Method <i>Issued March 2022</i>	<ul style="list-style-type: none"> Expands the current ability to hedge a portfolio of prepayable assets to allow more of the portfolio to be hedged. Non-prepayable assets can also be included in the same portfolio, thus increasing the size of the portfolio and the amount available 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. 	<ul style="list-style-type: none"> Adopted prospectively on January 1, 2023. Refer to Note 1 for further information.
Financial Instruments – Credit Losses: Troubled Debt Restructurings and Vintage Disclosures <i>Issued March 2022</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Adopted under the modified retrospective method on January 1, 2023. Refer to Note 1 for further information.

FASB Standards Issued but not yet Adopted

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 <i>Issued March 2023</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Required effective date: January 1, 2024. ^(a) The Firm is currently evaluating the potential impact on the Consolidated Financial Statements.

(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 Form 10-Q 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 the war in Ukraine;
- 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 cyberattacks 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 2022 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-K, Quarterly Reports on Form 10-Q or Current Reports on Form 8-K.

JPMorgan Chase & Co.
Consolidated statements of income (unaudited)

(in millions, except per share data)	Three months ended March 31,	
	2023	2022
Revenue		
Investment banking fees	\$ 1,649	\$ 2,008
Principal transactions	7,615	5,105
Lending- and deposit-related fees	1,620	1,839
Asset management fees	3,465	3,652
Commissions and other fees	1,695	1,710
Investment securities losses	(868)	(394)
Mortgage fees and related income	221	460
Card income	1,234	975
Other income	1,007	1,490
Noninterest revenue	17,638	16,845
Interest income	37,004	15,496
Interest expense	16,293	1,624
Net interest income	20,711	13,872
Total net revenue	38,349	30,717
Provision for credit losses	2,275	1,463
Noninterest expense		
Compensation expense	11,676	10,787
Occupancy expense	1,115	1,134
Technology, communications and equipment expense	2,184	2,360
Professional and outside services	2,448	2,572
Marketing	1,045	920
Other expense	1,639	1,418
Total noninterest expense	20,107	19,191
Income before income tax expense	15,967	10,063
Income tax expense	3,345	1,781
Net income	\$ 12,622	\$ 8,282
Net income applicable to common stockholders	\$ 12,193	\$ 7,845
Net income per common share data		
Basic earnings per share	\$ 4.11	\$ 2.64
Diluted earnings per share	4.10	2.63
Weighted-average basic shares	2,968.5	2,977.0
Weighted-average diluted shares	2,972.7	2,981.0

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of comprehensive income (unaudited)

(in millions)	Three months ended March 31,	
	2023	2022
Net income	\$ 12,622	\$ 8,282
Other comprehensive income/(loss), after-tax		
Unrealized gains/(losses) on investment securities	2,212	(7,453)
Translation adjustments, net of hedges	197	(62)
Fair value hedges	(21)	110
Cash flow hedges	798	(2,791)
Defined benefit pension and OPEB plans	(55)	67
DVA on fair value option elected liabilities	(208)	646
Total other comprehensive income/(loss), after-tax	2,923	(9,483)
Comprehensive income/(loss)	\$ 15,545	\$ (1,201)

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated balance sheets (unaudited)

(in millions, except share data)	March 31, 2023	December 31, 2022
Assets		
Cash and due from banks	\$ 25,098	\$ 27,697
Deposits with banks	520,902	539,537
Federal funds sold and securities purchased under resale agreements (included \$309,336 and \$311,883 at fair value)	317,111	315,592
Securities borrowed (included \$68,514 and \$70,041 at fair value)	195,917	185,369
Trading assets (included assets pledged of \$122,046 and \$93,687)	578,892	453,799
Available-for-sale securities (amortized cost of \$204,671 and \$216,188; included assets pledged of \$13,739 and \$9,158)	197,248	205,857
Held-to-maturity securities	412,827	425,305
Investment securities, net of allowance for credit losses	610,075	631,162
Loans (included \$38,546 and \$42,079 at fair value)	1,128,896	1,135,647
Allowance for loan losses	(20,053)	(19,726)
Loans, net of allowance for loan losses	1,108,843	1,115,921
Accrued interest and accounts receivable	115,316	125,189
Premises and equipment	28,266	27,734
Goodwill, MSRs and other intangible assets	62,090	60,859
Other assets (included \$14,434 and \$14,921 at fair value and assets pledged of \$7,164 and \$7,998)	181,795	182,884
Total assets^(a)	\$ 3,744,305	\$ 3,665,743
Liabilities		
Deposits (included \$41,580 and \$28,620 at fair value)	\$ 2,377,253	\$ 2,340,179
Federal funds purchased and securities loaned or sold under repurchase agreements (included \$192,290 and \$151,999 at fair value)	246,396	202,613
Short-term borrowings (included \$18,074 and \$15,792 at fair value)	42,241	44,027
Trading liabilities	189,864	177,976
Accounts payable and other liabilities (included \$6,697 and \$7,038 at fair value)	275,077	300,141
Beneficial interests issued by consolidated VIEs (included \$1 and \$5 at fair value)	14,903	12,610
Long-term debt (included \$76,185 and \$72,281 at fair value)	295,489	295,865
Total liabilities^(a)	3,441,223	3,373,411
Commitments and contingencies (refer to Notes 22, 23 and 24)		
Stockholders' equity		
Preferred stock (\$1 par value; authorized 200,000,000 shares; issued 2,740,375 and 2,740,375 shares)	27,404	27,404
Common stock (\$1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares)	4,105	4,105
Additional paid-in capital	89,155	89,044
Retained earnings	306,208	296,456
Accumulated other comprehensive losses	(14,418)	(17,341)
Treasury stock, at cost (1,182,645,386 and 1,170,676,094 shares)	(109,372)	(107,336)
Total stockholders' equity	303,082	292,332
Total liabilities and stockholders' equity	\$ 3,744,305	\$ 3,665,743

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at March 31, 2023, and December 31, 2022. The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests generally do not have recourse to the general credit of JPMorgan Chase. The assets and liabilities in the table below include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation. Refer to Note 13 for a further discussion.

(in millions)	March 31, 2023	December 31, 2022
Assets		
Trading assets	\$ 2,033	\$ 2,151
Loans	33,242	34,411
All other assets	533	550
Total assets	\$ 35,808	\$ 37,112
Liabilities		
Beneficial interests issued by consolidated VIEs	\$ 14,903	\$ 12,610
All other liabilities	255	279
Total liabilities	\$ 15,158	\$ 12,889

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of changes in stockholders' equity (unaudited)

(in millions, except per share data)	Three months ended March 31,	
	2023	2022
Preferred stock		
Balance at the beginning of the period	\$ 27,404	\$ 34,838
Issuance	—	—
Redemption	—	(2,000)
Balance at March 31	27,404	32,838
Common stock		
Balance at the beginning and end of the period	4,105	4,105
Additional paid-in capital		
Balance at the beginning of the period	89,044	88,415
Shares issued and commitments to issue common stock for employee share-based compensation awards, and related tax effects	111	(155)
Balance at March 31	89,155	88,260
Retained earnings		
Balance at the beginning of the period	296,456	272,268
Cumulative effect of change in accounting principles	449	—
Net income	12,622	8,282
Dividends declared:		
Preferred stock	(356)	(397)
Common stock (\$1.00 and \$1.00 per share, respectively)	(2,963)	(2,976)
Balance at March 31	306,208	277,177
Accumulated other comprehensive income/(loss)		
Balance at the beginning of the period	(17,341)	(84)
Other comprehensive income/(loss), after-tax	2,923	(9,483)
Balance at March 31	(14,418)	(9,567)
Treasury stock, at cost		
Balance at the beginning of the period	(107,336)	(105,415)
Repurchase	(2,955)	(2,500)
Reissuance	919	1,001
Balance at March 31	(109,372)	(106,914)
Total stockholders' equity	\$ 303,082	\$ 285,899

Effective January 1, 2023, the Firm adopted the Financial Instruments – Credit Losses: Troubled Debt Restructurings and Derivatives and Hedging: Fair Value Hedging – Portfolio Layer Method accounting guidance. Refer to Note 1 for further information.

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

JPMorgan Chase & Co.
Consolidated statements of cash flows (unaudited)

(in millions)	Three months ended March 31,	
	2023	2022
Operating activities		
Net income	\$ 12,622	\$ 8,282
Adjustments to reconcile net income to net cash used in operating activities:		
Provision for credit losses	2,275	1,463
Depreciation and amortization	1,649	1,820
Deferred tax (benefit)/expense	(606)	(730)
Other	1,738	1,200
Originations and purchases of loans held-for-sale	(22,009)	(66,262)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	20,873	75,558
Net change in:		
Trading assets	(117,067)	(91,213)
Securities borrowed	(10,460)	(18,979)
Accrued interest and accounts receivable	9,823	(49,719)
Other assets	14,129	1,319
Trading liabilities	3,200	29,993
Accounts payable and other liabilities	(27,847)	64,738
Other operating adjustments	439	613
Net cash (used in) operating activities	(111,241)	(41,917)
Investing activities		
Net change in:		
Federal funds sold and securities purchased under resale agreements	(1,317)	(40,407)
Held-to-maturity securities:		
Proceeds from paydowns and maturities	9,258	9,512
Purchases	(3,621)	(13,223)
Available-for-sale securities:		
Proceeds from paydowns and maturities	11,018	11,291
Proceeds from sales	34,554	16,971
Purchases	(26,490)	(45,357)
Proceeds from sales and securitizations of loans held-for-investment	9,230	9,987
Other changes in loans, net	(2,257)	(18,185)
All other investing activities, net	(6,581)	(3,197)
Net cash provided by/(used in) investing activities	23,794	(72,608)
Financing activities		
Net change in:		
Deposits	33,683	99,691
Federal funds purchased and securities loaned or sold under repurchase agreements	43,722	29,600
Short-term borrowings	(1,876)	4,300
Beneficial interests issued by consolidated VIEs	3,001	52
Proceeds from long-term borrowings	8,750	20,651
Payments of long-term borrowings	(16,171)	(13,094)
Redemption of preferred stock	—	(2,000)
Treasury stock repurchased	(2,690)	(2,455)
Dividends paid	(3,374)	(3,430)
All other financing activities, net	(488)	(543)
Net cash provided by financing activities	64,557	132,772
Effect of exchange rate changes on cash and due from banks and deposits with banks	1,656	(4,549)
Net increase/(decrease) in cash and due from banks and deposits with banks	(21,234)	13,698
Cash and due from banks and deposits with banks at the beginning of the period	567,234	740,834
Cash and due from banks and deposits with banks at the end of the period	\$ 546,000	\$ 754,532
Cash interest paid	\$ 15,287	\$ 1,088
Cash income taxes paid, net	1,382	705

The Notes to Consolidated Financial Statements (unaudited) are an integral part of these statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

Note 1 – Basis of presentation

JPMorgan Chase & Co. (“JPMorgan Chase” or the “Firm”), a financial holding company incorporated under Delaware law in 1968, is a leading financial services firm based in the U.S., with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Refer to Note 25 for a further discussion of the Firm’s business segments.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to U.S. GAAP. Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

The unaudited Consolidated Financial Statements prepared in conformity with U.S. GAAP require management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expense, and the disclosures of contingent assets and liabilities. Actual results could be different from these estimates. In the opinion of management, all normal, recurring adjustments have been included such that this interim financial information is fairly stated.

These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements, and related notes thereto, included in JPMorgan Chase’s 2022 Form 10-K.

Certain amounts reported in prior periods have been revised to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity.

Refer to Notes 1 and 14 of JPMorgan Chase’s 2022 Form 10-K for a further description of JPMorgan Chase’s accounting policies regarding consolidation.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities financing activities to be presented on a net basis when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances where it has determined that the specified conditions are met. Refer to Note 1 of JPMorgan Chase’s 2022 Form 10-K for further information on offsetting assets and liabilities.

Accounting standards adopted January 1, 2023

Derivatives and Hedging: Fair Value Hedging – Portfolio Layer Method

The adoption of this guidance expanded the ability to hedge a portfolio of prepayable assets to allow more of the portfolio to be hedged. Non-prepayable assets can also be included in the same portfolio, thus increasing the size of the portfolio and the amount available to be hedged. This guidance also clarified the types of derivatives that can be used as hedges, and the balance sheet presentation and disclosure requirements for the hedge accounting adjustments. As permitted by the guidance, the Firm elected to transfer HTM securities to AFS and designate those securities in a portfolio layer method hedge upon adoption. The adoption impact of the transfer on retained earnings was not material.

Refer to Note 4 and Note 9 for additional information.

Financial Instruments – Credit Losses: Troubled Debt Restructurings and Vintage Disclosures

The adoption of this guidance eliminated the accounting and disclosure requirements for TDRs, including the requirement to measure the allowance using a discounted cash flow (“DCF”) methodology, and allowed the option of a non-DCF portfolio-based approach for modified loans to troubled borrowers. If a DCF methodology is still applied for these modified loans, the discount rate must be the post-modification effective interest rate, instead of the pre-modification effective interest rate.

The Firm elected to apply its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except modified nonaccrual risk-rated loans which the Firm elected to continue applying a DCF methodology. Refer to Note 12 for a description of the portfolio-based allowance approach and the asset-specific allowance approach.

This guidance was adopted under the modified retrospective method which resulted in a net decrease to the allowance for credit losses of \$587 million and an increase to retained earnings of \$446 million, after-tax predominantly driven by residential real estate and credit card.

The adoption of this guidance eliminated the disclosure requirements for TDRs including the requirement to assess whether a modification is reasonably expected or involves a concession. The new guidance requires disclosure for 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 will differ from those previously considered TDRs. This guidance also requires disclosure of current period gross charge-offs by vintage origination year.

Refer to Note 11 for further information.

Note 2 – Fair value measurement

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's valuation methodologies for assets, liabilities and lending-related commitments measured at fair value and the fair value hierarchy.

The following table presents the assets and liabilities reported at fair value as of March 31, 2023, and December 31, 2022, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

March 31, 2023 (in millions)	Fair value hierarchy			Derivative netting adjustments ⁽¹⁾	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	\$ —	\$ 309,336	\$ —	\$ —	\$ 309,336
Securities borrowed	—	68,514	—	—	68,514
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. GSEs and government agencies ^(a)	—	77,406	757	—	78,163
Residential — nonagency	—	2,961	5	—	2,966
Commercial — nonagency	—	1,221	10	—	1,231
Total mortgage-backed securities	—	81,588	772	—	82,360
U.S. Treasury, GSEs and government agencies ^(a)	110,866	8,858	—	—	119,724
Obligations of U.S. states and municipalities	—	6,049	6	—	6,055
Certificates of deposit, bankers' acceptances and commercial paper	—	1,556	—	—	1,556
Non-U.S. government debt securities	31,282	59,694	169	—	91,145
Corporate debt securities	—	32,414	538	—	32,952
Loans	—	8,365	926	—	9,291
Asset-backed securities	—	2,689	7	—	2,696
Total debt instruments	142,148	201,213	2,418	—	345,779
Equity securities	138,312	1,561	581	—	140,454
Physical commodities ^(b)	4,434	11,525	—	—	15,959
Other	—	17,246	140	—	17,386
Total debt and equity instruments^(c)	284,894	231,545	3,139	—	519,578
Derivative receivables:					
Interest rate	2,702	278,722	4,115	(260,511)	25,028
Credit	—	11,070	977	(11,054)	993
Foreign exchange	163	184,299	1,218	(166,455)	19,225
Equity	—	57,478	3,979	(53,729)	7,728
Commodity	—	19,218	441	(13,359)	6,300
Total derivative receivables	2,865	550,787	10,730	(505,108)	59,274
Total trading assets^(d)	287,759	782,332	13,869	(505,108)	578,852
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. GSEs and government agencies ^(a)	—	67,305	—	—	67,305
Residential — nonagency	—	4,471	—	—	4,471
Commercial — nonagency	—	1,947	—	—	1,947
Total mortgage-backed securities	—	73,723	—	—	73,723
U.S. Treasury and government agencies	81,639	—	—	—	81,639
Obligations of U.S. states and municipalities	—	13,529	—	—	13,529
Non-U.S. government debt securities	10,581	8,849	—	—	19,430
Corporate debt securities	—	114	250	—	364
Asset-backed securities:					
Collateralized loan obligations	—	5,520	—	—	5,520
Other	—	3,043	—	—	3,043
Total available-for-sale securities	92,220	104,778	250	—	197,248
Loans ^(e)	—	37,067	1,479	—	38,546
Mortgage servicing rights	—	—	7,755	—	7,755
Other assets ^(d)	6,240	6,852	406	—	13,498
Total assets measured at fair value on a recurring basis	\$ 386,219	\$ 1,308,879	\$ 23,759	\$ (505,108)	\$ 1,213,749
Deposits	\$ —	\$ 39,372	\$ 2,208	\$ —	\$ 41,580
Federal funds purchased and securities loaned or sold under repurchase agreements	—	192,290	—	—	192,290
Short-term borrowings	—	16,664	1,410	—	18,074
Trading liabilities:					
Debt and equity instruments ^(c)	113,813	31,277	63	—	145,153
Derivative payables:					
Interest rate	4,082	267,285	3,361	(261,428)	13,300
Credit	—	11,903	525	(11,576)	852
Foreign exchange	144	186,805	673	(174,408)	13,214
Equity	—	61,681	4,864	(56,697)	9,848
Commodity	—	20,034	728	(13,265)	7,497
Total derivative payables	4,226	547,708	10,151	(517,374)	44,711
Total trading liabilities	118,039	578,985	10,214	(517,374)	189,864
Accounts payable and other liabilities	4,403	2,238	56	—	6,697
Beneficial interests issued by consolidated VIEs	—	1	—	—	1
Long-term debt	—	50,958	25,227	—	76,185
Total liabilities measured at fair value on a recurring basis	\$ 122,442	\$ 880,508	\$ 39,115	\$ (517,374)	\$ 524,691

	Fair value hierarchy			Derivative netting adjustments ^(a)	Total fair value
	Level 1	Level 2	Level 3		
December 31, 2022 (in millions)					
Federal funds sold and securities purchased under resale agreements	\$ —	\$ 311,883	\$ —	\$ —	\$ 311,883
Securities borrowed	—	70,041	—	—	70,041
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. GSEs and government agencies ^(a)	—	68,162	759	—	68,921
Residential — nonagency	—	2,498	5	—	2,503
Commercial — nonagency	—	1,448	7	—	1,455
Total mortgage-backed securities	—	72,108	771	—	72,879
U.S. Treasury, GSEs and government agencies ^(a)	61,191	8,546	—	—	69,737
Obligations of U.S. states and municipalities	—	6,608	7	—	6,615
Certificates of deposit, bankers' acceptances and commercial paper	—	2,009	—	—	2,009
Non-U.S. government debt securities	18,213	48,429	155	—	66,797
Corporate debt securities	—	25,626	463	—	26,089
Loans	—	5,744	759	—	6,503
Asset-backed securities	—	2,536	23	—	2,559
Total debt instruments	79,404	171,606	2,178	—	253,188
Equity securities	82,483	2,060	665	—	85,208
Physical commodities ^(b)	9,595	16,673	2	—	26,270
Other	—	18,146	64	—	18,210
Total debt and equity instruments^(c)	171,482	208,485	2,909	—	382,876
Derivative receivables:					
Interest rate	3,390	292,956	4,069	(271,966)	28,419
Credit	—	9,722	607	(9,239)	1,090
Foreign exchange	169	240,207	1,203	(218,214)	23,365
Equity	—	57,485	4,428	(52,774)	9,139
Commodity	—	24,982	375	(16,490)	8,867
Total derivative receivables	3,559	625,352	10,682	(568,713)	70,880
Total trading assets^(d)	175,041	833,837	13,591	(568,713)	453,756
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. GSEs and government agencies ^(a)	3	71,500	—	—	71,503
Residential — nonagency	—	4,620	—	—	4,620
Commercial — nonagency	—	1,958	—	—	1,958
Total mortgage-backed securities	3	78,078	—	—	78,081
U.S. Treasury and government agencies	92,060	—	—	—	92,060
Obligations of U.S. states and municipalities	—	6,786	—	—	6,786
Non-U.S. government debt securities	10,591	9,105	—	—	19,696
Corporate debt securities	—	118	239	—	357
Asset-backed securities:					
Collateralized loan obligations	—	5,792	—	—	5,792
Other	—	3,085	—	—	3,085
Total available-for-sale securities	102,654	102,964	239	—	205,857
Loans ^(e)	—	40,661	1,418	—	42,079
Mortgage servicing rights	—	—	7,973	—	7,973
Other assets ^(d)	7,544	6,065	405	—	14,014
Total assets measured at fair value on a recurring basis	\$ 285,239	\$ 1,365,451	\$ 23,626	\$ (568,713)	\$ 1,105,603
Deposits	\$ —	\$ 26,458	\$ 2,162	\$ —	\$ 28,620
Federal funds purchased and securities loaned or sold under repurchase agreements	—	151,999	—	—	151,999
Short-term borrowings	—	14,391	1,401	—	15,792
Trading liabilities:					
Debt and equity instruments ^(c)	98,719	28,032	84	—	126,835
Derivative payables:					
Interest rate	2,643	284,280	3,368	(274,321)	15,970
Credit	—	9,377	594	(9,217)	754
Foreign exchange	160	250,647	714	(232,665)	18,856
Equity	—	57,649	4,812	(53,657)	8,804
Commodity	—	22,748	521	(16,512)	6,757
Total derivative payables	2,803	624,701	10,009	(586,372)	51,141
Total trading liabilities	101,522	652,733	10,093	(586,372)	177,976
Accounts payable and other liabilities	5,702	1,283	53	—	7,038
Beneficial interests issued by consolidated VIEs	—	5	—	—	5
Long-term debt	—	48,189	24,092	—	72,281
Total liabilities measured at fair value on a recurring basis	\$ 107,224	\$ 895,058	\$ 37,801	\$ (586,372)	\$ 453,711

(a) At March 31, 2023, and December 31, 2022, included total U.S. GSE obligations of \$78.9 billion and \$73.8 billion, respectively, which were mortgage-related.

(b) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net realizable value is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. Refer to Note 4 for a further discussion of the Firm's hedge accounting relationships. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

- (c) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
- (d) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At March 31, 2023, and December 31, 2022, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were \$976 million and \$950 million, respectively. Included in these balances at March 31, 2023, and December 31, 2022, were trading assets of \$40 million and \$43 million, respectively, and other assets of \$936 million and \$907 million, respectively.
- (e) At March 31, 2023, and December 31, 2022, included \$10.2 billion and \$9.7 billion, respectively, of residential first-lien mortgages, and \$6.4 billion and \$6.8 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. GSEs and government agencies of \$3.6 billion and \$2.4 billion, respectively.
- (f) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

Level 3 valuations

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and the weighted or arithmetic averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range, weighted and arithmetic average values do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

Level 3 inputs^(a)

March 31, 2023

Product/Instrument	Fair value (in millions)	Principal valuation technique	Unobservable inputs ^(a)	Range of input values		Average ⁽ⁱ⁾
Residential mortgage-backed securities and loans ^(b)	\$ 1,695	Discounted cash flows	Yield	4%	30%	7%
			Prepayment speed	3%	12%	9%
			Conditional default rate	0%	5%	0%
			Loss severity	0%	110%	3%
Commercial mortgage-backed securities and loans ^(c)	432	Market comparables	Price	\$0	\$99	\$80
Corporate debt securities	788	Market comparables	Price	\$0	\$243	\$96
Loans ^(d)	1,050	Market comparables	Price	\$0	\$356	\$84
Non-U.S. government debt securities	169	Market comparables	Price	\$6	\$103	\$86
Net interest rate derivatives	775	Option pricing	Interest rate volatility	24 bps	633 bps	132 bps
			Interest rate spread volatility	33 bps	46 bps	36 bps
			Bermudan switch value	0%	52%	20%
			Interest rate correlation	(89)%	89%	15%
			IR-FX correlation	(35)%	60%	6%
	(21)	Discounted cash flows	Prepayment speed	0%	21%	7%
Net credit derivatives	430	Discounted cash flows	Credit correlation	40%	65%	49%
			Credit spread	0 bps	9,828 bps	370 bps
			Recovery rate	20%	90%	41%
	22	Market comparables	Price	\$3	\$115	\$80
Net foreign exchange derivatives	627	Option pricing	IR-FX correlation	(40)%	60%	20%
	(82)	Discounted cash flows	Prepayment speed	2%	18%	7%
			Interest rate curve	2%	18%	7%
Net equity derivatives	(885)	Option pricing	Forward equity price ^(e)	78%	138%	101%
			Equity volatility	5%	139%	32%
			Equity correlation	17%	100%	58%
			Equity-FX correlation	(86)%	60%	(28)%
			Equity-IR correlation	5%	35%	19%
Net commodity derivatives	(287)	Option pricing	Oil commodity forward	\$104 / BBL	\$286 / BBL	\$195 / BBL
			Natural gas commodity forward	\$0 / MMBTU	\$9 / MMBTU	\$5 / MMBTU
			Commodity volatility	4%	127%	66%
			Commodity correlation	(30)%	77%	23%
MSRs	7,755	Discounted cash flows	Refer to Note 14			
Long-term debt, short-term borrowings, and deposits ^(f)	27,517	Option pricing	Interest rate volatility	24 bps	633 bps	132 bps
			Bermudan switch value	0%	52%	20%
			Interest rate correlation	(89)%	89%	15%
			IR-FX correlation	(35)%	60%	6%
			Equity correlation	17%	100%	58%
			Equity-FX correlation	(86)%	60%	(28)%
			Equity-IR correlation	5%	35%	19%
	1,328	Discounted cash flows	Credit correlation	40%	65%	49%
Other level 3 assets and liabilities, net ^(g)	1,021					

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets. Furthermore, the inputs presented for each valuation technique in the table are, in some cases, not applicable to every instrument valued using the technique as the characteristics of the instruments can differ.

(b) Comprises U.S. GSE and government agency securities of \$732 million, nonagency securities of \$5 million and non-trading loans of \$958 million.

(c) Comprises U.S. GSE and government agency securities of \$25 million, nonagency securities of \$10 million, trading loans of \$72 million and non-trading loans of \$325 million.

(d) Comprises trading loans of \$854 million and non-trading loans of \$196 million.

(e) Long-term debt, short-term borrowings and deposits include structured notes issued by the Firm that are financial instruments that typically contain embedded derivatives. The estimation of the fair value of structured notes includes the derivative features embedded within the instrument. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(f) Includes equity securities of \$796 million including \$215 million in Other assets, for which quoted prices are not readily available and the fair value is generally based on internal valuation techniques such as EBITDA multiples and comparable analysis. All other level 3 assets and liabilities are insignificant both individually and in aggregate.

(g) Price is a significant unobservable input for certain instruments. When quoted market prices are not readily available, reliance is generally placed on price-based internal valuation techniques. The price input is expressed assuming a par value of \$100.

(h) Forward equity price is expressed as a percentage of the current equity price.

(i) Amounts represent weighted averages except for derivative related inputs where arithmetic averages are used.

Changes in and ranges of unobservable inputs

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for a discussion of the impact on fair value of changes in unobservable inputs and the relationships between unobservable inputs as well as a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the three months ended March 31, 2023 and 2022. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable inputs to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Fair value measurements using significant unobservable inputs											
Three months ended March 31, 2023 (in millions)	Fair value at Jan 1, 2023	Total realized/unrealized gains/(losses)	Purchases ^(a)	Sales	Settlements ^(b)	Transfers into level 3	Transfers (out of) level 3	Fair value at March 31, 2023	Change in unrealized gains/(losses) related to financial instruments held at March 31, 2023		
Assets:^(a)											
Federal funds sold and securities purchased under resale agreements	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Trading assets:											
Debt instruments:											
Mortgage-backed securities:											
U.S. GSEs and government agencies	759	7	25	(7)	(24)	—	(3)	757	7		
Residential – nonagency	5	1	—	—	(2)	1	—	5	1		
Commercial – nonagency	7	1	—	—	(1)	3	—	10	1		
Total mortgage-backed securities	771	9	25	(7)	(27)	4	(3)	772	9		
Obligations of U.S. states and municipalities	7	—	—	(1)	—	—	—	6	—		
Non-U.S. government debt securities	155	11	50	(47)	—	—	—	169	13		
Corporate debt securities	463	24	49	(17)	—	23	(4)	538	20		
Loans	759	8	436	(62)	(95)	23	(143)	926	8		
Asset-backed securities	23	—	1	(2)	(1)	1	(15)	7	—		
Total debt instruments	2,178	52	561	(136)	(123)	51	(165)	2,418	50		
Equity securities	665	(31)	58	(71)	—	36	(76)	581	(2)		
Physical commodities	2	—	—	—	(2)	—	—	—	—		
Other	64	(21)	94	—	2	1	—	140	1		
Total trading assets – debt and equity instruments	2,909	—	713	(207)	(123)	88	(241)	3,139	49	(c)	
Net derivative receivables: ^(b)											
Interest rate	701	346	35	(50)	(22)	(165)	(91)	754	461		
Credit	13	246	3	(3)	171	24	(2)	452	239		
Foreign exchange	489	89	28	(41)	(75)	64	(9)	545	126		
Equity	(384)	171	318	(687)	—	111	(414)	(885)	308		
Commodity	(146)	8	4	(67)	(127)	1	40	(287)	(31)		
Total net derivative receivables	673	860	388	(848)	(53)	35	(476)	579	1,103	(c)	
Available-for-sale securities:											
Corporate debt securities	239	11	—	—	—	—	—	250	11		
Total available-for-sale securities	239	11	—	—	—	—	—	250	11	(d)	
Loans	1,418	26	148	(66)	(95)	157	(109)	1,479	16	(e)	
Mortgage servicing rights	7,973	(11)	31	2	(240)	—	—	7,755	(11)	(e)	
Other assets	405	5	12	—	(16)	—	—	406	5	(c)	
Fair value measurements using significant unobservable inputs											
Three months ended March 31, 2023 (in millions)	Fair value at Jan 1, 2023	Total realized/unrealized (gains)/losses	Purchases	Sales	Issuances	Settlements ^(b)	Transfers into level 3	Transfers (out of) level 3	Fair value at March 31, 2023	Change in unrealized (gains)/losses related to financial instruments held at March 31, 2023	
Liabilities:^(a)											
Deposits	\$ 2,162	\$ 48	\$ —	\$ —	\$ 128	\$ (67)	\$ —	\$ (63)	\$ 2,208	\$ 48	(c)(f)
Short-term borrowings	1,401	90	—	—	1,051	(1,132)	—	—	1,410	20	(c)(f)
Trading liabilities – debt and equity instruments	84	(12)	(27)	8	—	—	12	(2)	63	1	(c)
Accounts payable and other liabilities	53	(1)	—	4	—	—	—	—	56	(1)	(c)
Long-term debt	24,092	1,356	—	—	2,733	(2,975)	91	(70)	25,227	1,447	(c)(f)

Fair value measurements using significant unobservable inputs											
Three months ended March 31, 2022 (in millions)	Fair value at Jan 1, 2022	Total realized/unrealized gains/(losses)	Purchases ^(a)	Sales	Settlements ^(b)	Transfers into level 3	Transfers (out of) level 3	Fair value at March 31, 2022	Change in unrealized gains/(losses) related to financial instruments held at March 31, 2022		
Assets: ^(a)											
Federal funds sold and securities purchased under resale agreements	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	
Trading assets:											
Debt instruments:											
Mortgage-backed securities:											
U.S. GSEs and government agencies	265	27	22	(7)	(21)	—	—	286		26	
Residential – nonagency	28	—	—	—	(11)	—	(7)	10		—	
Commercial – nonagency	10	—	—	—	—	—	—	10		—	
Total mortgage-backed securities	303	27	22	(7)	(32)	—	(7)	306		26	
Obligations of U.S. states and municipalities	7	—	—	—	—	—	—	7		—	
Non-U.S. government debt securities	81	(33)	228	(180)	—	37	—	133		(33)	
Corporate debt securities	332	(19)	61	(59)	(37)	41	(26)	293		(20)	
Loans	708	(4)	297	(98)	(7)	271	(118)	1,049		(4)	
Asset-backed securities	26	—	1	—	—	4	(3)	28		—	
Total debt instruments	1,457	(29)	609	(344)	(76)	353	(154)	1,816		(31)	
Equity securities	662	(813)	223	(240)	—	853	(22)	663		(760)	
Physical commodities	—	—	—	—	—	—	—	—		—	
Other	160	1	20	—	(5)	—	(1)	175		16	
Total trading assets – debt and equity instruments	2,279	(841) ^(c)	852	(584)	(81)	1,206	(177)	2,654		(775) ^(c)	
Net derivative receivables: ^(b)											
Interest rate	(16)	233	126	(94)	151	(27)	(6)	367		422	
Credit	74	67	4	(4)	(96)	(3)	2	44		66	
Foreign exchange	(419)	345	132	(24)	70	(6)	(22)	76		364	
Equity	(3,626)	730	498	(559)	443	(331)	262	(2,583)		838	
Commodity	(907)	422	50	(137)	156	—	2	(414)		467	
Total net derivative receivables	(4,894)	1,797 ^(c)	810	(818)	724	(367)	238	(2,510)		2,157 ^(c)	
Available-for-sale securities:											
Corporate debt securities	161	27	17	—	—	—	—	205		27	
Total available-for-sale securities	161	27 ^(d)	17	—	—	—	—	205		27 ^(d)	
Loans	1,933	98 ^(c)	121	(5)	(281)	390	(184)	2,072		156 ^(c)	
Mortgage servicing rights	5,494	959 ^(e)	1,130	(57)	(232)	—	—	7,294		959 ^(e)	
Other assets	306	9 ^(c)	41	—	(17)	2	—	341		9 ^(c)	
Fair value measurements using significant unobservable inputs											
Three months ended March 31, 2022 (in millions)	Fair value at Jan 1, 2022	Total realized/unrealized (gains)/losses	Purchases	Sales	Issuances	Settlements ^(b)	Transfers into level 3	Transfers (out of) level 3	Fair value at March 31, 2022	Change in unrealized (gains)/losses related to financial instruments held at March 31, 2022	
Liabilities: ^(a)											
Deposits	\$ 2,317	\$ (142) ^{(c)(f)}	\$ —	\$ —	\$ 108	\$ (48)	\$ —	\$ (114)	\$ 2,121	\$	(143) ^{(c)(f)}
Short-term borrowings	2,481	(401) ^{(c)(f)}	—	—	1,423	(1,347)	1	(11)	2,146		(153) ^{(c)(f)}
Trading liabilities – debt and equity instruments	30	(17) ^(c)	(14)	30	—	—	14	(2)	41		31 ^(c)
Accounts payable and other liabilities	69	(4) ^(c)	—	42	—	—	1	—	108		(4) ^(c)
Long-term debt	24,374	(1,668) ^{(c)(f)}	—	—	4,050	(2,476)	263	(149)	24,394		(1,575) ^{(c)(f)}

- (a) Level 3 assets at fair value as a percentage of total Firm assets at fair value (including assets measured at fair value on a nonrecurring basis) were 2% at both March 31, 2023 and December 31, 2022. Level 3 liabilities at fair value as a percentage of total Firm liabilities at fair value (including liabilities measured at fair value on a nonrecurring basis) were 7% and 8% at March 31, 2023 and December 31, 2022, respectively.
- (b) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
- (c) Predominantly reported in principal transactions revenue, except for changes in fair value for OCB mortgage loans and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
- (d) Realized gains/(losses) on AFS securities are reported in investment securities gains/(losses). Unrealized gains/(losses) are reported in OCI. Realized and unrealized gains/(losses) recorded on level 3 AFS securities were not material for the three months ended March 31, 2023 and 2022.
- (e) Changes in fair value for MSRs are reported in mortgage fees and related income.
- (f) Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue, and were not material for the three months ended March 31, 2023 and 2022. Unrealized (gains)/losses are reported in OCI, and were \$(20) million and \$(229) million for the three months ended March 31, 2023 and 2022, respectively.
- (g) Loan originations are included in purchases.
- (h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, deconsolidations associated with beneficial interests in VIEs and other items.

Level 3 analysis

Consolidated balance sheets changes

The following describes significant changes to level 3 assets since December 31, 2022, for those items measured at fair value on a recurring basis. Refer to Assets and liabilities measured at fair value on a nonrecurring basis on page 95 for further information on changes impacting items measured at fair value on a nonrecurring basis.

Three months ended March 31, 2023

Level 3 assets were \$23.8 billion at March 31, 2023, relatively flat compared to December 31, 2022, with no individually significant movements.

Refer to the sections below for additional information.

Transfers between levels for instruments carried at fair value on a recurring basis

For the three months ended March 31, 2023, there were no significant transfers from level 2 into level 3.

For the three months ended March 31, 2023, significant transfers from level 3 into level 2 included the following:

- \$953 million of gross equity derivative receivables as a result of an increase in observability and a decrease in the significance of unobservable inputs.

For the three months ended March 31, 2022, significant transfers from level 2 into level 3 included the following:

- \$1.2 billion of total debt and equity instruments, largely due to equity securities of \$853 million driven by a decrease in observability as a result of restricted access to certain markets.

For the three months ended March 31, 2022, there were no significant transfers from level 3 into level 2.

All transfers are based on changes in the observability and/or significance of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the periods indicated. These amounts exclude any effects of the Firm's risk management activities where the financial instruments are classified as level 1 and 2 of the fair value hierarchy. Refer to Changes in level 3 recurring fair value measurements rollforward tables on pages 91-94 for further information on these instruments.

Three months ended March 31, 2023

- \$891 million of net gains on assets, driven by gains in net derivative receivables due to market movements.
- \$1.5 billion of net losses on liabilities, predominantly driven by an increase in the fair value of long-term debt due to market movements.

Three months ended March 31, 2022

- \$2.0 billion of net gains on assets, predominantly driven by gains in net equity derivative receivables due to market movements and MSRs reflecting lower prepayment speeds on higher rates.
- \$2.2 billion of net gains on liabilities, largely driven by gains in long-term debt due to market movements.

Refer to Note 14 for information on MSRs.

Credit and funding adjustments — derivatives

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The FVA presented below includes the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

(in millions)	Three months ended March 31,	
	2023	2022
Credit and funding adjustments:		
Derivatives CVA	\$ 55	\$ (312)
Derivatives FVA	(8)	(58)

Refer to Note 2 of JPMorgan Chase's 2022 Form 10-K for further information about both credit and funding adjustments, as well as information about valuation adjustments on fair value option elected liabilities.

Assets and liabilities measured at fair value on a nonrecurring basis

The following tables present the assets and liabilities held as of March 31, 2023 and 2022, for which nonrecurring fair value adjustments were recorded during the three months ended March 31, 2023 and 2022, by major product category and fair value hierarchy.

March 31, 2023 (in millions)	Fair value hierarchy			Total fair value
	Level 1	Level 2	Level 3	
Loans	\$ —	\$ 709	\$ 833 ^(b)	\$ 1,542
Other assets ^(a)	—	22	179	201
Total assets measured at fair value on a nonrecurring basis	\$ —	\$ 731	\$ 1,012	\$ 1,743
Accounts payable and other liabilities	—	—	3	3
Total liabilities measured at fair value on a nonrecurring basis	\$ —	\$ —	\$ 3	\$ 3

March 31, 2022 (in millions)	Fair value hierarchy			Total fair value
	Level 1	Level 2	Level 3	
Loans	\$ —	\$ 874	\$ 417	\$ 1,291
Other assets	—	15	802	817
Total assets measured at fair value on a nonrecurring basis	\$ —	\$ 889	\$ 1,219	\$ 2,108
Accounts payable and other liabilities	—	—	28	28
Total liabilities measured at fair value on a nonrecurring basis	\$ —	\$ —	\$ 28	\$ 28

(a) Primarily includes equity securities without readily determinable fair values that were adjusted based on observable price changes in orderly transactions from an identical or similar investment of the same issuer (measurement alternative). Of the \$179 million in level 3 assets measured at fair value on a nonrecurring basis as of March 31, 2023, \$158 million related to equity securities adjusted based on the measurement alternative. These equity securities are classified as level 3 due to the infrequency of the observable prices and/or the restrictions on the shares.

(b) Of the \$833 million in level 3 assets measured at fair value on a nonrecurring basis as of March 31, 2023, \$14 million related to residential real estate loans carried at the net realizable value of the underlying collateral (e.g., collateral-dependent loans). These amounts are classified as level 3 as they are valued using information from broker's price opinions, appraisals and automated valuation models and discounted based upon the Firm's experience with actual liquidation values. These discounts ranged from 13% to 48% with a weighted average of 25%.

Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which fair value adjustments have been recognized for the three months ended March 31, 2023 and 2022, related to assets and liabilities held at those dates.

(in millions)	Three months ended March 31,	
	2023	2022
Loans	\$ (37)	\$ (18)
Other assets ^(a)	(65)	360
Accounts payable and other liabilities	(3)	(24)
Total nonrecurring fair value gains/(losses)	\$ (105)	\$ 318

(a) Included \$(61) million and \$376 million for the three months ended March 31, 2023 and 2022, respectively, of net gains/(losses) as a result of the measurement alternative.

Refer to Note 11 for further information about the measurement of collateral-dependent loans.

Equity securities without readily determinable fair values

The Firm measures certain equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer (i.e., measurement alternative), with such changes recognized in other income.

In its determination of the new carrying values upon observable price changes, the Firm may adjust the prices if deemed necessary to arrive at the Firm's estimated fair values. Such adjustments may include adjustments to reflect the different rights and obligations of similar securities, and other adjustments that are consistent with the Firm's valuation techniques for private equity direct investments.

The following table presents the carrying value of equity securities without readily determinable fair values held as of March 31, 2023 and 2022, that are measured under the measurement alternative and the related adjustments recorded during the periods presented for those securities with observable price changes. These securities are included in the nonrecurring fair value tables when applicable price changes are observable.

As of or for the period ended, (in millions)	Three months ended March 31,	
	2023	2022
Other assets		
Carrying value ^(a)	\$ 3,910	\$ 4,131
Upward carrying value changes ^(b)	35	387
Downward carrying value changes/impairment ^(c)	(96)	(11)

(a) The carrying value as of December 31, 2022 was \$4.1 billion. The period-end carrying values reflect cumulative purchases and sales in addition to upward and downward carrying value changes.

(b) The cumulative upward carrying value changes between January 1, 2018 and March 31, 2023 were \$1.5 billion.

(c) The cumulative downward carrying value changes/impairment between January 1, 2018 and March 31, 2023 were \$(1.0) billion.

Included in other assets above is the Firm's interest in approximately 37 million Visa Class B common shares ("Visa B shares"). These shares are subject to certain transfer restrictions and are convertible into Visa Class A common shares ("Visa A shares") at a specified conversion rate upon final resolution of certain litigation matters involving Visa. The conversion rate of Visa B shares into Visa A shares was 1.5991 at March 31, 2023, and the conversion rate may be adjusted by Visa depending on developments related to the litigation matters. The outcome of those litigation matters, and the effect that the resolution of those matters may have on the conversion rate, is unknown. Accordingly, as of March 31, 2023, there is significant uncertainty regarding when the transfer restrictions on Visa B shares may be terminated and what the final conversion rate for the Visa B shares will be. As a result of these considerations, as well as differences in voting rights, Visa B shares are not considered to be similar to Visa A shares, and they continue to be held at their nominal carrying value.

In connection with prior sales of Visa B shares, the Firm has entered into derivative instruments with the purchasers of the shares under which the Firm retains the risk associated with changes in the conversion rate. Under the terms of the derivative instruments, the Firm will (a) make or receive payments based on subsequent changes in the conversion rate and (b) make periodic interest payments to the purchasers of the Visa B shares. The payments under the derivative instruments will continue as long as the Visa B shares remain subject to transfer restrictions. The derivative instruments are accounted for at fair value using a discounted cash flow methodology based upon the Firm's estimate of the timing and magnitude of final resolution of the litigation matters. The derivative instruments are recorded in trading liabilities, and changes in fair value are recognized in other income. As of March 31, 2023, the Firm held derivative instruments associated with 23 million Visa B shares that the Firm had previously sold, which are all subject to similar terms and conditions.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

The following table presents, by fair value hierarchy classification, the carrying values and estimated fair values at March 31, 2023, and December 31, 2022, of financial assets and liabilities, excluding financial instruments that are carried at fair value on a recurring basis, and their classification within the fair value hierarchy.

(in billions)	March 31, 2023					December 31, 2022				
	Estimated fair value hierarchy				Total estimated fair value	Estimated fair value hierarchy				Total estimated fair value
	Carrying value	Level 1	Level 2	Level 3		Carrying value	Level 1	Level 2	Level 3	
Financial assets										
Cash and due from banks	\$ 25.1	\$ 25.1	\$ —	\$ —	\$ 25.1	\$ 27.7	\$ 27.7	\$ —	\$ —	27.7
Deposits with banks	520.9	520.4	0.5	—	520.9	539.5	539.3	0.2	—	539.5
Accrued interest and accounts receivable	114.8	—	114.7	0.1	114.8	124.7	—	124.6	0.1	124.7
Federal funds sold and securities purchased under resale agreements	7.8	—	7.8	—	7.8	3.7	—	3.7	—	3.7
Securities borrowed	127.4	—	127.4	—	127.4	115.3	—	115.3	—	115.3
Investment securities, held-to-maturity	412.8	187.2	194.8	—	382.0	425.3	189.1	199.5	—	388.6
Loans, net of allowance for loan losses ^(a)	1,070.3	—	198.9	851.2	1,050.1	1,073.9	—	194.0	853.9	1,047.9
Other	102.4	—	100.8	1.7	102.5	101.2	—	99.6	1.7	101.3
Financial liabilities										
Deposits	\$ 2,335.7	\$ —	\$ 2,335.9	\$ —	\$ 2,335.9	\$ 2,311.6	\$ —	\$ 2,311.5	\$ —	\$ 2,311.5
Federal funds purchased and securities loaned or sold under repurchase agreements	54.1	—	54.1	—	54.1	50.6	—	50.6	—	50.6
Short-term borrowings	24.2	—	24.2	—	24.2	28.2	—	28.2	—	28.2
Accounts payable and other liabilities	238.5	—	232.3	5.6	237.9	257.5	—	251.2	5.6	256.8
Beneficial interests issued by consolidated VIEs	14.9	—	14.9	—	14.9	12.6	—	12.6	—	12.6
Long-term debt	219.3	—	214.3	2.8	217.1	223.6	—	216.5	2.8	219.3

(a) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. Carrying value of the loan takes into account the loan's allowance for loan losses, which represents the loan's expected credit losses over its remaining expected life. The difference between the estimated fair value and carrying value of a loan is generally attributable to changes in market interest rates, including credit spreads, market liquidity premiums and other factors that affect the fair value of a loan but do not affect its carrying value.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets. The carrying value and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

(in billions)	March 31, 2023					December 31, 2022				
	Carrying value ^{(a) (b)}	Estimated fair value hierarchy			Total estimated fair value	Carrying value ^{(a) (b)}	Estimated fair value hierarchy			Total estimated fair value
		Level 1	Level 2	Level 3			Level 1	Level 2	Level 3	
Wholesale lending-related commitments	\$ 2.3	\$ —	\$ —	\$ 3.2	\$ 3.2	\$ 2.3	\$ —	\$ —	\$ 3.2	\$ 3.2

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which is recognized at fair value at the inception of the guarantees.

(b) Includes the wholesale allowance for lending-related commitments.

The Firm does not estimate the fair value of consumer off-balance sheet lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. Refer to page 169 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the valuation of lending-related commitments.

Note 3 – Fair value option

The fair value option provides an option to elect fair value for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.

The Firm has elected to measure certain instruments at fair value for several reasons including to mitigate income statement volatility caused by the differences between the measurement basis of elected instruments (e.g., certain instruments that otherwise would be accounted for on an accrual basis) and the associated risk management arrangements that are accounted for on a fair value basis, as well as to better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis, including lending-related commitments
- Certain securities financing agreements
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument
- Structured notes and other hybrid instruments, which are predominantly financial instruments that contain embedded derivatives, that are issued or transacted as part of client-driven activities
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the three months ended March 31, 2023 and 2022, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

(in millions)	Three months ended March 31,					
	2023			2022		
	Principal transactions	All other income	Total changes in fair value recorded ^(a)	Principal transactions	All other income	Total changes in fair value recorded ^(a)
Federal funds sold and securities purchased under resale agreements	\$ 202	\$ —	\$ 202	\$ (230)	\$ —	\$ (230)
Securities borrowed	88	—	88	(198)	—	(198)
Trading assets:						
Debt and equity instruments, excluding loans	1,595	—	1,595	344	—	344
Loans reported as trading assets:						
Changes in instrument-specific credit risk	131	—	131	(6)	—	(6)
Other changes in fair value	3	—	3	(11)	—	(11)
Loans:						
Changes in instrument-specific credit risk	65	1 ^(c)	66	6	12 ^(c)	18
Other changes in fair value	195	110 ^(c)	305	(719)	(514) ^(c)	(1,233)
Other assets	30	—	30	11	(3) ^(d)	8
Deposits ^(a)	(473)	—	(473)	402	—	402
Federal funds purchased and securities loaned or sold under repurchase agreements	(61)	—	(61)	82	—	82
Short-term borrowings ^(a)	(159)	—	(159)	302	—	302
Trading liabilities	(15)	—	(15)	(66)	—	(66)
Beneficial interests issued by consolidated VIEs	—	—	—	(1)	—	(1)
Other liabilities	—	—	—	3	—	3
Long-term debt ^{(a)(b)}	(2,798)	(26) ^{(c)(d)}	(2,824)	3,960	19 ^{(c)(d)}	3,979

(a) Unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected are recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transactions revenue were not material for the three months ended March 31, 2023 and 2022.

(b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

(e) Changes in fair value exclude contractual interest, which is included in interest income and interest expense for all instruments other than certain hybrid financial instruments in OIB. Refer to Note 6 for further information regarding interest income and interest expense.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of March 31, 2023, and December 31, 2022, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

(in millions)	March 31, 2023			December 31, 2022		
	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding
Loans						
Nonaccrual loans						
Loans reported as trading assets	\$ 2,437	\$ 365	\$ (2,072)	\$ 2,517	\$ 368	\$ (2,149)
Loans	934	788	(146)	967	829	(138)
Subtotal	3,371	1,153	(2,218)	3,484	1,197	(2,287)
90 or more days past due and government guaranteed						
Loans ^(a)	106	99	(7)	124	115	(9)
All other performing loans^(b)						
Loans reported as trading assets	10,761	8,926	(1,835)	7,823	6,135	(1,688)
Loans	38,516	37,659	(857)	42,588	41,135	(1,453)
Subtotal	49,277	46,585	(2,692)	50,411	47,270	(3,141)
Total loans	\$ 52,754	\$ 47,837	\$ (4,917)	\$ 54,019	\$ 48,582	\$ (5,437)
Long-term debt						
Principal-protected debt	\$ 44,223 ^(d)	\$ 33,595	\$ (10,628)	\$ 41,341 ^(d)	\$ 31,105	\$ (10,236)
Nonprincipal-protected debt ^(c)	NA	42,590	NA	NA	41,176	NA
Total long-term debt	NA	\$ 76,185	NA	NA	\$ 72,281	NA
Long-term beneficial interests						
Nonprincipal-protected debt ^(c)	NA	\$ 1	NA	NA	\$ 5	NA
Total long-term beneficial interests	NA	\$ 1	NA	NA	\$ 5	NA

(a) These balances are excluded from nonaccrual loans as the loans are insured and/or guaranteed by U.S. government agencies.

(b) There were no performing loans that were ninety days or more past due as of March 31, 2023, and December 31, 2022.

(c) Remaining contractual principal is not applicable to nonprincipal-protected structured notes and long-term beneficial interests. Unlike principal-protected structured notes and long-term beneficial interests, for which the Firm is obligated to return a stated amount of principal at maturity, nonprincipal-protected structured notes and long-term beneficial interests do not obligate the Firm to return a stated amount of principal at maturity, but for structured notes to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal-protected notes.

(d) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At March 31, 2023, and December 31, 2022, the contractual amount of lending-related commitments for which the fair value option was elected was \$9.4 billion and \$7.6 billion, respectively, with a corresponding fair value of \$12 million and \$24 million, respectively. Refer to Note 28 of JPMorgan Chase's 2022 Form 10-K, and Note 22 of this Form 10-Q for further information regarding off-balance sheet lending-related financial instruments.

Structured note products by balance sheet classification and risk component

The following table presents the fair value of structured notes, by balance sheet classification and the primary risk type.

(in millions)	March 31, 2023				December 31, 2022			
	Long-term debt	Short-term borrowings	Deposits	Total	Long-term debt	Short-term borrowings	Deposits	Total
Risk exposure								
Interest rate	\$ 34,608	\$ 292	\$ 37,213	\$ 72,113	\$ 31,973	\$ 260	\$ 24,655	\$ 56,888
Credit	4,227	241	—	4,468	4,105	170	—	4,275
Foreign exchange	2,742	1,079	125	3,946	2,674	788	50	3,512
Equity	31,936	5,011	3,406	40,353	30,864	4,272	3,545	38,681
Commodity	1,757	26	2 ^(a)	1,785	1,655	16	2 ^(a)	1,673
Total structured notes	\$ 75,270	\$ 6,649	\$ 40,746	\$ 122,665	\$ 71,271	\$ 5,506	\$ 28,252	\$ 105,029

(a) Excludes deposits linked to precious metals for which the fair value option has not been elected of \$613 million and \$602 million for the periods ended March 31, 2023 and December 31, 2022, respectively.

Note 4 – Derivative instruments

JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Refer to Note 5 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's use of and accounting policies regarding derivative instruments.

The Firm's disclosures are based on the accounting treatment and purpose of these derivatives. A limited number of the Firm's derivatives are designated in hedge

accounting relationships and are disclosed according to the type of hedge (fair value hedge, cash flow hedge, or net investment hedge). Derivatives not designated in hedge accounting relationships include certain derivatives that are used to manage risks associated with specified assets and liabilities ("specified risk management" positions) as well as derivatives used in the Firm's market-making businesses or for other purposes.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	10-Q page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
• Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	107-108
• Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	109
• Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	107-108
• Foreign exchange	Hedge foreign currency-denominated forecasted revenue and expense	Cash flow hedge	Corporate	109
• Foreign exchange	Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	109
• Commodity	Hedge commodity inventory	Fair value hedge	CIB, AWM	107-108
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
• Interest rate	Manage the risk associated with mortgage commitments, warehouse loans and MSRs	Specified risk management	CCB	110
• Credit	Manage the credit risk associated with wholesale lending exposures	Specified risk management	CIB	110
• Interest rate and foreign exchange	Manage the risk associated with certain other specified assets and liabilities	Specified risk management	Corporate	110
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	110
• Various	Other derivatives	Market-making and other	CIB, AWM, Corporate	110

Notional amount of derivative contracts

The following table summarizes the notional amount of free-standing derivative contracts outstanding as of March 31, 2023, and December 31, 2022.

(in billions)	Notional amounts ^(b)	
	March 31, 2023	December 31, 2022
Interest rate contracts		
Swaps	\$ 30,520	\$ 24,491
Futures and forwards	3,861	2,636
Written options	3,387	3,047
Purchased options	3,431	2,992
Total interest rate contracts	41,199	33,166
Credit derivatives^(a)	1,506	1,132
Foreign exchange contracts		
Cross-currency swaps	4,377	4,196
Spot, futures and forwards	8,465	7,017
Written options	867	775
Purchased options	847	759
Total foreign exchange contracts	14,556	12,747
Equity contracts		
Swaps	674	618
Futures and forwards	107	110
Written options	748	636
Purchased options	698	580
Total equity contracts	2,227	1,944
Commodity contracts		
Swaps	137	136
Spot, futures and forwards	145	136
Written options	142	117
Purchased options	110	98
Total commodity contracts	534	487
Total derivative notional amounts	\$ 60,022	\$ 49,476

(a) Refer to the Credit derivatives discussion on page 111 for more information on volumes and types of credit derivative contracts.

(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative contracts, the notional amount is not exchanged; it is simply a reference amount used to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of March 31, 2023, and December 31, 2022, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables^(a)

March 31, 2023 (in millions)	Gross derivative receivables				Net derivative receivables ^(b)	Gross derivative payables				Net derivative payables ^(b)
	Not designated as hedges	Designated as hedges	Total derivative receivables			Not designated as hedges	Designated as hedges	Total derivative payables		
Trading assets and liabilities										
Interest rate	\$ 285,532	\$ 7	\$ 285,539	\$ 25,028	\$ 274,728	\$ —	\$ 274,728	\$ 13,300		
Credit	12,047	—	12,047	993	12,428	—	12,428	852		
Foreign exchange	184,941	739	185,680	19,225	186,365	1,257	187,622	13,214		
Equity	61,457	—	61,457	7,728	66,545	—	66,545	9,848		
Commodity	18,624	1,035	19,659	6,300	19,392	1,370	20,762	7,497		
Total fair value of trading assets and liabilities	\$ 562,601	\$ 1,781	\$ 564,382	\$ 59,274	\$ 559,458	\$ 2,627	\$ 562,085	\$ 44,711		

December 31, 2022 (in millions)	Gross derivative receivables				Net derivative receivables ^(b)	Gross derivative payables				Net derivative payables ^(b)
	Not designated as hedges	Designated as hedges	Total derivative receivables			Not designated as hedges	Designated as hedges	Total derivative payables		
Trading assets and liabilities										
Interest rate	\$ 300,411	\$ 4	\$ 300,415	\$ 28,419	\$ 290,291	\$ —	\$ 290,291	\$ 15,970		
Credit	10,329	—	10,329	1,090	9,971	—	9,971	754		
Foreign exchange	239,946	1,633	241,579	23,365	248,911	2,610	251,521	18,856		
Equity	61,913	—	61,913	9,139	62,461	—	62,461	8,804		
Commodity	23,652	1,705	25,357	8,867	20,758	2,511	23,269	6,757		
Total fair value of trading assets and liabilities	\$ 636,251	\$ 3,342	\$ 639,593	\$ 70,880	\$ 632,392	\$ 5,121	\$ 637,513	\$ 51,141		

(a) Balances exclude structured notes for which the fair value option has been elected. Refer to Note 3 for further information.

(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

Derivatives netting

The following tables present, as of March 31, 2023, and December 31, 2022, gross and net derivative receivables and payables by contract and settlement type. Derivative receivables and payables, as well as the related cash collateral from the same counterparty, have been netted on the Consolidated balance sheets where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, amounts are not eligible for netting on the Consolidated balance sheets, and those derivative receivables and payables are shown separately in the tables below.

In addition to the cash collateral received and transferred that is presented on a net basis with derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments, but are not eligible for net presentation:

- collateral that consists of liquid securities and other cash collateral held at third-party custodians, which are shown separately as "Collateral not nettable on the Consolidated balance sheets" in the tables below, up to the fair value exposure amount. For the purpose of this disclosure, the definition of liquid securities is consistent with the definition of high quality liquid assets as defined in the LCR rule;
- the amount of collateral held or transferred that exceeds the fair value exposure at the individual counterparty level, as of the date presented, which is excluded from the tables below; and
- collateral held or transferred that relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement, which is excluded from the tables below.

(in millions)	March 31, 2023			December 31, 2022		
	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
Over-the-counter ("OTC")	\$ 191,898	\$ (169,448)	\$ 22,450	\$ 203,922	\$ (178,261)	\$ 25,661
OTC-cleared	90,955	(90,616)	339	93,800	(93,424)	376
Exchange-traded ^(a)	589	(447)	142	559	(311)	248
Total interest rate contracts	283,442	(260,511)	22,931	298,281	(271,996)	26,285
Credit contracts:						
OTC	8,564	(7,792)	772	8,474	(7,535)	939
OTC-cleared	3,385	(3,262)	123	1,746	(1,704)	42
Total credit contracts	11,949	(11,054)	895	10,220	(9,239)	981
Foreign exchange contracts:						
OTC	183,060	(165,794)	17,266	237,941	(216,796)	21,145
OTC-cleared	662	(658)	4	1,461	(1,417)	44
Exchange-traded ^(a)	26	(3)	23	15	(1)	14
Total foreign exchange contracts	183,748	(166,455)	17,293	239,417	(218,214)	21,203
Equity contracts:						
OTC	26,232	(22,553)	3,679	30,323	(25,665)	4,658
Exchange-traded ^(a)	32,080	(31,176)	904	28,467	(27,109)	1,358
Total equity contracts	58,312	(53,729)	4,583	58,790	(52,774)	6,016
Commodity contracts:						
OTC	11,145	(6,700)	4,445	14,430	(7,633)	6,797
OTC-cleared	107	(106)	1	120	(112)	8
Exchange-traded ^(a)	6,577	(6,553)	24	9,103	(8,745)	358
Total commodity contracts	17,829	(13,359)	4,470	23,653	(16,490)	7,163
Derivative receivables with appropriate legal opinion	555,280	(505,108)	50,172 ^(d)	630,361	(568,713)	61,648 ^(d)
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	9,102		9,102	9,232		9,232
Total derivative receivables recognized on the Consolidated balance sheets	\$ 564,382		\$ 59,274	\$ 639,593		\$ 70,880
Collateral not nettable on the Consolidated balance sheets^{(b)(c)}			(20,923)			(23,014)
Net amounts			\$ 38,351			\$ 47,866

(in millions)	March 31, 2023			December 31, 2022		
	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	\$ 177,549	\$ (166,800)	\$ 10,749	\$ 190,108	\$ (176,890)	\$ 13,218
OTC-cleared	94,500	(94,182)	318	97,417	(97,126)	291
Exchange-traded ^(a)	540	(446)	94	327	(305)	22
Total interest rate contracts	272,589	(261,428)	11,161	287,852	(274,321)	13,531
Credit contracts:						
OTC	9,096	(8,550)	546	8,054	(7,572)	482
OTC-cleared	3,081	(3,026)	55	1,674	(1,645)	29
Total credit contracts	12,177	(11,576)	601	9,728	(9,217)	511
Foreign exchange contracts:						
OTC	184,746	(173,744)	11,002	246,457	(231,248)	15,209
OTC-cleared	765	(664)	101	1,488	(1,417)	71
Exchange-traded ^(a)	31	—	31	20	—	20
Total foreign exchange contracts	185,542	(174,408)	11,134	247,965	(232,665)	15,300
Equity contracts:						
OTC	29,147	(25,525)	3,622	29,833	(26,554)	3,279
Exchange-traded ^(a)	33,357	(31,172)	2,185	28,291	(27,103)	1,188
Total equity contracts	62,504	(56,697)	5,807	58,124	(53,657)	4,467
Commodity contracts:						
OTC	11,189	(6,597)	4,592	11,954	(7,642)	4,312
OTC-cleared	106	(106)	—	112	(112)	—
Exchange-traded ^(a)	7,093	(6,562)	531	9,021	(8,758)	263
Total commodity contracts	18,388	(13,265)	5,123	21,087	(16,512)	4,575
Derivative payables with appropriate legal opinion	551,200	(517,374)	33,826 ^(d)	624,756	(586,372)	38,384 ^(d)
Derivative payables where an appropriate legal opinion has not been either sought or obtained	10,885		10,885	12,757		12,757
Total derivative payables recognized on the Consolidated balance sheets	\$ 562,085		\$ 44,711	\$ 637,513		\$ 51,141
Collateral not nettable on the Consolidated balance sheets ^{(b)(c)}			(4,437)			(3,318)
Net amounts			\$ 40,274			\$ 47,823

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.

(b) Includes liquid securities and other cash collateral held at third-party custodians related to derivative instruments where an appropriate legal opinion has been obtained. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.

(c) Derivative collateral relates only to OTC and OTC-cleared derivative instruments.

(d) Net derivatives receivable included cash collateral netted of \$47.8 billion and \$51.5 billion at March 31, 2023, and December 31, 2022, respectively. Net derivatives payable included cash collateral netted of \$60.1 billion and \$69.2 billion at March 31, 2023, and December 31, 2022, respectively. Derivative cash collateral relates to OTC and OTC-cleared derivative instruments.

Liquidity risk and credit-related contingent features

Refer to Note 5 of JPMorgan Chase's 2022 Form 10-K for a more detailed discussion of liquidity risk and credit-related contingent features related to the Firm's derivative contracts.

The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at March 31, 2023, and December 31, 2022.

OTC and OTC-cleared derivative payables containing downgrade triggers

(in millions)	March 31, 2023	December 31, 2022
Aggregate fair value of net derivative payables	\$ 13,817	\$ 16,023
Collateral posted	13,210	15,505

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, N.A., at March 31, 2023, and December 31, 2022, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined rating threshold is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

(in millions)	March 31, 2023		December 31, 2022	
	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade ^(a)	\$ 112	\$ 1,216	\$ 128	\$ 1,293
Amount required to settle contracts with termination triggers upon downgrade ^(b)	84	744	88	925

(a) Includes the additional collateral to be posted for initial margin.

(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 10, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding was not material at both March 31, 2023 and December 31, 2022.

Impact of derivatives on the Consolidated statements of income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pre-tax gains/(losses) recorded on such derivatives and the related hedged items for the three months ended March 31, 2023 and 2022, respectively. The Firm includes gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the related hedged item.

Three months ended March 31, 2023 (in millions)	Gains/(losses) recorded in income			Income statement impact of excluded components ^(e)		OCI impact	
	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI ^(f)	
Contract type							
Interest rate ^{(a)(b)}	\$ 1,171	\$ (1,103)	\$ 68	\$ —	\$ 9	\$ —	
Foreign exchange ^(c)	158	(94)	64	(172)	64	(28)	
Commodity ^(d)	(1,540)	1,625	85	—	84	—	
Total	\$ (211)	\$ 428	\$ 217	\$ (172)	\$ 157	\$ (28)	

Three months ended March 31, 2022 (in millions)	Gains/(losses) recorded in income			Income statement impact of excluded components ^(e)		OCI impact	
	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI ^(f)	
Contract type							
Interest rate ^{(a)(b)}	\$ (7,070)	\$ 6,981	\$ (89)	\$ —	\$ (66)	\$ —	
Foreign exchange ^(c)	(690)	688	(2)	(65)	(2)	145	
Commodity ^(d)	(176)	147	(29)	—	(37)	—	
Total	\$ (7,936)	\$ 7,816	\$ (120)	\$ (65)	\$ (105)	\$ 145	

(a) Primarily consists of hedges of the benchmark (e.g., Secured Overnight Financing Rate ("SOFR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.

(b) Includes the amortization of income/expense associated with the inception hedge accounting adjustment applied to the hedged item. Excludes the accrual of interest on interest rate swaps and the related hedged items.

(c) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items due to changes in foreign currency rates and the income statement impact of excluded components were recorded primarily in principal transactions revenue and net interest income.

(d) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or net realizable value (net realizable value approximates fair value). Gains and losses were recorded in principal transactions revenue.

(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts, time values and cross-currency basis spreads. Excluded components may impact earnings either through amortization of the initial amount over the life of the derivative, or through fair value changes recognized in the current period.

(f) Represents the change in value of amounts excluded from the assessment of effectiveness under the amortization approach, predominantly cross-currency basis spreads. The amount excluded at inception of the hedge is recognized in earnings over the life of the derivative.

As of March 31, 2023 and December 31, 2022, the following amounts were recorded on the Consolidated balance sheets related to certain cumulative fair value hedge basis adjustments that are expected to reverse through the income statement in future periods as an adjustment to yield.

March 31, 2023 (in millions)	Carrying amount of the hedged items ^{(a),(b)}	Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:		
		Active hedging relationships ^(d)	Discontinued hedging relationships ^{(d),(e)}	Total
Assets				
Investment securities - AFS	\$ 119,145 ^(c)	\$ (2,658)	\$ (1,449)	\$ (4,107)
Liabilities				
Long-term debt	172,238	(7,215)	(5,592)	(12,807)
<hr/>				
December 31, 2022 (in millions)	Carrying amount of the hedged items ^{(a),(b)}	Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:		
		Active hedging relationships ^(d)	Discontinued hedging relationships ^{(d),(e)}	Total
Assets				
Investment securities - AFS	\$ 84,073 ^(c)	\$ (4,149)	\$ (1,542)	\$ (5,691)
Liabilities				
Long-term debt	175,257	(11,879)	(3,313)	(15,192)

(a) Excludes physical commodities with a carrying value of \$14.6 billion and \$26.0 billion at March 31, 2023 and December 31, 2022, respectively, to which the Firm applies fair value hedge accounting. As a result of the application of hedge accounting, these inventories are carried at fair value, thus recognizing unrealized gains and losses in current periods. Since the Firm exits these positions at fair value, there is no incremental impact to net income in future periods.

(b) Excludes hedged items where only foreign currency risk is the designated hedged risk, as basis adjustments related to foreign currency hedges will not reverse through the income statement in future periods. At March 31, 2023 and December 31, 2022, the carrying amount excluded for AFS securities is \$19.9 billion and \$20.3 billion, respectively, and for long-term debt is \$217 million and \$221 million, respectively.

(c) Carrying amount represents the amortized cost, net of allowance if applicable. Effective January 1, 2023, the Firm adopted the new portfolio layer method hedge accounting guidance which expanded the ability to hedge a portfolio of prepayable assets to allow more of the portfolio to be hedged. At March 31, 2023, the amortized cost of the portfolio layer method closed portfolios was \$38.9 billion, of which \$24.5 billion was designated as hedged. The cumulative amount of basis adjustments was \$21 million. Refer to Note 1 and Note 9 for additional information.

(d) Positive (negative) amounts related to assets represent cumulative fair value hedge basis adjustments that will reduce (increase) net interest income in future periods. Positive (negative) amounts related to liabilities represent cumulative fair value hedge basis adjustments that will increase (reduce) net interest income in future periods.

(e) Represents basis adjustments existing on the balance sheet date associated with hedged items that have been de-designated from qualifying fair value hedging relationships.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pre-tax gains/(losses) recorded on such derivatives, for the three months ended March 31, 2023 and 2022, respectively. The Firm includes the gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the change in cash flows on the related hedged item.

Three months ended March 31, 2023 (in millions)	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate ^(a)	\$ (427)	\$ 461	\$ 888
Foreign exchange ^(b)	(56)	106	162
Total	\$ (483)	\$ 567	\$ 1,050

Three months ended March 31, 2022 (in millions)	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate ^(a)	\$ 243	\$ (3,361)	\$ (3,604)
Foreign exchange ^(b)	(6)	(75)	(69)
Total	\$ 237	\$ (3,436)	\$ (3,673)

(a) Primarily consists of hedges of SOFR-indexed floating-rate assets. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item—primarily noninterest revenue and compensation expense.

The Firm did not experience any forecasted transactions that failed to occur for the three months ended March 31, 2023 and 2022.

Over the next 12 months, the Firm expects that approximately \$(1.4) billion (after-tax) of net losses recorded in AOCI at March 31, 2023, related to cash flow hedges will be recognized in income. For cash flow hedges that have been terminated, the maximum length of time over which the derivative results recorded in AOCI will be recognized in earnings is approximately seven years, corresponding to the timing of the originally hedged forecasted cash flows. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately seven years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pre-tax gains/(losses) recorded on such instruments for the three months ended March 31, 2023 and 2022.

Three months ended March 31, (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss)			
	2023		2022	
	Amounts recorded in income ^{(a)(b)}	Amounts recorded in OCI	Amounts recorded in income ^{(a)(b)}	Amounts recorded in OCI
Foreign exchange derivatives	\$ 84	\$ (1,004)	\$ (131)	\$ 338

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. The Firm elects to record changes in fair value of these amounts directly in other income.

(b) Excludes amounts reclassified from AOCI to income on the sale or liquidation of hedged entities. During the three months ended March 31, 2023, the Firm reclassified a pre-tax loss of \$41 million to other revenue related to the acquisition of QIFM. Refer to Note 19 for further information.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pre-tax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from mortgage commitments, warehouse loans, MSRs, wholesale lending exposures, and foreign currency-denominated assets and liabilities.

(in millions)	Derivatives gains/(losses) recorded in income	
	Three months ended March 31,	
	2023	2022
Contract type		
Interest rate ^(a)	\$ (14)	\$ (229)
Credit ^(b)	(96)	33
Foreign exchange ^(c)	2	(82)
Total	\$ (108)	\$ (278)

- (a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in mortgage commitments, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.
- (b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.
- (c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. Refer to Note 5 for information on principal transactions revenue.

Credit derivatives

Refer to Note 5 of JPMorgan Chase's 2022 Form 10-K for a more detailed discussion of credit derivatives. The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of March 31, 2023 and December 31, 2022. The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

March 31, 2023 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings ^(c)	Net protection (sold)/purchased ^(d)	Other protection purchased ^(e)
Credit derivatives				
Credit default swaps	\$ (643,237)	\$ 667,461	\$ 24,224	\$ 3,187
Other credit derivatives ^(a)	(80,136)	100,213	20,077	12,241
Total credit derivatives	(723,373)	767,674	44,301	15,428
Credit-related notes ^(b)	—	—	—	7,625
Total	\$ (723,373)	\$ 767,674	\$ 44,301	\$ 23,053

December 31, 2022 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings ^(c)	Net protection (sold)/purchased ^(d)	Other protection purchased ^(e)
Credit derivatives				
Credit default swaps	\$ (495,557)	\$ 509,846	\$ 14,289	\$ 2,917
Other credit derivatives ^(a)	(47,165)	65,029	17,864	11,746
Total credit derivatives	(542,722)	574,875	32,153	14,663
Credit-related notes ^(b)	—	—	—	7,863
Total	\$ (542,722)	\$ 574,875	\$ 32,153	\$ 22,526

(a) Other credit derivatives predominantly consist of credit swap options and total return swaps.

(b) Represents Other protection purchased by OIB, primarily in its market-making businesses.

(c) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.

(d) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.

(e) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives as of March 31, 2023, and December 31, 2022, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold — credit derivatives ratings^(a)/maturity profile

March 31, 2023 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables ^(b)	Fair value of payables ^(b)	Net fair value
Risk rating of reference entity							
Investment-grade	\$ (121,414)	\$ (362,872)	\$ (84,259)	\$ (568,545)	\$ 3,263	\$ (1,567)	\$ 1,696
Noninvestment-grade	(37,875)	(100,151)	(16,802)	(154,828)	1,991	(3,510)	(1,519)
Total	\$ (159,289)	\$ (463,023)	\$ (101,061)	\$ (723,373)	\$ 5,254	\$ (5,077)	\$ 177

December 31, 2022 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables ^(b)	Fair value of payables ^(b)	Net fair value
Risk rating of reference entity							
Investment-grade	\$ (90,484)	\$ (294,791)	\$ (30,822)	\$ (416,097)	\$ 2,324	\$ (1,495)	\$ 829
Noninvestment-grade	(33,244)	(87,011)	(6,370)	(126,625)	1,267	(3,209)	(1,942)
Total	\$ (123,728)	\$ (381,802)	\$ (37,192)	\$ (542,722)	\$ 3,591	\$ (4,704)	\$ (1,113)

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.

(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements including cash collateral netting.

Note 5 – Noninterest revenue and noninterest expense

Noninterest revenue

Refer to Note 6 of JPMorgan Chase's 2022 Form 10-K for a discussion of the components of and accounting policies for the Firm's noninterest revenue.

Investment banking fees

The following table presents the components of investment banking fees.

(in millions)	Three months ended March 31,	
	2023	2022
Underwriting		
Equity	\$ 233	\$ 242
Debt	672	974
Total underwriting	905	1,216
Advisory	744	792
Total investment banking fees	\$ 1,649	\$ 2,008

Principal transactions

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities in CIB and fund deployment activities in Treasury and CIO. Refer to Note 6 for further information on interest income and interest expense.

Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual LOB.

(in millions)	Three months ended March 31,	
	2023	2022
Trading revenue by instrument type		
Interest rate ^(a)	\$ 1,786	\$ 469
Credit ^(b)	634	457
Foreign exchange	1,551	1,324
Equity	2,693	2,255
Commodity	926	747
Total trading revenue	7,590	5,252
Private equity gains/(losses)	25	(147)
Principal transactions	\$ 7,615	\$ 5,105

(a) Includes the impact of changes in funding valuation adjustments on derivatives.

(b) Includes the impact of changes in credit valuation adjustments on derivatives, net of the associated hedging activities.

Lending- and deposit-related fees

The following table presents the components of lending- and deposit-related fees.

(in millions)	Three months ended March 31,	
	2023	2022
Lending-related fees	\$ 369	\$ 362
Deposit-related fees	1,251	1,477
Total lending- and deposit-related fees	\$ 1,620	\$ 1,839

Deposit-related fees include the impact of credits earned by clients that reduce such fees.

Asset management fees

The following table presents the components of asset management fees.

(in millions)	Three months ended March 31,	
	2023	2022
Asset management fees		
Investment management fees ^(a)	\$ 3,390	\$ 3,562
All other asset management fees ^(b)	75	90
Total asset management fees	\$ 3,465	\$ 3,652

(a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.

(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.

Commissions and other fees

The following table presents the components of commissions and other fees.

(in millions)	Three months ended March 31,	
	2023	2022
Commissions and other fees		
Brokerage commissions ^(a)	\$ 747	\$ 810
Administration fees ^(b)	557	633
All other commissions and fees ^(c)	391	267
Total commissions and other fees	\$ 1,695	\$ 1,710

(a) Represents commissions earned when the Firm acts as a broker, by facilitating its clients' purchases and sales of securities and other financial instruments.

(b) Predominantly includes fees for custody, securities lending, funds services and securities clearance.

(c) Includes travel-related and annuity sales commissions, depositary receipt-related service fees, as well as other service fees, which are recognized as revenue when the services are rendered.

Card income

The following table presents the components of card income.

(in millions)	Three months ended March 31,	
	2023	2022
Interchange and merchant processing income	\$ 7,139	\$ 6,235
Rewards costs and partner payments	(5,509)	(4,870)
Other card income ^(a)	(396)	(390)
Total card income	\$ 1,234	\$ 975

(a) Predominantly represents the amortization of account origination costs and annual fees.

Refer to Note 14 for further information on **mortgage fees and related income**.

Other income

This revenue category includes operating lease income, as well as losses associated with the Firm's tax-oriented investments, predominantly alternative energy equity-method investments in CIB.

The following table presents certain components of other income:

(in millions)	Three months ended March 31,	
	2023	2022
Operating lease income	\$ 755	1,048
Losses on tax-oriented investments ^(a)	(412)	(408)
Gain related to the acquisition of CIBM ^(b)	339	—

(a) The losses associated with these tax-oriented investments are more than offset by lower income tax expense from the associated tax credits.

(b) Gain on the original minority interest in CIBM upon the Firm's acquisition of the remaining 51% of the entity.

Refer to Note 16 for information on operating lease income included within other income.

Noninterest expense

Other expense

Other expense on the Firm's Consolidated statements of income includes the following:

(in millions)	Three months ended March 31,	
	2023	2022
Legal expense	\$ 176	\$ 119

Note 6 – Interest income and Interest expense

Refer to Note 7 of JPMorgan Chase's 2022 Form 10-K for a description of JPMorgan Chase's accounting policies regarding interest income and interest expense.

The following table presents the components of interest income and interest expense.

(in millions)	Three months ended March 31,	
	2023	2022
Interest income		
Loans ^(a)	\$ 17,708	\$ 10,633
Taxable securities	3,967	1,979
Non-taxable securities ^(b)	248	245
Total investment securities ^(a)	4,215	2,224
Trading assets - debt instruments	3,646	1,767
Federal funds sold and securities purchased under resale agreements	3,131	397
Securities borrowed ^(c)	1,716	(87)
Deposits with banks	4,819	238
All other interest-earning assets ^(d)	1,769	324
Total interest income	\$ 37,004	\$ 15,496
Interest expense		
Interest-bearing deposits	\$ 7,637	\$ 182
Federal funds purchased and securities loaned or sold under repurchase agreements	2,804	113
Short-term borrowings ^(e)	421	44
Trading liabilities - debt and all other interest-bearing liabilities ^(f)	1,971	191
Long-term debt	3,313	1,076
Beneficial interest issued by consolidated VIEs	147	18
Total interest expense	\$ 16,293	\$ 1,624
Net interest income	\$ 20,711	\$ 13,872
Provision for credit losses	2,275	1,463
Net interest income after provision for credit losses	\$ 18,436	\$ 12,409

(a) Includes the amortization/accretion of unearned income (e.g., purchase premiums/discounts and net deferred fees/costs).

(b) Represents securities which are tax-exempt for U.S. federal income tax purposes.

(c) Negative interest and rates reflect the net impact of interest earned offset by fees paid on client-driven prime brokerage securities borrowed transactions.

(d) Includes interest earned on brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets which are classified in other assets on the Consolidated balance sheets.

(e) Includes commercial paper.

(f) All other interest-bearing liabilities includes interest expense on brokerage-related customer payables.

Note 7 – Pension and other postretirement employee benefit plans

Refer to Note 8 of JPMorgan Chase's 2022 Form 10-K for a discussion of JPMorgan Chase's pension and OPEB plans.

The following table presents the net periodic benefit costs reported in the Consolidated statements of income for the Firm's defined benefit pension, defined contribution and OPEB plans.

(in millions)	Three months ended March 31,	
	2023	2022
	Pension and OPEB plans	
Total net periodic defined benefit plan cost/(credit)	\$ (94)	\$ (64)
Total defined contribution plans	365	344
Total pension and OPEB cost included in noninterest expense	\$ 271	\$ 280

At March 31, 2023 and December 31, 2022, the fair values of plan assets for the Firm's significant defined benefit pension and OPEB plans were \$20.5 billion and \$19.9 billion, respectively.

Note 8 – Employee share-based incentives

Refer to Note 9 of JPMorgan Chase's 2022 Form 10-K for a discussion of the accounting policies and other information relating to employee share-based incentives.

The Firm recognized the following noncash compensation expense related to its various employee share-based incentive plans in its Consolidated statements of income.

(in millions)	Three months ended March 31,	
	2023	2022
Cost of prior grants of restricted stock units ("RSUs"), performance share units ("PSUs") and stock appreciation rights ("SARs") that are amortized over their applicable vesting periods	\$ 357	\$ 271
Accrual of estimated costs of share-based awards to be granted in future periods, predominantly those to full-career eligible employees	513	535
Total noncash compensation expense related to employee share-based incentive plans	\$ 870	\$ 806

In the first quarter of 2023, in connection with its annual incentive grant for the 2022 performance year, the Firm granted 20 million RSUs and 801 thousand PSUs with weighted-average grant date fair values of \$138.57 per RSU and \$139.81 per PSU.

Note 9 – Investment securities

Investment securities consist of debt securities that are classified as AFS or HTM. Debt securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities. At March 31, 2023, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings).

Effective January 1, 2023, the Firm adopted the portfolio layer method hedge accounting guidance which permitted a transfer of HTM securities to AFS upon adoption. The Firm transferred obligations of U.S. states and municipalities with

a carrying value of \$7.1 billion resulting in the recognition of \$38 million net pre-tax unrealized losses in AOCI. This transfer was a noncash transaction. Refer to Note 1 and Note 19 for additional information.

During 2022, the Firm transferred \$78.3 billion of investment securities from AFS to HTM for capital management purposes. AOCI included pretax unrealized losses of \$4.8 billion on the securities at the date of transfer.

Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K for additional information regarding the investment securities portfolio.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

(in millions)	March 31, 2023				December 31, 2022			
	Amortized cost ^{(c)(d)}	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost ^{(c)(d)}	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
Mortgage-backed securities:								
U.S. GSEs and government agencies	\$ 71,570	\$ 592	\$ 4,857	\$ 67,305	\$ 77,194	\$ 479	\$ 6,170	\$ 71,503
Residential:								
U.S.	1,695	1	103	1,593	1,576	1	111	1,466
Non-U.S.	2,885	4	11	2,878	3,176	5	27	3,154
Commercial	2,101	—	154	1,947	2,113	—	155	1,958
Total mortgage-backed securities	78,251	597	5,125	73,723	84,059	485	6,463	78,081
U.S. Treasury and government agencies	83,648	513	2,522	81,639	95,217	302	3,459	92,060
Obligations of U.S. states and municipalities	13,692	166	329	13,529	7,103	86	403	6,786
Non-U.S. government debt securities	19,960	13	543	19,430	20,360	14	678	19,696
Corporate debt securities	392	—	28	364	381	—	24	357
Asset-backed securities:								
Collateralized loan obligations	5,607	2	89	5,520	5,916	1	125	5,792
Other	3,100	4	61	3,043	3,152	2	69	3,085
Unallocated portfolio layer fair value basis adjustments ^(a)	21	(21)	—	NA	NA	NA	NA	NA
Total available-for-sale securities	204,671	1,274	8,697	197,248	216,188	890	11,221	205,857
Held-to-maturity securities^(b)								
Mortgage-backed securities:								
U.S. GSEs and government agencies	112,980	84	11,893	101,171	113,492	35	13,709	99,818
U.S. Residential	10,602	5	1,132	9,475	10,503	3	1,244	9,262
Commercial	10,747	10	734	10,023	10,361	10	734	9,637
Total mortgage-backed securities	134,329	99	13,759	120,669	134,356	48	15,687	118,717
U.S. Treasury and government agencies	202,487	—	15,275	187,212	207,463	—	18,363	189,100
Obligations of U.S. states and municipalities	12,299	52	740	11,611	19,747	53	1,080	18,720
Asset-backed securities:								
Collateralized loan obligations	61,528	50	1,175	60,403	61,414	4	1,522	59,896
Other	2,184	—	89	2,095	2,325	—	110	2,215
Total held-to-maturity securities	412,827	201	31,038	381,990	425,305	105	36,762	388,648
Total investment securities, net of allowance for credit losses	\$ 617,498	\$ 1,475	\$ 39,735	\$ 579,238	\$ 641,493	\$ 995	\$ 47,983	\$ 594,505

(a) Represents the amount of portfolio layer method basis adjustments related to AFS securities hedged in a closed portfolio. Under U.S. GAAP portfolio layer method basis adjustments are not allocated to individual securities, however the amounts impact the unrealized gains or losses for the individual securities being hedged. Refer to Note 1 and Note 4 for additional information.

(b) The Firm purchased \$3.6 billion and \$13.2 billion of HTM securities for the three months ended March 31, 2023 and 2022, respectively.

(c) The amortized cost of investment securities is reported net of allowance for credit losses of \$90 million and \$96 million at March 31, 2023 and December 31, 2022, respectively.

(d) Excludes \$2.4 billion and \$2.5 billion of accrued interest receivable at March 31, 2023 and December 31, 2022, respectively. The Firm did not reverse through interest income any accrued interest receivable for the three months ended March 31, 2023 and 2022. Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K for further discussion of accounting policies for accrued interest receivable on investment securities.

AFS securities impairment

The following tables present the fair value and gross unrealized losses by aging category for AFS securities at March 31, 2023 and December 31, 2022. The tables exclude U.S. Treasury and government agency securities and U.S. GSE and government agency MBS with unrealized losses of \$7.4 billion and \$9.6 billion, at March 31, 2023 and December 31, 2022, respectively; changes in the value of these securities are generally driven by changes in interest rates rather than changes in their credit profile given the explicit or implicit guarantees provided by the U.S. government.

	Available-for-sale securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
March 31, 2023 (in millions)						
Available-for-sale securities						
Mortgage-backed securities:						
Residential:						
U.S.	\$ 474	\$ 16	\$ 1,062	\$ 87	\$ 1,536	\$ 103
Non-U.S.	966	4	1,653	7	2,619	11
Commercial	249	17	1,678	137	1,927	154
Total mortgage-backed securities	1,689	37	4,393	231	6,082	268
Obligations of U.S. states and municipalities	2,164	66	1,202	263	3,366	329
Non-U.S. government debt securities	7,592	70	5,475	473	13,067	543
Corporate debt securities	110	2	249	26	359	28
Asset-backed securities:						
Collateralized loan obligations	352	4	4,882	85	5,234	89
Other	1,537	29	1,071	32	2,608	61
Total available-for-sale securities with gross unrealized losses	\$ 13,444	\$ 208	\$ 17,272	\$ 1,110	\$ 30,716	\$ 1,318

	Available-for-sale securities with gross unrealized losses					
	Less than 12 months		12 months or more		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
December 31, 2022 (in millions)						
Available-for-sale securities						
Mortgage-backed securities:						
Residential:						
U.S.	\$ 1,187	\$ 71	\$ 260	\$ 40	\$ 1,447	\$ 111
Non-U.S.	2,848	25	70	2	2,918	27
Commercial	1,131	74	813	81	1,944	155
Total mortgage-backed securities	5,166	170	1,143	123	6,309	293
Obligations of U.S. states and municipalities	3,051	241	364	162	3,415	403
Non-U.S. government debt securities	6,941	321	3,848	357	10,789	678
Corporate debt securities	150	2	207	22	357	24
Asset-backed securities:						
Collateralized loan obligations	3,010	61	2,701	64	5,711	125
Other	2,586	51	256	18	2,842	69
Total available-for-sale securities with gross unrealized losses	\$ 20,904	\$ 846	\$ 8,519	\$ 746	\$ 29,423	\$ 1,592

HTM securities – credit risk

Credit quality indicator

The primary credit quality indicator for HTM securities is the risk rating assigned to each security. At March 31, 2023 and December 31, 2022, all HTM securities were rated investment grade and were current and accruing, with approximately 99% and 98% rated at least AA+, respectively.

Allowance for credit losses on investment securities

The allowance for credit losses on investment securities was \$90 million and \$41 million as of March 31, 2023 and 2022, respectively, which included a cumulative-effect adjustment to retained earnings related to the transfer of HTM securities to AFS for the period ended March 31, 2023.

Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K for further discussion of accounting policies for AFS and HTM securities.

Selected impacts of investment securities on the Consolidated statements of income

(in millions)	Three months ended March 31,	
	2023	2022
Realized gains	\$ 131	\$ 13
Realized losses	(999)	(407)
Investment securities losses	\$ (868)	\$ (394)
Provision for credit losses	\$ 1	(1)

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at March 31, 2023, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity March 31, 2023 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years ^(c)	Total
Available-for-sale securities					
Mortgage-backed securities					
Amortized cost	\$ 14	\$ 3,406	\$ 4,644	\$ 70,187	\$ 78,251
Fair value	14	3,259	4,678	65,772	73,723
Average yield ^(a)	2.14 %	4.16 %	5.69 %	4.04 %	4.14 %
U.S. Treasury and government agencies					
Amortized cost	\$ 11,298	\$ 45,163	\$ 20,706	\$ 6,481	\$ 83,648
Fair value	11,030	43,602	20,506	6,501	81,639
Average yield ^(a)	0.36 %	3.87 %	4.33 %	6.33 %	3.70 %
Obligations of U.S. states and municipalities					
Amortized cost	\$ 18	\$ 140	\$ 2,380	\$ 11,154	\$ 13,692
Fair value	18	142	2,403	10,966	13,529
Average yield ^(a)	4.84 %	4.51 %	4.46 %	5.44 %	5.26 %
Non-U.S. government debt securities					
Amortized cost	\$ 12,348	\$ 2,802	\$ 4,436	\$ 374	\$ 19,960
Fair value	12,339	2,710	4,006	375	19,430
Average yield ^(a)	3.89 %	2.20 %	1.47 %	3.51 %	3.11 %
Corporate debt securities					
Amortized cost	\$ 187	\$ 221	\$ 13	\$ —	\$ 421
Fair value	134	217	13	—	364
Average yield ^(a)	15.98 %	11.40 %	6.11 %	—%	13.26 %
Asset-backed securities					
Amortized cost	\$ 103	\$ 1,406	\$ 3,645	\$ 3,553	\$ 8,707
Fair value	98	1,382	3,598	3,485	8,563
Average yield ^(a)	5.25 %	3.13 %	5.52 %	5.68 %	5.20 %
Total available-for-sale securities					
Amortized cost ^(b)	\$ 23,968	\$ 53,138	\$ 35,824	\$ 91,749	\$ 204,679
Fair value	23,633	51,312	35,204	87,099	197,248
Average yield ^(a)	2.33 %	3.82 %	4.29 %	4.43 %	4.00 %
Held-to-maturity securities					
Mortgage-backed securities					
Amortized cost	\$ 99	\$ 2,755	\$ 11,506	\$ 119,996	\$ 134,356
Fair value	96	2,575	10,332	107,666	120,669
Average yield ^(a)	5.70 %	2.61 %	2.55 %	2.98 %	2.94 %
U.S. Treasury and government agencies					
Amortized cost	\$ 57,971	\$ 77,514	\$ 67,002	\$ —	\$ 202,487
Fair value	56,374	72,935	57,903	—	187,212
Average yield ^(a)	0.45 %	0.84 %	1.27 %	—%	0.87 %
Obligations of U.S. states and municipalities					
Amortized cost	\$ —	\$ —	\$ 738	\$ 11,595	\$ 12,333
Fair value	—	—	711	10,900	11,611
Average yield ^(a)	—%	—%	4.20 %	4.06 %	4.06 %
Asset-backed securities					
Amortized cost	\$ —	\$ 82	\$ 19,511	\$ 44,119	\$ 63,712
Fair value	—	82	19,262	43,154	62,498
Average yield ^(a)	—%	5.72 %	5.37 %	5.48 %	5.45 %
Total held-to-maturity securities					
Amortized cost ^(b)	\$ 58,070	\$ 80,351	\$ 98,757	\$ 175,710	\$ 412,888
Fair value	56,470	75,592	88,208	161,720	381,990
Average yield ^(a)	0.46 %	0.91 %	2.25 %	3.68 %	2.35 %

(a) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives, including closed portfolio hedges. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments, and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid. However, for certain callable debt securities, the average yield is calculated to the earliest call date.

(b) For purposes of this table, the amortized cost of available-for-sale securities excludes the allowance for credit losses of \$(29) million and the portfolio layer fair value hedge basis adjustments of \$21 million at March 31, 2023. The amortized cost of held-to-maturity securities also excludes the allowance for credit losses of \$(61) million at March 31, 2023.

(c) Substantially all of the Firm's U.S. residential MBS and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately seven years for agency residential MBS, and six years for both agency residential collateralized mortgage obligations and nonagency residential collateralized mortgage obligations.

Note 10 – Securities financing activities

Refer to Note 11 of JPMorgan Chase's 2022 Form 10-K for a discussion of accounting policies relating to securities financing activities. Refer to Note 3 for further information regarding securities financing agreements for which the fair value option has been elected. Refer to Note 23 for further information regarding assets pledged and collateral received in securities financing agreements.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements as of March 31, 2023 and December 31, 2022. When the Firm has obtained an appropriate legal opinion with respect to a master netting agreement with a counterparty and where other relevant netting criteria under U.S. GAAP are met, the Firm nets, on the Consolidated balance sheets, the balances outstanding under its securities financing agreements with the same counterparty. In addition, the Firm exchanges securities and/or cash collateral with its counterparty to reduce the economic exposure with the counterparty, but such collateral is not eligible for net Consolidated balance

sheet presentation. Where the Firm has obtained an appropriate legal opinion with respect to the counterparty master netting agreement, such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented in the table below as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below. In transactions where the Firm is acting as the lender in a securities-for-securities lending agreement and receives securities that can be pledged or sold as collateral, the Firm recognizes the securities received at fair value within other assets and the obligation to return those securities within accounts payable and other liabilities on the Consolidated balance sheets.

(in millions)	March 31, 2023					Net amounts ^(c)
	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets ^(b)		
Assets						
Securities purchased under resale agreements	\$ 608,147	\$ (291,100)	\$ 317,047	\$ (308,851)	\$	8,196
Securities borrowed	233,841	(37,924)	195,917	(142,451)		53,466
Liabilities						
Securities sold under repurchase agreements	\$ 531,763	\$ (291,100)	\$ 240,663	\$ (204,338)	\$	36,325
Securities loaned and other ^(a)	48,570	(37,924)	10,646	(10,563)		83

(in millions)	December 31, 2022					Net amounts ^(c)
	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets ^(b)		
Assets						
Securities purchased under resale agreements	\$ 597,912	\$ (282,411)	\$ 315,501	\$ (304,120)	\$	11,381
Securities borrowed	228,279	(42,910)	185,369	(131,578)		53,791
Liabilities						
Securities sold under repurchase agreements	\$ 480,793	\$ (282,411)	\$ 198,382	\$ (167,427)	\$	30,955
Securities loaned and other ^(a)	52,443	(42,910)	9,533	(9,527)		6

(a) Includes securities-for-securities lending agreements of \$6.6 billion and \$7.0 billion at March 31, 2023 and December 31, 2022, respectively, accounted for at fair value, where the Firm is acting as lender.

(b) In some cases, collateral exchanged with a counterparty exceeds the net asset or liability balance with that counterparty. In such cases, the amounts reported in this column are limited to the related net asset or liability with that counterparty.

(c) Includes securities financing agreements that provide collateral rights, but where an appropriate legal opinion with respect to the master netting agreement has not been either sought or obtained. At March 31, 2023 and December 31, 2022, included \$6.2 billion and \$6.0 billion, respectively, of securities purchased under resale agreements; \$49.7 billion and \$49.0 billion, respectively, of securities borrowed; \$35.0 billion and \$29.1 billion, respectively, of securities sold under repurchase agreements; and securities loaned and other which were not material at both March 31, 2023 and December 31, 2022.

The tables below present as of March 31, 2023, and December 31, 2022 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

(in millions)	Gross liability balance			
	March 31, 2023		December 31, 2022	
	Securities sold under repurchase agreements	Securities loaned and other	Securities sold under repurchase agreements	Securities loaned and other
Mortgage-backed securities				
U.S. GSEs and government agencies	\$ 68,935	\$ —	\$ 58,050	\$ —
Residential - nonagency	2,538	—	2,414	—
Commercial - nonagency	1,689	—	2,007	—
U.S. Treasury, GSEs and government agencies	242,331	1,294	191,254	1,464
Obligations of U.S. states and municipalities	1,987	39	1,735	5
Non-U.S. government debt	146,097	959	155,156	1,259
Corporate debt securities	38,013	3,422	37,121	461
Asset-backed securities	4,017	—	2,981	—
Equity securities	26,156	42,856	30,075	49,254
Total	\$ 531,763	\$ 48,570	\$ 480,793	\$ 52,443

March 31, 2023 (in millions)	Remaining contractual maturity of the agreements				
	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	\$ 261,992	\$ 148,156	\$ 40,759	\$ 80,856	\$ 531,763
Total securities loaned and other	47,146	339	—	1,085	48,570

December 31, 2022 (in millions)	Remaining contractual maturity of the agreements				
	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	\$ 205,235	\$ 170,696	\$ 37,120	\$ 67,742	\$ 480,793
Total securities loaned and other	50,138	1,285	3	1,017	52,443

Transfers not qualifying for sale accounting

At March 31, 2023, and December 31, 2022, the Firm held \$871 million and \$692 million, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in short-term borrowings on the Consolidated balance sheets.

Note 11 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained")
- Loans held-for-sale
- Loans at fair value

Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion of loans, including accounting policies. Refer to Note 3 of this Form 10-Q for further information on the Firm's elections of fair value accounting under the fair value option. Refer to Note 2 of this Form 10-Q for information on loans carried at fair value and classified as trading assets.

On January 1, 2023 the Firm adopted the Financial Instruments - Credit Losses: Troubled Debt Restructurings and Vintage Disclosures accounting guidance as discussed in Note 1. The adoption of this guidance eliminated the existing accounting and disclosure requirements for TDRs, and implemented additional disclosure requirements for FDMs. The disclosure requirements for FDMs are effective for periods beginning on or after January 1, 2023. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion on loan modifications prior to January 1, 2023, which were accounted for and reported as TDRs. This new guidance also requires disclosure of current period gross charge-offs by vintage origination year, effective for periods beginning on or after January 1, 2023.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class.

Consumer, excluding credit card	Credit card	Wholesale ^{(c)(d)}
<ul style="list-style-type: none"> • Residential real estate^(a) • Auto and other^(b) 	<ul style="list-style-type: none"> • Credit card loans 	<ul style="list-style-type: none"> • Secured by real estate • Commercial and industrial • Other^(e)

(a) Includes scored mortgage and home equity loans held in CCB and AWM and scored mortgage loans held in CIB and Corporate.

(b) Includes scored auto and business banking loans and overdrafts.

(c) Includes loans held in CIB, CB, AWM, Corporate as well as risk-rated BWM and auto dealer loans held in CCB, for which the wholesale methodology is applied when determining the allowance for loan losses.

(d) The wholesale portfolio segment's classes align with loan classifications as defined by the bank regulatory agencies, based on the loan's collateral, purpose, and type of borrower.

(e) Includes loans to financial institutions, states and political subdivisions, SPES, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for more information on SPES.

The following tables summarize the Firm's loan balances by portfolio segment.

March 31, 2023 (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total ^{(a)(b)}
Retained	\$ 300,447	\$ 180,079	\$ 604,324	\$ 1,084,850
Held-for-sale	572	—	4,928	5,500
At fair value	10,414	—	28,132	38,546
Total	\$ 311,433	\$ 180,079	\$ 637,384	\$ 1,128,896
December 31, 2022 (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total ^{(a)(b)}
Retained	\$ 300,753	\$ 185,175	\$ 603,670	\$ 1,089,598
Held-for-sale	618	—	3,352	3,970
At fair value	10,004	—	32,075	42,079
Total	\$ 311,375	\$ 185,175	\$ 639,097	\$ 1,135,647

(a) Excludes \$5.3 billion and \$5.2 billion of accrued interest receivables at March 31, 2023 and December 31, 2022, respectively. The Firm wrote off accrued interest receivables of \$11 million and \$12 million for the three months ended March 31, 2023 and 2022, respectively.

(b) Loans (other than those for which the fair value option has been elected) are presented net of unamortized discounts and premiums and net deferred loan fees or costs. These amounts were not material as of March 31, 2023, and December 31, 2022.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. Loans that were reclassified to held-for-sale and sold in a subsequent period are excluded from the sales line of this table.

Three months ended March 31, (in millions)	2023				2022			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	\$ 79 ^{(b)(c)}	\$ —	\$ 163	\$ 242	\$ 119 ^{(b)(c)}	\$ —	\$ 166	\$ 285
Sales	—	—	9,171	9,171	47	—	9,707	9,754
Retained loans reclassified to held-for-sale ^(a)	43	—	314	357	76	—	273	349

(a) Reclassifications of loans to held-for-sale are non-cash transactions.

(b) Predominantly includes purchases of residential real estate loans, including the Firm's voluntary repurchases of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines for the three months ended March 31, 2023 and 2022. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, FHA, RHS, and/or VA.

(c) Excludes purchases of retained loans of \$663 million and \$3.2 billion for the three months ended March 31, 2023 and 2022, respectively, which are predominantly sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards.

Gains and losses on sales of loans

Net gains/(losses) on sales of loans and lending-related commitments (including adjustments to record loans and lending-related commitments held-for-sale at the lower of cost or fair value) recognized in noninterest revenue was \$23 million for the three months ended March 31, 2023, of which \$27 million related to loans. Net gains/(losses) on sales of loans and lending-related commitments was \$38 million for the three months ended March 31, 2022, of which \$34 million related to loans. In addition, the sale of loans may also result in write downs, recoveries or changes in the allowance recognized in the provision for credit losses.

Consumer, excluding credit card loan portfolio

Consumer loans, excluding credit card loans, consist primarily of scored residential mortgages, home equity loans and lines of credit, auto and business banking loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period and certain payment-option loans that may result in negative amortization.

The following table provides information about retained consumer loans, excluding credit card, by class.

(in millions)	March 31, 2023	December 31, 2022
Residential real estate	\$ 236,115	\$ 237,561
Auto and other	64,332	63,192
Total retained loans	\$ 300,447	\$ 300,753

Delinquency rates are the primary credit quality indicator for consumer loans. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on consumer credit quality indicators.

Residential real estate

Delinquency is the primary credit quality indicator for retained residential real estate loans. The following tables provide information on delinquency and gross charge-offs for the three months ended March 31, 2023.

(in millions, except ratios)	March 31, 2023									
	Term loans by origination year ^(d)						Revolving loans		Total	
	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans		
Loan delinquency^{(a)(b)}										
Current	\$ 2,613	\$ 39,656	\$ 65,294	\$ 42,762	\$ 15,103	\$ 54,592	\$ 5,265	\$ 9,237	\$ 234,522	
30–149 days past due	—	21	14	13	20	605	16	216	905	
150 or more days past due	—	1	2	5	11	497	2	170	688	
Total retained loans	\$ 2,613	\$ 39,678	\$ 65,310	\$ 42,780	\$ 15,134	\$ 55,694	\$ 5,283	\$ 9,623	\$ 236,115	
% of 30+ days past due to total retained loans ^(c)	— %	0.06 %	0.02 %	0.04 %	0.20 %	1.94 %	0.34 %	4.01 %	0.67 %	
Gross charge-offs	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 7	\$ 8	\$ 3	\$ 18	

(in millions, except ratios)	December 31, 2022									
	Term loans by origination year ^(d)						Revolving loans		Total	
	2022	2021	2020	2019	2018	Prior to 2018	Within the revolving period	Converted to term loans		
Loan delinquency^{(a)(b)}										
Current	\$ 39,934	\$ 66,072	\$ 43,315	\$ 15,397	\$ 6,339	\$ 49,632	\$ 5,589	\$ 9,685	\$ 235,963	
30–149 days past due	29	11	14	20	20	597	15	208	914	
150 or more days past due	1	1	6	10	7	480	4	175	684	
Total retained loans	\$ 39,964	\$ 66,084	\$ 43,335	\$ 15,427	\$ 6,366	\$ 50,709	\$ 5,608	\$ 10,068	\$ 237,561	
% of 30+ days past due to total retained loans ^(c)	0.08 %	0.02 %	0.05 %	0.19 %	0.42 %	2.07 %	0.34 %	3.80 %	0.66 %	

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies which were not material at March 31, 2023 and December 31, 2022.

(b) At March 31, 2023 and December 31, 2022, loans under payment deferral programs offered in response to the COVID-19 pandemic which are still within their deferral period and performing according to their modified terms are generally not considered delinquent.

(c) Excludes mortgage loans that are 30 or more days past due insured by U.S. government agencies which were not material at March 31, 2023 and December 31, 2022. These amounts have been excluded based upon the government guarantee.

(d) Purchased loans are included in the year in which they were originated.

Approximately 37% of the total revolving loans are senior lien loans; the remaining balance are junior lien loans. The lien position the Firm holds is considered in the Firm's allowance for credit losses. Revolving loans that have been converted to term loans have higher delinquency rates than those that are still within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for revolving loans within the revolving period.

Nonaccrual loans and other credit quality indicators

The following table provides information on nonaccrual and other credit quality indicators for retained residential real estate loans.

(in millions, except weighted-average data)	March 31, 2023		December 31, 2022	
Nonaccrual loans ^{(a)(b)(c)(d)(e)}	\$	3,710	\$	3,745
Current estimated LTV ratios^{(f)(g)(h)}				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	\$	4	\$	2
Less than 660		2		—
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660		196		174
Less than 660		5		6
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660		12,774		12,034
Less than 660		250		184
Less than 80% and refreshed FICO scores:				
Equal to or greater than 660		213,157		215,096
Less than 660		8,823		8,659
No FICO/LTV available		904		1,406 ^(k)
Total retained loans	\$	236,115	\$	237,561
Weighted average LTV ratio ^{(f)(i)}		51 %		51 %
Weighted average FICO ^{(g)(k)}		770		769
Geographic region^{(j)(k)}				
California	\$	72,610	\$	73,112
New York		34,271		34,471
Florida		18,877		18,870
Texas		14,899		14,968
Illinois		11,133		11,296
Colorado		9,979		9,968
Washington		9,043		9,060
New Jersey		7,013		7,108
Massachusetts		6,352		6,380
Connecticut		5,408		5,432
All other		46,530		46,896
Total retained loans	\$	236,115	\$	237,561

(a) Includes collateral-dependent residential real estate loans that are charged down to the fair value of the underlying collateral less costs to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual loans, regardless of their delinquency status. At March 31, 2023, approximately 9% of Chapter 7 residential real estate loans were 30 days or more past due.

(b) Mortgage loans insured by U.S. government agencies excluded from nonaccrual loans were not material at March 31, 2023 and December 31, 2022.

(c) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.

(d) Interest income on nonaccrual loans recognized on a cash basis was \$45 million for both the three months ended March 31, 2023 and 2022, respectively.

(e) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.

(f) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(g) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(h) Includes residential real estate loans, primarily held in LLCs in AVM that did not have a refreshed FICO score. These loans have been included in a FICO band based on management's estimation of the borrower's credit quality.

(i) Excludes loans with no FICO and/or LTV data available.

(j) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at March 31, 2023.

(k) Prior-period amount has been revised to conform with the current presentation.

Loan modifications

The Firm grants certain modifications of residential real estate loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. The Firm's proprietary modification programs as well as government programs, including U.S. GSE programs, generally provide various modifications to borrowers experiencing financial difficulty including, but not limited to, interest rate reductions, term extensions, other-than-insignificant payment delay and principal forgiveness that would otherwise have been required under the terms of the original agreement, are considered FDMs.

For the three months ended March 31, 2023, residential real estate FDMs were \$38 million. The financial effects of the FDMs, which were largely in the form of term extensions and interest rate reductions, included extending the weighted-average life of the loans up to 24 years, and reducing the weighted-average contractual interest rate from 5.84% to 3.57%. There were no additional commitments to lend to borrowers experiencing financial difficulty whose loans have been modified as FDMs. In addition to FDMs, the Firm also had \$23 million of loans subject to a trial modification, and \$2 million of 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.

For periods ending prior to January 1, 2023, modifications of residential real estate loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. For the three months ended March 31, 2022, new TDRs were \$118 million. There were no additional commitments to lend to borrowers whose residential real estate loans have been modified in TDRs. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on TDRs.

Nature and extent of modifications

The following table provides information about how residential real estate loans were modified in TDRs during the period presented.

	Three months ended March 31, 2022
Number of loans approved for a trial modification	1,526
Number of loans permanently modified	1,542
Concession granted:^(a)	
Interest rate reduction	64 %
Term or payment extension	77
Principal and/or interest deferred	13
Principal forgiveness	1
Other ^(b)	27

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. Concessions offered on trial modifications are generally consistent with those granted on permanent modifications.

(b) Includes variable interest rate to fixed interest rate modifications and payment delays that meet the definition of a TDR.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans and about redefaults of certain loans modified in TDRs for the period presented.

	Three months ended March 31, 2022
(in millions, except weighted-average data)	
Weighted-average interest rate of loans with interest rate reductions – before TDR	4.43 %
Weighted-average interest rate of loans with interest rate reductions – after TDR	3.31
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	23
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	39
Charge-offs recognized upon permanent modification	\$ —
Principal deferred	7
Principal forgiven	1
Balance of loans that redefaulted within one year of permanent modification ^(a)	\$ 43

(a) Represents loans permanently modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The dollar amount presented represents the balance of such loans at the end of the reporting period in which such loans defaulted.

Active and suspended foreclosure

At March 31, 2023 and December 31, 2022, the Firm had residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of \$580 million and \$565 million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Auto and other

Delinquency is the primary credit quality indicator for retained auto and other loans. The following tables provide information on delinquency and gross charge-offs for the three months ended March 31, 2023.

March 31, 2023										
(in millions, except ratios)	Term loans by origination year						Revolving loans			
	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	Total	
Loan delinquency										
Current	\$ 7,994	\$ 19,938	\$ 18,215	\$ 10,071	\$ 3,350	\$ 1,468	\$ 2,427	\$ 111	\$ 63,574	
30–119 days past due	71	212	217	76	52	35	12	19	694	
120 or more days past due	—	—	36	17	—	1	2	8	64	
Total retained loans	\$ 8,065	\$ 20,150	\$ 18,468	\$ 10,164	\$ 3,402	\$ 1,504	\$ 2,441	\$ 138	\$ 64,332	
% of 30+ days past due to total retained loans ^(a)	0.88 %	1.05 %	1.12 %	0.74 %	1.53 %	2.39 %	0.57 %	19.57 %	1.08 %	
Gross charge-offs	\$ 27	\$ 112	\$ 41	\$ 14	\$ 9	\$ 14	\$ —	\$ —	\$ 217	
December 31, 2022										
(in millions, except ratios)	Term loans by origination year						Revolving loans			
	2022	2021	2020	2019	2018	Prior to 2018	Within the revolving period	Converted to term loans	Total	
Loan delinquency										
Current	\$ 22,187	\$ 20,212	\$ 11,401	\$ 3,991	\$ 1,467	\$ 578	\$ 2,342	\$ 118	\$ 62,296	
30–119 days past due	263	308	100	68	33	17	12	10	811	
120 or more days past due	—	53	24	—	—	1	2	5	85	
Total retained loans	\$ 22,450	\$ 20,573	\$ 11,525	\$ 4,059	\$ 1,500	\$ 596	\$ 2,356	\$ 133	\$ 63,192	
% of 30+ days past due to total retained loans ^(a)	1.17 %	1.15 %	0.83 %	1.68 %	2.20 %	3.02 %	0.59 %	11.28 %	1.18 %	

(a) At March 31, 2023 and December 31, 2022, auto and other loans excluded \$65 million and \$153 million, respectively, of PFP loans guaranteed by the SBA that are 30 or more days past due. These amounts have been excluded based upon the SBA guarantee.

Nonaccrual and other credit quality indicators

The following table provides information on nonaccrual and other credit quality indicators for retained auto and other consumer loans.

(in millions)	Total Auto and other	
	March 31, 2023	December 31, 2022
Nonaccrual loans^{(a)(b)(c)}	\$ 133	\$ 129
Geographic region^(d)		
California	\$ 9,736	\$ 9,689
Texas	7,434	7,216
Florida	5,013	4,847
New York	4,411	4,345
Illinois	2,916	2,839
New Jersey	2,292	2,219
Pennsylvania	1,823	1,822
Georgia	1,760	1,708
Ohio	1,631	1,603
Arizona	1,570	1,551
All other	25,746	25,353
Total retained loans	\$ 64,332	\$ 63,192

(a) At March 31, 2023 and December 31, 2022, nonaccrual loans excluded \$54 million and \$101 million, respectively, of PPP loans 90 or more days past due and guaranteed by the SBA, of which \$53 million and \$76 million, respectively, were no longer accruing interest based on the guidelines set by the SBA. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting the guidelines set by the SBA. There were no loans that were not guaranteed by the SBA that are 90 or more days past due and still accruing interest at March 31, 2023 and December 31, 2022.

(b) Generally, all consumer nonaccrual loans have an allowance. In accordance with regulatory guidance, certain nonaccrual loans that are considered collateral-dependent have been charged down to the lower of amortized cost or the fair value of their underlying collateral less costs to sell. If the value of the underlying collateral improves subsequent to charge down, the related allowance may be negative.

(c) Interest income on nonaccrual loans recognized on a cash basis was not material for the three months ended March 31, 2023 and 2022.

(d) The geographic regions presented in this table are ordered based on the magnitude of the corresponding loan balances at March 31, 2023.

Loan modifications

The Firm grants certain modifications of auto and other loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. For the three months ended March 31, 2023, auto and other FDMs were not material and there were no additional commitments to lend to borrowers modified as FDMs.

For the three months ended March 31, 2022, auto and other TDRs were not material.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans.

Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on the credit card loan portfolio, including credit quality indicators.

The following tables provide information on delinquency and gross charge-offs for the three months ended March 31, 2023.

(in millions, except ratios)	March 31, 2023		
	Within the revolving period	Converted to term loans	Total
Loan delinquency			
Current and less than 30 days past due and still accruing	\$ 176,353	\$ 702	\$ 177,055
30–89 days past due and still accruing	1,462	65	1,527
90 or more days past due and still accruing	1,464	33	1,497
Total retained loans	\$ 179,279	\$ 800	\$ 180,079
Loan delinquency ratios			
% of 30+ days past due to total retained loans	1.63 %	12.25 %	1.68 %
% of 90+ days past due to total retained loans	0.82	4.13	0.83
Gross charge-offs	\$ 1,075	\$ 36	\$ 1,111

(in millions, except ratios)	December 31, 2022		
	Within the revolving period	Converted to term loans	Total
Loan delinquency			
Current and less than 30 days past due and still accruing	\$ 181,793	\$ 696	\$ 182,489
30–89 days past due and still accruing	1,356	64	1,420
90 or more days past due and still accruing	1,230	36	1,266
Total retained loans	\$ 184,379	\$ 796	\$ 185,175
Loan delinquency ratios			
% of 30+ days past due to total retained loans	1.40 %	12.56 %	1.45 %
% of 90+ days past due to total retained loans	0.67	4.52	0.68

Other credit quality indicators

The following table provides information on other credit quality indicators for retained credit card loans.

(in millions, except ratios)	March 31, 2023	December 31, 2022
Geographic region^(a)		
California	\$ 27,424	\$ 28,154
Texas	18,924	19,171
New York	14,657	15,046
Florida	12,778	12,905
Illinois	9,781	10,089
New Jersey	7,410	7,643
Ohio	5,545	5,792
Colorado	5,420	5,493
Pennsylvania	5,231	5,517
Arizona	4,392	4,487
All other	68,517	70,878
Total retained loans	\$ 180,079	\$ 185,175
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	85.3 %	86.8 %
Less than 660	14.5	13.0
No FICO available	0.2	0.2

(a) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at March 31, 2023.

Loan modifications

The Firm grants certain modifications of credit card loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. These modifications involve placing the customer on a fixed payment plan, generally for 60 months, and typically include reducing the interest rate on the credit card under long-term programs. If the cardholder does not comply with the modified payment terms, then the credit card loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In most cases, the Firm does not reinstate the borrower's line of credit.

The following table provides information on credit card loan modifications considered FDMs.

Three months ended March 31, 2023 (in millions)	Amortized cost basis	% of loan modifications to total retained credit card loans	Financial effect of loan modification
Loan modification			
Term extension and interest rate reduction ^{(a),(b)}	\$ 163	0.09 %	Term extension with a reduction in the weighted average contractual interest rate from 22.62% to 3.5%
Total	\$ 163		

(a) Term extension includes credit card loans whose terms have been modified under long-term programs by placing the customer on a fixed payment plan.

(b) The interest rates represent weighted average at enrollment.

For the period ended March 31, 2023, the Firm also had \$24 million of loans subject to a trial modification. The changes to the TDR accounting guidance eliminated the TDR reasonably expected and concession assessment criteria. Accordingly, trial modifications are not considered FDMs.

The following table provides information on the payment status of FDMs.

March 31, 2023 (in millions)	Amortized cost basis
Current and less than 30 days past due and still accruing	\$ 113
30-89 days past due and still accruing	30
90 or more days past due and still accruing	20
Total	\$ 163

There were no FDMs that re-defaulted during the three months ended March 31, 2023.

For credit card loans modified as FDMs, payment default is deemed to have occurred when the borrower misses two consecutive contractual payments. Defaulted modified credit card loans remain in the modification program and continue to be charged off in accordance with the Firm's standard charge-off policy.

For periods ending prior to January 1, 2023, modifications of credit card loans where the Firm granted concessions to borrowers who were experiencing financial difficulty were generally accounted for and reported as TDRs. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on TDRs.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults. New enrollments were less than 1% of total retained credit card loans.

(in millions, except weighted-average data)	Three months ended March	
	31, 2022	
Balance of new TDRs ^(a)	\$	82
Weighted-average interest rate of loans – before TDR		18.00 %
Weighted-average interest rate of loans – after TDR		4.87
Balance of loans that redefaulted within one year of modification ^(b)	\$	9

(a) Represents the outstanding balance prior to modification.

(b) Represents loans modified in TDRs that experienced a payment default in the period presented, and for which the payment default occurred within one year of the modification. The amount presented represents the balance of such loans as of the end of the quarter in which they defaulted.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of clients, ranging from large corporate and institutional clients, to small businesses and high-net-worth individuals. The primary credit quality indicator for wholesale loans is the internal risk rating assigned to each loan. Refer to Note 12 of JPMorgan Chase's 2022 Form 10-K for further information on these risk ratings.

Internal risk rating is the primary credit quality indicator for retained wholesale loans. The following tables provide information on internal risk rating and gross charge-offs for the three months ended March 31, 2023.

(in millions, except ratios)	Secured by real estate		Commercial and industrial		Other ^(a)		Total retained loans	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Loans by risk ratings								
Investment-grade	\$ 99,301	\$ 99,552	\$ 76,797	\$ 76,275	\$ 248,757	\$ 249,585	\$ 424,855	\$ 425,412
Noninvestment-grade:								
Noncriticized	23,550	23,272	80,992	81,393	57,487	57,888	162,029	162,553
Criticized performing	4,200	3,662	9,696	8,974	1,333	1,106	15,229	13,742
Criticized nonaccrual	338	246	1,263	1,018	610	699	2,211	1,963
Total noninvestment-grade	28,088	27,180	91,951	91,385	59,430	59,693	179,469	178,258
Total retained loans	\$ 127,389	\$ 126,732	\$ 168,748	\$ 167,660	\$ 308,187	\$ 309,278	\$ 604,324	\$ 603,670
% of investment-grade to total retained loans	77.95 %	78.55 %	45.51 %	45.49 %	80.72 %	80.70 %	70.30 %	70.47 %
% of total criticized to total retained loans	3.56	3.08	6.49	5.96	0.63	0.58	2.89	2.60
% of criticized nonaccrual to total retained loans	0.27	0.19	0.75	0.61	0.20	0.23	0.37	0.33

(a) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AVMM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for more information on SPEs.

(in millions)	Secured by real estate								
	March 31, 2023								
	Term loans by origination year						Revolving loans		Total
	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	
Loans by risk ratings									
Investment-grade	\$ 1,691	\$ 23,975	\$ 22,370	\$ 14,280	\$ 14,266	\$ 21,517	\$ 1,202	\$ —	\$ 99,301
Noninvestment-grade	839	6,546	5,805	3,022	3,633	7,628	614	1	28,088
Total retained loans	\$ 2,530	\$ 30,521	\$ 28,175	\$ 17,302	\$ 17,899	\$ 29,145	\$ 1,816	\$ 1	\$ 127,389
Gross charge-offs	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 8	\$ —	\$ —	\$ 8

(in millions)	Secured by real estate								
	December 31, 2022								
	Term loans by origination year						Revolving loans		Total
	2022	2021	2020	2019	2018	Prior to 2018	Within the revolving period	Converted to term loans	
Loans by risk ratings									
Investment-grade	\$ 24,134	\$ 22,407	\$ 14,773	\$ 14,666	\$ 5,277	\$ 17,289	\$ 1,006	\$ —	\$ 99,552
Noninvestment-grade	6,072	5,602	3,032	3,498	2,395	5,659	920	2	27,180
Total retained loans	\$ 30,206	\$ 28,009	\$ 17,805	\$ 18,164	\$ 7,672	\$ 22,948	\$ 1,926	\$ 2	\$ 126,732

Commercial and industrial March 31, 2023									
(in millions)	Term loans by origination year						Revolving loans		Total
	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	
Loans by risk ratings									
Investment-grade	\$ 8,780	\$ 14,073	\$ 7,567	\$ 2,643	\$ 1,396	\$ 1,450	\$ 40,887	\$ 1	\$ 76,797
Noninvestment-grade	5,745	20,505	11,161	2,988	2,154	1,409	47,906	83	91,951
Total retained loans	\$ 14,525	\$ 34,578	\$ 18,728	\$ 5,631	\$ 3,550	\$ 2,859	\$ 88,793	\$ 84	\$ 168,748
Gross charge-offs	\$ —	\$ —	\$ 16	\$ 1	\$ 2	\$ 3	\$ 63	\$ 1	\$ 86

Commercial and industrial December 31, 2022									
(in millions)	Term loans by origination year						Revolving loans		Total
	2022	2021	2020	2019	2018	Prior to 2018	Within the revolving period	Converted to term loans	
Loans by risk ratings									
Investment-grade	\$ 21,072	\$ 8,338	\$ 3,045	\$ 1,995	\$ 748	\$ 989	\$ 40,087	\$ 1	\$ 76,275
Noninvestment-grade	24,088	12,444	3,459	2,506	525	1,014	47,267	82	91,385
Total retained loans	\$ 45,160	\$ 20,782	\$ 6,504	\$ 4,501	\$ 1,273	\$ 2,003	\$ 87,354	\$ 83	\$ 167,660

Other ^(a) March 31, 2023									
(in millions)	Term loans by origination year						Revolving loans		Total
	2023	2022	2021	2020	2019	Prior to 2019	Within the revolving period	Converted to term loans	
Loans by risk ratings									
Investment-grade	\$ 10,340	\$ 25,435	\$ 14,913	\$ 12,359	\$ 4,370	\$ 8,158	\$ 170,325	\$ 2,857	\$ 248,757
Noninvestment-grade	2,794	14,432	6,165	1,692	692	830	32,821	4	59,430
Total retained loans	\$ 13,134	\$ 39,867	\$ 21,078	\$ 14,051	\$ 5,062	\$ 8,988	\$ 203,146	\$ 2,861	\$ 308,187
Gross charge-offs	\$ —	\$ —	\$ 5	\$ 5	\$ —	\$ —	\$ 1	\$ —	\$ 11

Other ^(a) December 31, 2022									
(in millions)	Term loans by origination year						Revolving loans		Total
	2022	2021	2020	2019	2018	Prior to 2018	Within the revolving period	Converted to term loans	
Loans by risk ratings									
Investment-grade	\$ 32,121	\$ 15,864	\$ 13,015	\$ 4,529	\$ 2,159	\$ 7,251	\$ 171,049	\$ 3,597	\$ 249,585
Noninvestment-grade	16,829	7,096	1,821	699	451	475	32,240	82	59,693
Total retained loans	\$ 48,950	\$ 22,960	\$ 14,836	\$ 5,228	\$ 2,610	\$ 7,726	\$ 203,289	\$ 3,679	\$ 309,278

(a) Includes loans to financial institutions, states and political subdivisions, SPEs, nonprofits, personal investment companies and trusts, as well as loans to individuals and individual entities (predominantly Global Private Bank clients within AWM and J.P. Morgan Wealth Management within CCB). Refer to Note 14 of JPMorgan Chase's 2022 Form 10-K for more information on SPEs.

The following table presents additional information on retained loans secured by real estate, which consists of loans secured wholly or substantially by a lien or liens on real property at origination.

(in millions, except ratios)	Multifamily		Other commercial		Total retained loans secured by real estate	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Retained loans secured by real estate	\$ 79,374	\$ 79,139	\$ 48,015	\$ 47,593	\$ 127,389	\$ 126,732
Criticized	2,212	1,916	2,326	1,992	4,538	3,908
% of criticized to total retained loans secured by real estate	2.79 %	2.42 %	4.84 %	4.19 %	3.56 %	3.08 %
Criticized nonaccrual	\$ 60	\$ 51	\$ 278	\$ 195	\$ 338	\$ 246
% of criticized nonaccrual loans to total retained loans secured by real estate	0.08 %	0.06 %	0.58 %	0.41 %	0.27 %	0.19 %

Geographic distribution and delinquency

The following table provides information on the geographic distribution and delinquency for retained wholesale loans.

(in millions)	Secured by real estate		Commercial and industrial		Other		Total retained loans	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Loans by geographic distribution^(a)								
Total U.S.	\$ 124,360	\$ 123,740	\$ 127,826	\$ 125,324	\$ 229,930	\$ 230,525	\$ 482,116	\$ 479,589
Total non-U.S.	3,029	2,992	40,922	42,336	78,257	78,753	122,208	124,081
Total retained loans	\$ 127,389	\$ 126,732	\$ 168,748	\$ 167,660	\$ 308,187	\$ 309,278	\$ 604,324	\$ 603,670
Loan delinquency								
Current and less than 30 days past due and still accruing	\$ 126,781	\$ 126,083	\$ 166,249	\$ 165,415	\$ 305,985	\$ 307,511	\$ 599,015	\$ 599,009
30–89 days past due and still accruing	270	402	1,160	1,127	1,527	1,015	2,957	2,544
90 or more days past due and still accruing ^(b)	—	1	76	100	65	53	141	154
Criticized nonaccrual	338	246	1,263	1,018	610	699	2,211	1,963
Total retained loans	\$ 127,389	\$ 126,732	\$ 168,748	\$ 167,660	\$ 308,187	\$ 309,278	\$ 604,324	\$ 603,670

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.

(b) Represents loans that are considered well-collateralized and therefore still accruing interest.

Nonaccrual loans

The following table provides information on retained wholesale nonaccrual loans.

(in millions)	Secured by real estate		Commercial and industrial		Other		Total retained loans	
	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
Nonaccrual loans								
With an allowance	\$ 219	\$ 172	\$ 795	\$ 686	\$ 384	\$ 487	\$ 1,398	\$ 1,345
Without an allowance ^(a)	119	74	468	332	226	212	813	618
Total nonaccrual loans^(b)	\$ 338	\$ 246	\$ 1,263	\$ 1,018	\$ 610	\$ 699	\$ 2,211	\$ 1,963

(a) When the discounted cash flows or collateral value equals or exceeds the amortized cost of the loan, the loan does not require an allowance. This typically occurs when the loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.

(b) Interest income on nonaccrual loans recognized on a cash basis was not material for the three months ended March 31, 2023 and 2022.

Loan modifications

The Firm grants certain modifications of wholesale loans to borrowers experiencing financial difficulty, which effective January 1, 2023, are reported as FDMs. The following table provides information about Commercial and industrial loan modifications considered FDMs.

Three months ended March 31, 2023 (in millions)	Commercial and industrial		
	Amortized cost basis	% of loan modifications to total retained commercial and industrial wholesale loans	Financial effect of loan modification
Loan modification			
Single modifications			
Term extension	\$ 280	0.17 %	Extended loans by a weighted-average of 8 months
Other-than-insignificant payment delay	49	0.03 %	Provided payment deferrals with delayed amounts primarily added to end of the original loan terms
Multiple modifications			
Term extension and principal forgiveness	\$ 44	0.03 %	Extended loans by a weighted-average of 64 months and reduced amortized cost basis of the loans by \$23 million
Total	\$ 373		

The following table provides information on the payment status of Commercial and industrial FDMs.

As of March 31, 2023 (in millions)	Amortized cost basis
Current and less than 30 days past due and still accruing	\$ 212
30-89 days past due and still accruing	4
90 or more days past due and still accruing	—
Criticized nonaccrual	157
Total	\$ 373

The following table provides information on Commercial and industrial FDMs that re-defaulted during the three months ended March 31, 2023.

Three months ended March 31, 2023 (in millions)	Amortized cost basis
Loan modification	
Term extension	4
Total^(a)	4

(a) Represents FDMs that were 30 days or more past due at March 31, 2023.

As of March 31, 2023, additional commitments to lend to borrowers experiencing financial difficulty whose Commercial and industrial loans have been modified as FDMs were \$909 million.

FDMs to borrowers in the Other loan class were \$63 million for the three months ended March 31, 2023. The financial effect of FDMs extended the loans by a weighted-average of four months and were generally in the form of term extensions. There were no additional commitments to borrowers experiencing financial difficulty whose loans have been modified as FDMs.

For the three months ended March 31, 2023, Secured by real estate FDMs were not material and there were no additional commitments to lend to borrowers experiencing financial difficulty whose loans have been modified as FDMs.

Prior to January 1, 2023, certain loan modifications were considered TDRs.

For the three months ended March 31, 2022, new TDRs were \$418 million and reflected the extension of maturity dates, covenant waivers, receipt of assets in partial satisfaction of the loan and deferral of principal and interest payments, predominantly in the Commercial and Industrial and Other loan classes. For the three months ended March 31, 2022, the impact of these modifications were not material to the Firm.

As a result of the elimination of the requirement to assess whether a modification is reasonably expected or involves a concession, the population of loans considered FDMs is greater than those previously considered TDRs.

Note 12 – 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.

On January 1, 2023 the Firm adopted the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance as described in Note 1.

The adoption of this guidance eliminated the requirement to measure the allowance for TDRs using a DCF methodology and allowed the option of a non-DCF portfolio-based approach for modified loans to borrowers experiencing financial difficulty. If a DCF methodology is still applied for these modified loans, the discount rate must be the post-modification effective interest rate, instead of the pre-modification effective interest rate.

The Firm elected to change from an asset-specific allowance approach to its non-DCF, portfolio-based allowance approach for modified loans to troubled borrowers for all portfolios except collateral-dependent loans and nonaccrual risk-rated loans, for which the asset-specific allowance approach will continue to apply.

This guidance was adopted under the modified retrospective method which resulted in a net decrease to the allowance for credit losses of \$587 million and an increase to retained earnings of \$446 million, after-tax predominantly driven by residential real estate and credit card.

Refer to Note 13 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion of the allowance for credit losses and the related accounting policies.

Allowance for credit losses and related information

The table below summarizes information about the allowances for credit losses and includes a breakdown of loans and lending-related commitments by impairment methodology. Refer to Note 10 of JPMorgan Chase's 2022 Form 10-K and Note 9 of this Form 10-Q for further information on the allowance for credit losses on investment securities.

Three months ended March 31, (in millions)	2023				2022			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	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	235	1,111	105	1,451	204	720	52	976
Gross recoveries collected	(103)	(189)	(22)	(314)	(158)	(214)	(22)	(394)
Net charge-offs/(recoveries)	132	922	83	1,137	46	506	30	582
Provision for loan losses	247	1,222	578	2,047	175	506	687	1,368
Other	—	—	4	4	—	—	20	20
Ending balance at March 31,	\$ 1,666	\$ 11,400	\$ 6,987	\$ 20,053	\$ 1,894	\$ 10,250	\$ 5,048	\$ 17,192
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	—	(14)	(13)	(2)	—	98	96
Other	—	—	1	1	—	—	1	1
Ending balance at March 31	\$ 77	—	\$ 2,293	\$ 2,370	\$ 111	—	\$ 2,247	\$ 2,358
Total allowance for investment securities	NA	NA	NA	90	NA	NA	NA	41
Total allowance for credit losses^(b)	\$ 1,743	\$ 11,400	\$ 9,280	\$ 22,513	\$ 2,005	\$ 10,250	\$ 7,295	\$ 19,591
Allowance for loan losses by impairment methodology								
Asset-specific ^(c)	\$ (1,030)	—	\$ 437	\$ (593)	\$ (644)	\$ 262	\$ 485	\$ 103
Portfolio-based	2,696	11,400	6,550	20,646	2,538	9,988	4,563	17,089
Total allowance for loan losses	\$ 1,666	\$ 11,400	\$ 6,987	\$ 20,053	\$ 1,894	\$ 10,250	\$ 5,048	\$ 17,192
Loans by impairment methodology								
Asset-specific ^(c)	\$ 3,560	—	\$ 2,189	\$ 5,749	\$ 13,186	\$ 901	\$ 2,823	\$ 16,910
Portfolio-based	296,887	180,079	602,135	1,079,101	282,975	151,382	567,130	1,001,487
Total retained loans	\$ 300,447	\$ 180,079	\$ 604,324	\$ 1,084,850	\$ 296,161	\$ 152,283	\$ 569,953	\$ 1,018,397
Collateral-dependent loans								
Net charge-offs	\$ 4	—	\$ 18	\$ 22	\$ (5)	—	\$ 7	\$ 2
Loans measured at fair value of collateral less cost to sell	3,539	—	586	4,125	4,144	—	665	4,809
Allowance for lending-related commitments by impairment methodology								
Asset-specific	\$ —	—	\$ 45	\$ 45	\$ —	—	\$ 139	\$ 139
Portfolio-based	77	—	2,248	2,325	111	—	2,108	2,219
Total allowance for lending-related commitments^(d)	\$ 77	—	\$ 2,293	\$ 2,370	\$ 111	—	\$ 2,247	\$ 2,358
Lending-related commitments by impairment methodology								
Asset-specific	\$ —	—	\$ 401	\$ 401	\$ —	—	\$ 767	\$ 767
Portfolio-based ^(e)	21,569	—	466,600	488,169	31,847	—	463,570	495,417
Total lending-related commitments	\$ 21,569	—	\$ 467,001	\$ 488,570	\$ 31,847	—	\$ 464,337	\$ 496,184

(a) Represents the impact to the allowance for loan losses upon the adoption of the Financial Instruments - Credit Losses: Troubled Debt Restructurings accounting guidance.

(b) At March 31, 2023, in addition to the allowance for credit losses in the table above, the Firm also had an allowance for credit losses of \$241 million associated with Other assets in Corporate and \$20 million associated with certain accounts receivable in CIB.

(c) Includes collateral-dependent loans, including those for which foreclosure is deemed probable, and nonaccrual risk-rated loans for all periods presented. Prior periods also include non collateral-dependent TDRs or reasonably expected TDRs and modified FCD loans.

(d) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.

(e) At March 31, 2023 and 2022, lending-related commitments excluded \$16.0 billion and \$15.3 billion, respectively, for the consumer, excluding credit card portfolio segment; \$861.2 billion and \$757.3 billion, respectively, for the credit card portfolio segment; and \$17.5 billion and \$32.9 billion, respectively, for the wholesale portfolio segment, which were not subject to the allowance for lending-related commitments.

Discussion of changes in the allowance

The allowance for credit losses as of March 31, 2023 was \$22.8 billion, reflecting a net addition of \$1.1 billion from December 31, 2022. The net addition to the allowance for credit losses was predominantly driven by a deterioration in the Firm's weighted-average economic outlook, including the impact from changes to the Firm's macroeconomic scenarios, and the additional weight placed on the relative adverse scenario. The additional weight placed on the relative adverse scenario reflects an increased probability of a moderate recession due to tightening financial conditions, including higher inflation, changes in monetary policy, and geopolitical risks.

The net addition to the allowance consisted of:

- \$726 million in **wholesale**, which also reflected net downgrade activity, and an addition to the allowance for credit losses associated with Other assets in Corporate, and
- \$416 million in **consumer**.

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. 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 5.8% in the third quarter of 2024, and a 1.2% lower U.S. real GDP exiting the second quarter of 2024.

The Firm's central case assumptions reflected U.S. unemployment rates and U.S. real GDP as follows:

	Assumptions at March 31, 2023		
	2Q23	4Q23	2Q24
U.S. unemployment rate ^(a)	3.5 %	4.1 %	4.9 %
YoY growth in U.S. real GDP ^(b)	2.0 %	0.4 %	— %

	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 Note 13 and Note 10 of JPMorgan Chase's 2022 Form 10-K for a description of the policies, methodologies and judgments used to determine the Firm's allowances for credit losses on loans, lending-related commitments, and investment securities.

Refer to Consumer Credit Portfolio on pages 50-53, Wholesale Credit Portfolio on pages 54-62 and Note 11 for additional information on the consumer and wholesale credit portfolios.

Refer to Critical Accounting Estimates Used by the Firm on pages 74-76 for further information on the allowance for credit losses and related management judgments.

Note 13 – Variable interest entities

Refer to Note 1 and Note 14 of JPMorgan Chase's 2022 Form 10-K for a further description of the Firm's accounting policies and involvement with VIEs.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "Firm-sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase-administered asset-backed commercial paper conduit.

Line of Business	Transaction Type	Activity	Form 10-Q page references
CCB	Credit card securitization trusts	Securitization of originated credit card receivables	140
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	140-142
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, and other consumer loans	140-142
	Multi-seller conduits	Assisting clients in accessing the financial markets in a cost-efficient manner and structuring transactions to meet investor needs	142
	Municipal bond vehicles	Financing of municipal bond investments	142

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties. Refer to pages 143-144 of this Note for more information on consolidated VIE assets and liabilities as well as the VIEs sponsored by third parties.

Significant Firm-sponsored VIEs

Credit card securitizations

As a result of the Firm's continuing involvement, the Firm is considered to be the primary beneficiary of its Firm-sponsored credit card securitization trust, the Chase Issuance Trust.

Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following tables present the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests (including amounts required to be held pursuant to credit

risk retention rules), recourse or guarantee arrangements, and derivative contracts. In certain instances, the Firm's only continuing involvement is servicing the loans. The Firm's maximum loss exposure from retained and purchased interests is the carrying value of these interests.

March 31, 2023 (in millions)	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIES ^{(c)(d)(e)}			
	Total assets held by securitization VIES	Assets held in consolidated securitization VIES	Assets held in nonconsolidated securitization VIES with continuing involvement	Trading assets	Investment securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related^(a)							
Residential mortgage:							
Prime/Alt-A and option ARMs	\$ 55,451	\$ 735	\$ 37,836	\$ 839	\$ 1,959	\$ —	\$ 2,798
Subprime	9,515	—	1,701	16	—	—	16
Commercial and other ^(b)	163,184	—	126,194	795	5,398	663	6,856
Total	\$ 228,150	\$ 735	\$ 165,731	\$ 1,650	\$ 7,357	\$ 663	\$ 9,670

December 31, 2022 (in millions)	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIES ^{(c)(d)(e)}			
	Total assets held by securitization VIES	Assets held in consolidated securitization VIES	Assets held in nonconsolidated securitization VIES with continuing involvement	Trading assets	Investment securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related^(a)							
Residential mortgage:							
Prime/Alt-A and option ARMs	\$ 55,362	\$ 754	\$ 37,058	\$ 744	\$ 1,918	\$ —	\$ 2,662
Subprime	9,709	—	1,743	10	—	—	10
Commercial and other ^(b)	164,915	—	127,037	888	5,373	670	6,931
Total	\$ 229,986	\$ 754	\$ 165,838	\$ 1,642	\$ 7,291	\$ 670	\$ 9,603

(a) Excludes U.S. GSEs and government agency securitizations and re-securitizations, which are not Firm-sponsored.

(b) Consists of securities backed by commercial real estate loans and non-mortgage-related consumer receivables.

(c) Excludes the following: retained servicing; securities retained from loan sales and securitization activity related to U.S. GSEs and government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities; senior securities of \$3 million and \$134 million at March 31, 2023 and December 31, 2022, respectively, and subordinated securities which were zero and \$34 million at March 31, 2023 and December 31, 2022, respectively, which the Firm purchased in connection with CIB's secondary market-making activities.

(d) Includes interests held in re-securitization transactions.

(e) As of March 31, 2023 and December 31, 2022, 83% and 84%, respectively, of the Firm's retained securitization interests, which are predominantly carried at fair value and include amounts required to be held pursuant to credit risk retention rules, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of \$2.8 billion and \$2.6 billion of investment-grade retained interests at March 31, 2023 and December 31, 2022, respectively, and noninvestment-grade retained interests were not material at both March 31, 2023 and December 31, 2022. The retained interests in commercial and other securitization trusts consisted of \$5.8 billion of investment-grade retained interests at both March 31, 2023 and December 31, 2022, and \$1.1 billion of noninvestment-grade retained interests at both March 31, 2023 and December 31, 2022.

Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB.

Commercial mortgages and other consumer securitizations

CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts.

Re-securitizations

The following table presents the principal amount of securities transferred to re-securitization VIEs.

(in millions)	Three months ended March 31,	
	2023	2022
Transfers of securities to VIEs		
U.S. GSEs and government agencies	\$ 3,406	\$ 6,076

The Firm did not transfer any private label securities to re-securitization VIEs during the three months ended March 31, 2023 and 2022, respectively and retained interests in any such Firm-sponsored VIEs as of March 31, 2023 and December 31, 2022 were not material.

The following table presents information on the Firm's interests in nonconsolidated re-securitization VIEs.

(in millions)	Nonconsolidated re-securitization VIEs	
	March 31, 2023	December 31, 2022
U.S. GSEs and government agencies		
Interest in VIEs	\$ 3,411	\$ 2,580

As of March 31, 2023, and December 31, 2022, the Firm did not consolidate any U.S. GSE and government agency re-securitization VIEs or any Firm-sponsored private-label re-securitization VIEs.

Multi-seller conduits

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held \$10.4 billion and \$13.8 billion of the commercial paper issued by the Firm-administered multi-seller conduits at March 31, 2023, and December 31, 2022, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were \$9.8 billion and \$10.6 billion at March 31, 2023, and December 31, 2022, respectively, and are reported as off-balance sheet lending-related commitments in other unfunded commitments to extend credit. Refer to Note 22 for more information on off-balance sheet lending-related commitments.

Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow institutions to finance their municipal bond investments at short-term rates. TOB transactions are known as customer TOB trusts and non-customer TOB trusts. Customer TOB trusts are sponsored by a third party.

The Firm serves as sponsor for all non-customer TOB transactions.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of March 31, 2023, and December 31, 2022.

March 31, 2023 (in millions)	Assets				Liabilities		
	Trading assets	Loans	Other ^(c)	Total assets ^(d)	Beneficial interests in VIE assets ^(e)	Other ^(f)	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	\$ —	\$ 8,948	\$ 84	\$ 9,032	\$ 999	\$ 2	\$ 1,001
Firm-administered multi-seller conduits	4	22,397	162	22,563	12,175	29	12,204
Municipal bond vehicles	1,965	—	24	1,989	1,593	8	1,601
Mortgage securitization entities ^(a)	—	764	10	774	136	61	197
Other	64	1,133 ^(b)	253	1,450	—	155	155
Total	\$ 2,033	\$ 33,242	\$ 533	\$ 35,808	\$ 14,903	\$ 255	\$ 15,158

December 31, 2022 (in millions)	Assets				Liabilities		
	Trading assets	Loans	Other ^(c)	Total assets ^(d)	Beneficial interests in VIE assets ^(e)	Other ^(f)	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	\$ —	\$ 9,699	\$ 100	\$ 9,799	\$ 1,999	\$ 2	\$ 2,001
Firm-administered multi-seller conduits	—	22,819	170	22,989	9,236	39	9,275
Municipal bond vehicles	2,089	—	7	2,096	1,232	10	1,242
Mortgage securitization entities ^(a)	—	781	10	791	143	67	210
Other	62	1,112 ^(b)	263	1,437	—	161	161
Total	\$ 2,151	\$ 34,411	\$ 550	\$ 37,112	\$ 12,610	\$ 279	\$ 12,889

(a) Includes residential mortgage securitizations.

(b) Primarily includes purchased supply chain finance receivables and purchased auto loan securitizations in OIB.

(c) Includes assets classified as cash and other assets on the Consolidated balance sheets.

(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The assets and liabilities include third-party assets and liabilities of consolidated VIEs and exclude intercompany balances that eliminate in consolidation.

(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated VIEs". The holders of these beneficial interests generally do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of \$1.1 billion and \$2.1 billion at March 31, 2023, and December 31, 2022, respectively.

(f) Includes liabilities classified as accounts payable and other liabilities on the Consolidated balance sheets.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm generally does not consolidate the VIE, but it records and reports these positions on its Consolidated balance sheets in the same manner it would record and report positions in respect of any other third-party transaction.

Tax credit vehicles

The Firm holds investments in unconsolidated tax credit vehicles, which are limited partnerships and similar entities that own and operate affordable housing, energy, and other projects. These entities are primarily considered VIEs. A third party is typically the general partner or managing

member and has control over the significant activities of the tax credit vehicles, and accordingly the Firm does not consolidate tax credit vehicles. The Firm generally invests in these partnerships as a limited partner and earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure, represented by equity investments and funding commitments, was \$30.2 billion at both March 31, 2023, and December 31, 2022, of which \$10.7 billion and \$10.6 billion was unfunded at March 31, 2023, and December 31, 2022, respectively. The Firm assesses each project and to reduce the risk of loss, may withhold varying amounts of its capital investment until the project qualifies for tax credits. Refer to Note 25 of JPMorgan Chase's 2022 Form 10-K for further information on affordable housing tax credits and Note 22 of this Form 10-Q for more information on off-balance sheet lending-related commitments.

Customer municipal bond vehicles (TOB trusts)

The Firm may provide various services to customer TOB trusts, including remarketing agent, liquidity or tender option provider. In certain customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder.

In those transactions, upon the termination of the vehicle, the Firm has recourse to the third-party Residual holders for any shortfall. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds. The Firm does not consolidate customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle.

Securitization activity

The following table provides information related to the Firm's securitization activities for the three months ended March 31, 2023 and 2022, related to assets held in Firm-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved at the time of the securitization.

(in millions)	Three months ended March 31,			
	2023		2022	
	Residential mortgage ^(d)	Commercial and other ^(e)	Residential mortgage ^(d)	Commercial and other ^(e)
Principal securitized	\$ 1,073	\$ —	\$ 6,495	\$ 3,108
All cash flows during the period:^(a)				
Proceeds received from loan sales as financial instruments ^{(b)(c)}	\$ 1,030	\$ —	\$ 6,375	\$ 3,106
Servicing fees collected	6	—	24	—
Cash flows received on interests	74	87	155	71

(a) Excludes re-securitization transactions.

(b) Predominantly includes Level 2 assets.

(c) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

(d) Represents prime mortgages. Excludes loan securitization activity related to U.S. GSEs and government agencies.

(e) Includes commercial mortgage and other consumer loans.

Loans and excess MSR sold to U.S. government-sponsored enterprises and loans in securitization transactions pursuant to Ginnie Mae guidelines

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share

a portion of the credit risk associated with the sold loans with the purchaser. Refer to Note 22 of this Form 10-Q for additional information about the Firm's loan sales- and securitization-related indemnifications and Note 14 for additional information about the impact of the Firm's sale of certain excess MSRs.

The Firm's maximum exposure as a liquidity provider to customer TOB trusts at March 31, 2023 and December 31, 2022 was \$5.9 billion and \$5.8 billion, respectively. The fair value of assets held by such VIEs at March 31, 2023 and December 31, 2022 was \$8.4 billion and \$8.2 billion, respectively.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgages, credit card receivables, commercial mortgages and other consumer loans.

The following table summarizes the activities related to loans sold to the U.S. GSEs, and loans in securitization transactions pursuant to Ginnie Mae guidelines.

(in millions)	Three months ended March 31,	
	2023	2022
Carrying value of loans sold	\$ 2,698	\$ 23,668
Proceeds received from loan sales as cash	7	9
Proceeds from loan sales as securities ^{(a),(b)}	2,662	23,258
Total proceeds received from loan sales^(c)	\$ 2,669	\$ 23,267
Gains/(losses) on loan sales ^{(d),(e)}	\$ —	\$ —

(a) Includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt or retained as part of the Firm's investment securities portfolio.

(b) Included in level 2 assets.

(c) Excludes the value of MSRs retained upon the sale of loans.

(d) Gains/(losses) on loan sales include the value of MSRs.

(e) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 22, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan

pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. Refer to Note 11 for additional information.

The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage loans recognized on the Firm's Consolidated balance sheets as of March 31, 2023 and December 31, 2022. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

(in millions)	March 31, 2023	December 31, 2022
Loans repurchased or option to repurchase ^(a)	\$ 709	\$ 839
Real estate owned	10	10
Foreclosed government-guaranteed residential mortgage loans ^(b)	23	27

(a) Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.

(b) Relates to voluntary repurchases of loans, which are included in accrued interest and accounts receivable.

Loan delinquencies and liquidation losses

The table below includes information about components of and delinquencies related to nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement as of March 31, 2023, and December 31, 2022.

(in millions)	Securitized assets		90 days past due		Net liquidation losses/(recoveries)	
	March 31, 2023	December 31, 2022	March 31, 2023	December 31, 2022	Three months ended March 31, 2023	2022
Securitized loans						
Residential mortgage:						
Prime / Alt-A & option ARMs	\$ 37,836	\$ 37,058	\$ 528	\$ 511	\$ 7	\$ (6)
Subprime	1,701	1,743	196	212	2	—
Commercial and other	126,194	127,037	863	948	19	6
Total loans securitized	\$ 165,731	\$ 165,838	\$ 1,587	\$ 1,671	\$ 28	\$ —

Note 14 – Goodwill and Mortgage servicing rights

Refer to Note 15 of JPMorgan Chase's 2022 Form 10-K for a discussion of the accounting policies related to goodwill and mortgage servicing rights.

Goodwill

The following table presents goodwill attributed to the reportable business segments and Corporate.

(in millions)	March 31, 2023	December 31, 2022
Consumer & Community Banking	\$ 32,121	\$ 32,121
Corporate & Investment Bank	8,008	8,008
Commercial Banking	2,985	2,985
Asset & Wealth Management	8,366	7,902
Corporate	664	646
Total goodwill	\$ 52,144	\$ 51,662

The following table presents changes in the carrying amount of goodwill.

(in millions)	Three months ended March 31,	
	2023	2022
Balance at beginning of period	\$ 51,662	\$ 50,315
Changes during the period from:		
Business combinations ^(a)	451	—
Other ^(b)	31	(17)
Balance at March 31,	\$ 52,144	\$ 50,298

(a) For the three months ended March 31, 2023, represents estimated goodwill in AWM, as a result of the Firm's acquisition of the remaining 51% interest in CIM.

(b) Predominantly foreign currency adjustments.

Goodwill impairment testing

Goodwill is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate that there may be an impairment. Refer to Note 15 of JPMorgan Chase's 2022 Form 10-K for a further discussion of the Firm's goodwill impairment testing.

Unanticipated declines in business performance, increases in credit losses, increases in capital requirements, as well as deterioration in economic or market conditions, adverse regulatory or legislative changes or increases in the estimated market cost of equity, could cause the estimated fair values of the Firm's reporting units to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

As of March 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 March 31, 2023, or December 31, 2022, nor was goodwill written off due to impairment during the three months ended March 31, 2023 or 2022.

Mortgage servicing rights

MSRs represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained. Refer to Notes 2 and 15 of JPMorgan Chase's 2022 Form 10-K for a further description of the MSR asset, interest rate risk management, and the valuation of MSRs.

The following table summarizes MSR activity for the three months ended March 31, 2023 and 2022.

(in millions, except where otherwise noted)	As of or for the three months ended March 31,	
	2023	2022
Fair value at beginning of period	\$ 7,973	\$ 5,494
MSR activity:		
Originations of MSRs	32	415
Purchase of MSRs ^(a)	(1)	715
Disposition of MSRs	2	(57)
Net additions/(dispositions)	33	1,073
Changes due to collection/realization of expected cash flows	(240)	(232)
Changes in valuation due to inputs and assumptions:		
Changes due to market interest rates and other ^(b)	(22)	894
Changes in valuation due to other inputs and assumptions:		
Projected cash flows (e.g., cost to service)	—	—
Discount rates	—	—
Prepayment model changes and other ^(c)	11	65
Total changes in valuation due to other inputs and assumptions	11	65
Total changes in valuation due to inputs and assumptions	(11)	959
Fair value at March 31,	\$ 7,755	\$ 7,294
Changes in unrealized gains/(losses) included in income related to MSRs held at March 31,	\$ (11)	\$ 959
Contractual service fees, late fees and other ancillary fees included in income	388	370
Third-party mortgage loans serviced at March 31, (in billions)	577	576
Servicer advances, net of an allowance for uncollectible amounts, at March 31 ^(d)	671	1,426

(a) Includes purchase price adjustments associated with MSRs purchased in the prior quarter, primarily as a result of loans that prepaid within 90 days of settlement, allowing the Firm to recover the purchase price.

(b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(c) Represents changes in prepayments other than those attributable to changes in market interest rates.

(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the three months ended March 31, 2023 and 2022.

(in millions)	Three months ended March 31,	
	2023	2022
CCB mortgage fees and related income		
Production revenue	\$ 75	\$ 211
Net mortgage servicing revenue:		
Operating revenue:		
Loan servicing revenue	400	368
Changes in MSR asset fair value due to collection/realization of expected cash flows	(240)	(232)
Total operating revenue	160	136
Risk management:		
Changes in MSR asset fair value due to market interest rates and other ^(a)	(22)	894
Other changes in MSR asset fair value due to other inputs and assumptions in model ^(b)	11	65
Changes in derivative fair value and other	(1)	(850)
Total risk management	(12)	109
Total net mortgage servicing revenue	148	245
Total CCB mortgage fees and related income	223	456
All other	(2)	4
Mortgage fees and related income	\$ 221	\$ 460

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

Changes in fair value based on variations in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In the following table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at March 31, 2023, and December 31, 2022, and outlines hypothetical sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

(in millions, except rates)	Mar 31, 2023	Dec 31, 2022
Weighted-average prepayment speed assumption (constant prepayment rate)	6.32 %	6.12 %
Impact on fair value of 10% adverse change	\$ (183)	\$ (183)
Impact on fair value of 20% adverse change	(355)	(356)
Weighted-average option adjusted spread ^(a)	5.90 %	5.77 %
Impact on fair value of a 100 basis point adverse change	\$ (332)	\$ (341)
Impact on fair value of a 200 basis point adverse change	(637)	(655)

(a) Includes the impact of operational risk and regulatory capital.

Note 15 – Deposits

Refer to Note 17 of JPMorgan Chase's 2022 Form 10-K for further information on deposits.

At March 31, 2023 and December 31, 2022, noninterest-bearing and interest-bearing deposits were as follows.

(in millions)	March 31, 2023	December 31, 2022
U.S. offices		
Noninterest-bearing (included \$38,803 and \$26,363 at fair value) ^(a)	\$ 663,772	\$ 644,902
Interest-bearing (included \$595 and \$586 at fair value) ^(a)	1,290,614	1,276,346
Total deposits in U.S. offices	1,954,386	1,921,248
Non-U.S. offices		
Noninterest-bearing (included \$1,443 and \$1,398 at fair value) ^(a)	25,071	27,005
Interest-bearing (included \$739 and \$273 at fair value) ^(a)	397,796	391,926
Total deposits in non-U.S. offices	422,867	418,931
Total deposits	\$ 2,377,253	\$ 2,340,179

(a) Includes structured notes classified as deposits for which the fair value option has been elected. Refer to Note 3 for further discussion.

Note 16 – Leases

Refer to Note 18 of JPMorgan Chase's 2022 Form 10-K for a further discussion on leases.

Firm as lessee

At March 31, 2023, JPMorgan Chase and its subsidiaries were obligated under a number of noncancellable leases, predominantly operating leases for premises and equipment used primarily for business purposes.

Operating lease liabilities and right-of-use ("ROU") assets are recognized at the lease commencement date based on the present value of the future minimum lease payments over the lease term.

The following table provides information related to the Firm's operating leases:

(in millions)	March 31, 2023	December 31, 2022
Right-of-use assets	\$ 7,727	\$ 7,782
Lease liabilities	8,113	8,183

The Firm's net rental expense was \$487 million and \$495 million for the three months ended March 31, 2023 and 2022, respectively.

Firm as lessor

The Firm's lease financings are predominantly auto operating leases, and are included in other assets on the Firm's Consolidated balance sheets.

The following table presents the Firm's operating lease income, included within other income, and the related depreciation expense, included within technology, communications and equipment expense, on the Consolidated statements of income:

	Three months ended March 31,	
(in millions)	2023	2022
Operating lease income	\$ 755	\$ 1,048
Depreciation expense	419	711

Note 17 - Preferred stock

Refer to Note 21 of JPMorgan Chase's 2022 Form 10-K for a further discussion on preferred stock.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of March 31, 2023 and December 31, 2022, and the quarterly dividend declarations for the three months ended March 31, 2023 and 2022.

	Shares		Carrying value (in millions)		Issue date	Contractual rate in effect at March 31, 2023	Earliest redemption date	Floating annualized rate ^(a)	Dividend declared per share	
	March 31, 2023	December 31, 2022	March 31, 2023	December 31, 2022					Three months ended March 31,	
									2023	2022
Fixed-rate:										
Series DD	169,625	169,625	\$ 1,696	\$ 1,696	9/21/2018	5.750 %	12/1/2023	NA	\$ 143.75	\$ 143.75
Series EE	185,000	185,000	1,850	1,850	1/24/2019	6.000	3/1/2024	NA	150.00	150.00
Series GG	90,000	90,000	900	900	11/7/2019	4.750	12/1/2024	NA	118.75	118.75
Series JJ	150,000	150,000	1,500	1,500	3/17/2021	4.550	6/1/2026	NA	113.75	113.75
Series LL	185,000	185,000	1,850	1,850	5/20/2021	4.625	6/1/2026	NA	115.63	115.63
Series MM	200,000	200,000	2,000	2,000	7/29/2021	4.200	9/1/2026	NA	105.00	105.00
Fixed-to-floating-rate:										
Series I	—	—	\$ —	\$ —	4/23/2008	— %	4/30/2018	LIBOR + 3.47%	\$ —	\$ 92.13
Series Q	150,000	150,000	1,500	1,500	4/23/2013	5.150	5/1/2023	LIBOR + 3.25	128.75	128.75
Series R	150,000	150,000	1,500	1,500	7/29/2013	6.000	8/1/2023	LIBOR + 3.30	150.00	150.00
Series S	200,000	200,000	2,000	2,000	1/22/2014	6.750	2/1/2024	LIBOR + 3.78	168.75	168.75
Series U	100,000	100,000	1,000	1,000	3/10/2014	6.125	4/30/2024	LIBOR + 3.33	153.13	153.13
Series V	—	—	—	—	6/9/2014	—	7/1/2019	LIBOR + 3.32	—	86.40
Series X	160,000	160,000	1,600	1,600	9/23/2014	6.100	10/1/2024	LIBOR + 3.33	152.50	152.50
Series Z	—	—	—	—	4/21/2015	—	5/1/2020	LIBOR + 3.80	—	—
Series CC	125,750	125,750	1,258	1,258	10/20/2017	LIBOR + 2.58	11/1/2022	LIBOR + 2.58	182.79	115.63 ^(b)
Series FF	225,000	225,000	2,250	2,250	7/31/2019	5.000	8/1/2024	SOFR + 3.38	125.00	125.00
Series HH	300,000	300,000	3,000	3,000	1/23/2020	4.600	2/1/2025	SOFR + 3.125	115.00	115.00
Series II	150,000	150,000	1,500	1,500	2/24/2020	4.000	4/1/2025	SOFR + 2.745	100.00	100.00
Series KK	200,000	200,000	2,000	2,000	5/12/2021	3.650	6/1/2026	CMT + 2.85	91.25	91.25
Total preferred stock	2,740,375	2,740,375	\$ 27,404	\$ 27,404						

(a) Floating annualized rate includes three-month LIBOR, three-month term SOFR or five-year Constant Maturity Treasury ("CMT") rate, as applicable, plus the spreads noted above.

(b) The dividend rate for Series CC preferred stock became floating and payable quarterly starting on November 1, 2022; prior to which the dividend rate was fixed at 4.625% or \$231.25 per share payable semiannually.

Each series of preferred stock has a liquidation value and redemption price per share of \$10,000, plus accrued but unpaid dividends. The aggregate liquidation value was \$27.7 billion at March 31, 2023.

Redemptions

On October 31, 2022, the Firm redeemed all \$2.93 billion of its fixed to floating rate non-cumulative perpetual preferred stock, Series I.

On October 3, 2022, the Firm redeemed all \$2.5 billion of its fixed-to-floating rate non-cumulative preferred stock, Series V.

On February 1, 2022, the Firm redeemed all \$2.0 billion of its fixed-to-floating rate non-cumulative preferred stock, Series Z.

Note 18 – Earnings per share

Refer to Note 23 of JPMorgan Chase's 2022 Form 10-K for a discussion of the computation of basic and diluted earnings per share ("EPS"). The following table presents the calculation of basic and diluted EPS for the three months ended March 31, 2023 and 2022.

(in millions, except per share amounts)	Three months ended March 31,	
	2023	2022
Basic earnings per share		
Net income	\$ 12,622	\$ 8,282
Less: Preferred stock dividends	356	397
Net income applicable to common equity	12,266	7,885
Less: Dividends and undistributed earnings allocated to participating securities	73	40
Net income applicable to common stockholders	\$ 12,193	\$ 7,845
Total weighted-average basic shares outstanding	2,968.5	2,977.0
Net income per share	\$ 4.11	\$ 2.64
Diluted earnings per share		
Net income applicable to common stockholders	\$ 12,193	\$ 7,845
Total weighted-average basic shares outstanding	2,968.5	2,977.0
Add: Dilutive impact of unvested PSUs, nondividend-earning RSUs and SARs	4.2	4.0
Total weighted-average diluted shares outstanding	2,972.7	2,981.0
Net income per share	\$ 4.10	\$ 2.63

Note 19 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), fair value changes of excluded components on fair value hedges, cash flow hedging activities, net gain/(loss) related to the Firm's defined benefit pension and OPEB plans, and fair value option-elected liabilities arising from changes in the Firm's own credit risk (DVA).

As of or for the three months ended March 31, 2023 (in millions)	Unrealized gains/(losses) on investment securities	Translation adjustments, net of hedges	Fair value hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at January 1, 2023	\$ (9,124)	\$ (1,545)	\$ (33)	\$ (5,656)	\$ (1,451)	\$ 468	\$ (17,341)
Net change	2,212	197	(21)	798	(55)	(208)	2,923
Balance at March 31, 2023	\$ (6,912) ^(a)	\$ (1,348)	\$ (54)	\$ (4,858)	\$ (1,506)	\$ 260	\$ (14,418)

As of or for the three months ended March 31, 2022 (in millions)	Unrealized gains/(losses) on investment securities	Translation adjustments, net of hedges	Fair value hedges	Cash flow hedges	Defined benefit pension and OPEB plans	DVA on fair value option elected liabilities	Accumulated other comprehensive income/(loss)
Balance at January 1, 2022	\$ 2,640	\$ (934)	\$ (131)	\$ (296)	\$ (210)	\$ (1,153)	\$ (84)
Net change	(7,453)	(62)	110	(2,791)	67	646	(9,483)
Balance at March 31, 2022	\$ (4,813) ^(a)	\$ (996)	\$ (21)	\$ (3,087)	\$ (143)	\$ (507)	\$ (9,567)

(a) As of March 31, 2023 includes after-tax net unamortized unrealized gains/(losses) of \$(29.1) million related to HTM securities that have been transferred to AFS as permitted by the new hedge accounting guidance. As of March 31, 2023 and 2022 includes after-tax net unamortized unrealized gains/(losses) of \$(1.3) billion and \$2.2 billion, related to AFS securities that have been transferred to HTM, respectively. Refer to Note 9 of this Form 10-Q, and Note 10 of JPMorgan Chase's 2022 Form 10-K for further information.

The following table presents the pre-tax and after-tax changes in the components of OCI.

Three months ended March 31, (in millions)	2023			2022		
	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:						
Net unrealized gains/(losses) arising during the period	\$ 2,042	\$ (490)	\$ 1,552	\$ (10,202)	\$ 2,450	\$ (7,752)
Reclassification adjustment for realized (gains)/losses included in net income ^(a)	868	(208)	660	394	(95)	299
Net change	2,910	(698)	2,212	(9,808)	2,355	(7,453)
Translation adjustments^(b):						
Translation	973	(41)	932	(341)	24	(317)
Hedges	(963)	228	(735)	338	(83)	255
Net change	10	187	197	(3)	(59)	(62)
Fair value hedges, net change^(c):	(28)	7	(21)	145	(35)	110
Cash flow hedges:						
Net unrealized gains/(losses) arising during the period	567	(136)	431	(3,436)	825	(2,611)
Reclassification adjustment for realized (gains)/losses included in net income ^(a)	483	(116)	367	(237)	57	(180)
Net change	1,050	(252)	798	(3,673)	882	(2,791)
Defined benefit pension and OPEB plans, net change:	(71)	16	(55)	90	(23)	67
DVA on fair value option elected liabilities, net change:	(274)	66	(208)	859	(213)	646
Total other comprehensive income/(loss)	\$ 3,597	\$ (674)	\$ 2,923	\$ (12,390)	\$ 2,907	\$ (9,483)

(a) The pre-tax amount is reported in Investment securities gains/(losses) in the Consolidated statements of income.

(b) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. During the three months ended March 31, 2023, the Firm reclassified a net pre-tax loss of \$(5) million to other revenue related to the acquisition of CIFM of which \$(41) million related to the net investment hedge loss. There were no sales or liquidations of legal entities that resulted in reclassifications for the three month period ended March 31, 2022.

(c) Represents changes in fair value of cross-currency swaps attributable to changes in cross-currency basis spreads, which are excluded from the assessment of hedge effectiveness and recorded in other comprehensive income. The initial cost of cross-currency basis spreads is recognized in earnings as part of the accrual of interest on the cross currency swaps.

(d) The pre-tax amounts are primarily recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.

Note 20 – Restricted cash and other restricted assets

Refer to Note 26 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion of the Firm's restricted cash and other restricted assets.

Certain of the Firm's cash and other assets are restricted as to withdrawal or usage. These restrictions are imposed by various regulatory authorities based on the particular activities of the Firm's subsidiaries.

The Firm is also subject to rules and regulations established by other U.S. and non-U.S. regulators. As part of its compliance with the respective regulatory requirements, the Firm's broker-dealer activities are subject to certain restrictions on cash and other assets.

The following table presents the components of the Firm's restricted cash:

(in billions)	March 31, 2023	December 31, 2022
Segregated for the benefit of securities and cleared derivative customers	\$ 13.3	\$ 18.7
Cash reserves at non-U.S. central banks and held for other general purposes	8.3	8.1
Total restricted cash^(a)	\$ 21.6	\$ 26.8

(a) Comprises \$20.2 billion and \$25.4 billion in deposits with banks, and \$1.4 billion and \$1.4 billion in cash and due from banks on the Consolidated balance sheet as of March 31, 2023 and December 31, 2022, respectively.

Also, as of March 31, 2023 and December 31, 2022, the Firm had the following other restricted assets:

- Cash and securities pledged with clearing organizations for the benefit of customers of \$44.4 billion and \$42.4 billion, respectively.
- Securities with a fair value of \$27.5 billion and \$31.7 billion, respectively, were also restricted in relation to customer activity.

Note 21 – Regulatory capital

Refer to Note 27 of JPMorgan Chase's 2022 Form 10-K for a detailed discussion on regulatory capital.

The Federal Reserve establishes capital requirements, including well-capitalized requirements, for the 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.

Under the risk-based capital and leverage-based guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios for CET1 capital, Tier 1 capital, Total capital, Tier 1 leverage and the SLR. Failure to meet these minimum requirements could cause the Federal Reserve to take action. IDI subsidiaries are also subject to these capital requirements established by their respective primary regulators.

The following table presents the risk-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of March 31, 2023 and December 31, 2022.

	Standardized capital ratio requirements		Advanced capital ratio requirements		Well-capitalized ratios	
	BHC ^{(a)(b)}	IDI ^(c)	BHC ^{(a)(b)}	IDI ^(c)	BHC ^(d)	IDI ^(e)
Risk-based capital ratios						
CET1 capital	12.5 %	7.0 %	11.0 %	7.0 %	NA	6.5 %
Tier 1 capital	14.0	8.5	12.5	8.5	6.0 %	8.0
Total capital	16.0	10.5	14.5	10.5	10.0	10.0

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.

- (a) Represents the regulatory capital ratio requirements applicable to the Firm. The CET1, Tier 1 and Total capital ratio requirements each include a respective minimum requirement plus a GSIB surcharge of 4.0% as calculated under Method 2; plus a 4.0% SCB for Basel III Standardized ratios and a fixed 2.5% capital conservation buffer for Basel III Advanced ratios. The countercyclical buffer is currently set to 0% by the federal banking agencies.
- (b) For the period ended December 31, 2022, the CET1, Tier 1, and Total capital ratio requirements under Basel III Standardized 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.
- (c) Represents requirements for JPMorgan Chase's IDI subsidiaries. The CET1, Tier 1 and Total capital ratio requirements include a fixed capital conservation buffer requirement of 2.5% that is applicable to the IDI subsidiaries. The IDI subsidiaries are not subject to the GSIB surcharge.
- (d) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
- (e) Represents requirements for IDI subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

The following table presents the leverage-based regulatory capital ratio requirements and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of March 31, 2023 and December 31, 2022.

	Capital ratio requirements ^(a)		Well-capitalized ratios	
	BHC	IDI	BHC ^(b)	IDI
Leverage-based capital ratios				
Tier 1 leverage	4.0 %	4.0 %	NA	5.0 %
SLR	5.0	6.0	NA	6.0

Note: The table above is as defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its IDI subsidiaries are subject.

(a) Represents minimum SLR requirement of 3.0%, as well as supplementary leverage buffer requirements of 2.0% and 3.0% for BHC and IDI subsidiaries, respectively.

(b) The Federal Reserve's regulations do not establish well-capitalized thresholds for these measures for BHCs.

CECL regulatory capital transition

Beginning January 1, 2022, the \$2.9 billion CECL capital benefit, provided by the Federal Reserve in response to the COVID-19 pandemic, is being phased out at 25% per year over a three-year period. As of March 31, 2023, the Firm's CET1 capital reflected the remaining \$1.4 billion benefit associated with the CECL capital transition provisions.

Additionally, effective January 1, 2023, the Firm phased out 50% of the other CECL capital transition provisions which impacted Tier 2 capital, adjusted average assets, total leverage exposure and RWA, as applicable.

Refer to Note 27 of JPMorgan Chase's 2022 Form 10-K for further information on CECL capital transition provisions.

The following tables present risk-based capital metrics under both the Basel III Standardized and Basel III Advanced approaches and leverage-based capital metrics for JPMorgan Chase and JPMorgan Chase Bank, N.A. As of March 31, 2023 and December 31, 2022, JPMorgan Chase and JPMorgan Chase Bank, N.A. were well-capitalized and met all capital requirements to which each was subject.

March 31, 2023 (in millions, except ratios)	Base I III Standardized		Base I III Advanced	
	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Risk-based capital metrics^(a)				
CET1 capital	\$ 227,144	\$ 273,551	\$ 227,144	\$ 273,551
Tier 1 capital	253,837	273,554	253,837	273,554
Total capital	286,398	292,244	273,122	279,218
Risk-weighted assets	1,647,363	1,584,591	1,633,774	1,489,078
CET1 capital ratio	13.8 %	17.3 %	13.9 %	18.4 %
Tier 1 capital ratio	15.4	17.3	15.5	18.4
Total capital ratio	17.4	18.4	16.7	18.8
December 31, 2022 (in millions, except ratios)	Base I III Standardized		Base I III Advanced	
	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Risk-based capital metrics^(a)				
CET1 capital	\$ 218,934	\$ 269,668	\$ 218,934	\$ 269,668
Tier 1 capital	245,631	269,672	245,631	269,672
Total capital	277,769	288,433	264,583	275,255
Risk-weighted assets	1,653,538	1,597,072	1,609,773	1,475,602
CET1 capital ratio	13.2 %	16.9 %	13.6 %	18.3 %
Tier 1 capital ratio	14.9	16.9	15.3	18.3
Total capital ratio	16.8	18.1	16.4	18.7

(a) The capital metrics reflect the CECL capital transition provisions.

Three months ended (in millions, except ratios)	March 31, 2023		December 31, 2022	
	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Leverage-based capital metrics^(a)				
Adjusted average assets ^(b)	\$ 3,656,598	\$ 3,180,721	\$ 3,703,873	\$ 3,249,912
Tier 1 leverage ratio	6.9 %	8.6 %	6.6 %	8.3 %
Total leverage exposure	\$ 4,327,863	\$ 3,848,373	\$ 4,367,092	\$ 3,925,502
SLR	5.9 %	7.1 %	5.6 %	6.9 %

(a) The capital metrics reflect the CECL capital transition provisions.

(b) Adjusted average assets, for purposes of calculating the leverage ratios, includes quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill, inclusive of estimated equity method goodwill, and other intangible assets.

Note 22 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to address the financing needs of its customers and clients. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the customer or client draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the customer or client subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees have historically been refinanced, extended, cancelled, or expired without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its expected future credit exposure or funding requirements. Refer to Note 28 of JPMorgan Chase's 2022 Form 10-K for a further discussion of lending-related commitments and guarantees, and the Firm's related accounting policies.

To provide for expected credit losses in wholesale and certain consumer lending-related commitments, an allowance for credit losses on lending-related commitments is maintained. Refer to Note 12 for further information regarding the allowance for credit losses on lending-related commitments.

The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at March 31, 2023, and December 31, 2022. The amounts in the table below for credit card, home equity and certain scored business banking lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card and certain scored business banking lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity (in millions)	Contractual amount						Carrying value ⁽ⁱ⁾	
	March 31, 2023					Dec 31, 2022	Mar 31, 2023	Dec 31, 2022
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Residential real estate ^(a)	\$ 7,237	\$ 3,863	\$ 6,498	\$ 5,745	\$ 23,343	\$ 21,287	\$ 70	\$ 75
Auto and other	12,310	1	—	1,914	14,225	12,231	—	—
Total consumer, excluding credit card	19,547	3,864	6,498	7,659	37,568	33,518	70	75
Credit card ^(b)	861,218	—	—	—	861,218	821,284	—	—
Total consumer^(c)	880,765	3,864	6,498	7,659	898,786	854,802	70	75
Wholesale:								
Other unfunded commitments to extend credit ^(d)	97,803	131,725	202,649	21,647	453,824	440,407	2,282 ^(h)	2,328 ^(h)
Standby letters of credit and other financial guarantees ^(d)	13,172	8,279	4,259	1,045	26,755	27,439	427	408
Other letters of credit ^(d)	3,563	294	103	—	3,960	4,134	9	6
Total wholesale^(c)	114,538	140,298	207,011	22,692	484,539	471,980	2,718	2,742
Total lending-related	\$ 995,303	\$ 144,162	\$ 213,509	\$ 30,351	\$ 1,383,325	\$ 1,326,782	\$ 2,788	\$ 2,817
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees ^(e)	\$ 325,217	\$ —	\$ —	\$ —	\$ 325,217	\$ 283,386	\$ —	\$ —
Derivatives qualifying as guarantees	3,189	246	12,302	40,907	56,644	59,180	286	649
Unsettled resale and securities borrowed agreements	137,021	701	—	—	137,722	116,975	(1)	(2)
Unsettled repurchase and securities loaned agreements	98,941	544	—	—	99,485	66,407	(2)	(7)
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	76	76
Loans sold with recourse	NA	NA	NA	NA	816	820	29	28
Exchange & clearing house guarantees and commitments ^(f)	174,476	—	—	—	174,476	191,068	—	—
Other guarantees and commitments ^(g)	7,118	735	159	2,896	10,908	8,634	51	53

(a) Includes certain commitments to purchase loans from correspondents.

(b) Also includes commercial card lending-related commitments primarily in CB and CIB.

(c) Predominantly all consumer and wholesale lending-related commitments are in the U.S.

(d) At March 31, 2023, and December 31, 2022, reflected the contractual amount net of risk participations totaling \$64 million and \$71 million, respectively, for other unfunded commitments to extend credit; \$8.2 billion at both March 31, 2023, and December 31, 2022, for standby letters of credit and other financial guarantees; \$350 million and \$512 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

(e) At March 31, 2023, and December 31, 2022, collateral held by the Firm in support of securities lending indemnification agreements was \$340.9 billion and \$298.5 billion, respectively. Securities lending collateral primarily consists of cash, G7 government securities, and securities issued by U.S. GSEs and government agencies.

(f) At March 31, 2023, and December 31, 2022, includes guarantees to the Fixed Income Clearing Corporation under the sponsored member repo program and commitments and guarantees associated with the Firm's membership in certain clearing houses.

(g) At March 31, 2023, and December 31, 2022, primarily includes unfunded commitments related to certain tax-oriented equity investments, unfunded commitments to purchase secondary market loans, and other equity investment commitments.

(h) At March 31, 2023 and December 31, 2022 includes net mark-downs on held-for-sale positions related to unfunded commitments in the bridge financing portfolio.

(i) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, and lending-related commitments for which the fair value option was elected, the carrying value represents the fair value.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

The following table summarizes the contractual amount and carrying value of standby letters of credit and other financial guarantees and other letters of credit arrangements as of March 31, 2023, and December 31, 2022.

Standby letters of credit, other financial guarantees and other letters of credit

(in millions)	March 31, 2023		December 31, 2022	
	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade ^(a)	\$ 18,669	\$ 2,963	\$ 19,205	\$ 3,040
Noninvestment-grade ^(a)	8,086	997	8,234	1,094
Total contractual amount	\$ 26,755	\$ 3,960	\$ 27,439	\$ 4,134
Allowance for lending-related commitments	\$ 90	\$ 9	\$ 82	\$ 6
Guarantee liability	337	—	326	—
Total carrying value	\$ 427	\$ 9	\$ 408	\$ 6
Commitments with collateral	\$ 14,843	\$ 719	\$ 15,296	\$ 795

(a) The ratings scale is based on the Firm's internal risk ratings. Refer to Note 11 for further information on internal risk ratings.

Derivatives qualifying as guarantees

The Firm transacts in certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. Refer to Note 28 of JPMorgan Chase's 2022 Form 10-K for further information on these derivatives.

The following table summarizes the derivatives qualifying as guarantees as of March 31, 2023, and December 31, 2022.

(in millions)	March 31, 2023	December 31, 2022
Notional amounts		
Derivative guarantees	\$ 56,644	\$ 59,180
Stable value contracts with contractually limited exposure	31,758	31,820
Maximum exposure of stable value contracts with contractually limited exposure	1,448	2,063
Fair value		
Derivative payables	286	649

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. Refer to Note 4 for a further discussion of credit derivatives.

Standby letters of credit and other financial guarantees

Standby letters of credit and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a client or customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade financings and similar transactions.

Merchant charge-backs

Under the rules of payment networks, in its role as a merchant acquirer, the Firm's Merchant Services business in CIB Payments, retains a contingent liability for disputed processed credit and debit card transactions that result in a charge-back to the merchant. If a dispute is resolved in the cardholder's favor, the Firm will (through the cardholder's issuing bank) credit or refund the amount to the cardholder and will charge back the transaction to the merchant. If the Firm is unable to collect the amount from the merchant, the Firm will bear the loss for the amount credited or refunded to the cardholder. The Firm mitigates this risk by withholding future settlements, retaining cash reserve accounts or obtaining other collateral. In addition, the Firm recognizes a valuation allowance that covers the payment or performance risk related to charge-backs.

Loan sales and securitization-related indemnifications

In connection with the Firm's mortgage loan sale and securitization activities with GSEs the Firm has made representations and warranties that the loans sold meet certain requirements, and that may require the Firm to repurchase mortgage loans and/or indemnify the loan purchaser if such representations and warranties are breached by the Firm.

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves. Refer to Note 24 of this Form 10-Q and Note 30 of JPMorgan Chase's 2022 Form 10-K for additional information regarding litigation.

Sponsored member repo program

The Firm acts as a sponsoring member to clear eligible overnight and term resale and repurchase agreements through the Government Securities Division of the Fixed Income Clearing Corporation ("FICC") on behalf of clients that become sponsored members under the FICC's rules. The Firm also guarantees to the FICC the prompt and full payment and performance of its sponsored member clients' respective obligations under the FICC's rules. The Firm minimizes its liability under these guarantees by obtaining a security interest in the cash or high-quality securities collateral that the clients place with the clearing house therefore the Firm expects the risk of loss to be remote. The Firm's maximum possible exposure, without taking into consideration the associated collateral, is included in the Exchange & clearing house guarantees and commitments line on page 157. Refer to Note 11 of JPMorgan Chase's 2022 Form 10-K for additional information on credit risk mitigation practices on resale agreements and the types of collateral pledged under repurchase agreements.

Guarantees of subsidiaries

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company and no other subsidiary of the Parent Company guarantees these securities. These guarantees, which rank on a parity with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 157 of this Note. Refer to Note 20 of JPMorgan Chase's 2022 Form 10-K for additional information.

Note 23 – Pledged assets and collateral

Refer to Note 29 of JPMorgan Chase's 2022 Form 10-K for a discussion of the Firm's pledged assets and collateral.

Pledged assets

The Firm pledges financial assets that it owns to maintain potential borrowing capacity at discount windows with Federal Reserve banks, various other central banks and FHLBs. Additionally, the Firm pledges assets for other purposes, including to collateralize repurchase and other securities financing agreements, to cover short sales and to collateralize derivative contracts and deposits. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are parenthetically identified on the Consolidated balance sheets as assets pledged.

The following table presents the Firm's pledged assets.

(in billions)	March 31, 2023	December 31, 2022
Assets that may be sold or repledged or otherwise used by secured parties	\$ 142.9	\$ 110.8
Assets that may not be sold or repledged or otherwise used by secured parties	143.4	114.8
Assets pledged at Federal Reserve banks and FHLBs	571.3	567.6
Total pledged assets	\$ 857.6	\$ 793.2

Total pledged assets do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. Refer to Note 13 for additional information on assets and liabilities of consolidated VIEs. Refer to Note 10 for additional information on the Firm's securities financing activities. Refer to Note 20 of JPMorgan Chase's 2022 Form 10-K for additional information on the Firm's long-term debt.

Collateral

The Firm accepts financial assets as collateral that it is permitted to sell or repledge, deliver or otherwise use. This collateral is generally obtained under resale and other securities financing agreements, prime brokerage-related held-for-investment customer receivables and derivative contracts. Collateral is generally used under repurchase and other securities financing agreements, to cover short sales and to collateralize derivative contracts and deposits.

The following table presents the fair value of collateral accepted.

(in billions)	March 31, 2023	December 31, 2022
Collateral permitted to be sold or repledged, delivered, or otherwise used	\$ 1,393.1	\$ 1,346.9
Collateral sold, repledged, delivered or otherwise used	1,066.3	1,019.4

Note 24 – Litigation

Contingencies

As of March 31, 2023, the Firm and its subsidiaries and affiliates are defendants or respondents in numerous legal proceedings, including private, civil litigations, government investigations or regulatory enforcement matters. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations and regulatory enforcement matters involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and several geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from \$0 to approximately \$1.2 billion at March 31, 2023. This estimated aggregate range of reasonably possible losses was based upon information available as of that date for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made, as of that date. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given:

- the number, variety and varying stages of the proceedings, including the fact that many are in preliminary stages,
- the existence in many such proceedings of multiple defendants, including the Firm, whose share of liability (if any) has yet to be determined,
- the numerous yet-unresolved issues in many of the proceedings, including issues regarding class certification and the scope of many of the claims, and
- the uncertainty of the various potential outcomes of such proceedings, including where the Firm has made assumptions concerning future rulings by the court or other adjudicator, or about the behavior or incentives of adverse parties or regulatory authorities, and those assumptions prove to be incorrect.

In addition, the outcome of a particular proceeding may be a result which the Firm did not take into account in its estimate because the Firm had deemed the likelihood of that outcome to be remote. Accordingly, the Firm's estimate of the aggregate range of reasonably possible losses will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

1MDB Litigation. J.P. Morgan (Suisse) SA was named as a defendant in a civil litigation filed in May 2021 in Malaysia by 1Malaysia Development Berhad ("1MDB"), a Malaysian state-owned and controlled investment fund. J.P. Morgan (Suisse) SA was served in August 2022. The claim alleges "dishonest assistance" against J.P. Morgan (Suisse) SA in relation to payments of \$300 million and \$500 million, from 2009 and 2010, respectively, received from 1MDB and paid into an account at J.P. Morgan Suisse (SA) held by 1MDB PetroSaudi Limited, a joint venture company between 1MDB and PetroSaudi Holdings (Cayman) Limited. In September 2022, the Firm filed an application challenging the validity of service and the Malaysian Court's jurisdiction to hear the claim. In April 2023, 1MDB discontinued its claim against J.P. Morgan (Suisse) SA, but requested permission of the Court to refile in the future, which the Court took under consideration.

Amrapali. India's Enforcement Directorate ("ED") is investigating J.P. Morgan India Private Limited in connection with investments made in 2010 and 2012 by two offshore funds formerly managed by JPMorgan Chase entities into residential housing projects developed by the Amrapali Group ("Amrapali"). In 2017, numerous creditors filed civil claims against Amrapali, including petitions brought by home buyers relating to delays in delivering or failure to deliver residential units. The home buyers' petitions have been overseen by the Supreme Court of India and are ongoing. In August 2021, the ED issued an order fining J.P. Morgan India Private Limited approximately \$31.5 million. The Firm is appealing the order and the fine. Relatedly, in July 2019, the Supreme Court of India issued an order making preliminary findings that Amrapali and other parties, including unspecified JPMorgan Chase entities and the offshore funds that had invested in the projects, violated certain currency control and money laundering provisions, and ordering the ED to conduct a further inquiry under India's Prevention of Money Laundering Act ("PMLA") and Foreign Exchange Management Act ("FEMA"). In May 2020, the ED attached approximately \$25 million from J.P. Morgan India Private Limited in connection with the criminal PMLA investigation. The Firm is responding to and cooperating with the PMLA investigation.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. Among those resolutions, in May 2015, the Firm pleaded guilty to a single violation of federal antitrust law. The Department of Labor ("DOL") granted the Firm exemptions that permit the Firm and its affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA")

through the ten-year disqualification period following the antitrust plea. The only remaining FX-related governmental inquiry is a South Africa Competition Commission matter which is currently pending before the South Africa Competition Tribunal.

With respect to civil litigation matters, in August 2018, the United States District Court for the Southern District of New York granted final approval to the Firm's settlement of a consolidated class action brought by U.S.-based plaintiffs, which principally alleged violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates and also sought damages on behalf of persons who transacted in FX futures and options on futures. Although certain members of the settlement class filed requests to the Court to be excluded from the class, an agreement to resolve their claims was reached in December 2022. The District Court denied certification of a putative class action against the Firm and other foreign exchange dealers on behalf of certain parties who purchased foreign currencies at allegedly inflated rates and granted summary judgment against the named plaintiffs in March 2023. Those plaintiffs have filed a notice of appeal. In addition, some FX-related individual and putative class actions based on similar alleged underlying conduct have been filed outside the U.S., including in the U.K., Israel, the Netherlands, Brazil and Australia. An agreement to resolve one of the UK actions was reached in December 2022. In a putative class action pending before the U.K. Competition Appeal Tribunal, proposed class representatives have appealed the tribunal's denial of a request for class certification on an opt-out basis. In Israel, a settlement in principle has been reached in the putative class action, which remains subject to court approval.

Interchange Litigation. Groups of merchants and retail associations filed a series of class action complaints alleging that Visa and Mastercard, as well as certain banks, conspired to set the price of credit and debit card interchange fees and enacted related rules in violation of antitrust laws. In 2012, the parties initially settled the cases for a cash payment, but that settlement was reversed on appeal and remanded to the United States District Court for the Eastern District of New York.

The original class action was divided into two separate actions, one seeking primarily monetary relief and the other seeking primarily injunctive relief. In September 2018, the parties to the monetary class action finalized an agreement which amends and supersedes the prior settlement agreement. Pursuant to this settlement, the defendants collectively contributed an additional \$900 million to the approximately \$5.3 billion previously held in escrow from the original settlement. In December 2019, the amended settlement agreement was approved by the District Court. In March 2023, the United States Court of Appeals for the Second Circuit affirmed the District Court's approval of the settlement, and two merchants have filed petitions for rehearing of the Appellate Court's approval. Based on the percentage of merchants that opted out of the amended

class settlement, \$700 million has been returned to the defendants from the settlement escrow in accordance with the settlement agreement. The injunctive class action continues separately, and in September 2021, the District Court granted plaintiffs' motion for class certification in part, and denied the motion in part.

Of the merchants who opted out of the amended damages class settlement, certain merchants filed individual actions raising similar allegations against Visa and Mastercard, as well as against the Firm and other banks. While some of those actions remain pending, the defendants have reached settlements with the merchants who opted out representing approximately 65% of the combined Mastercard-branded and Visa-branded payment card sales volume.

Jeffrey Epstein Litigation. JPMorgan Chase Bank, N.A. is named as a defendant in two lawsuits filed in the United States District Court for the Southern District of New York which allege that JPMorgan Chase Bank, N.A. knowingly facilitated Jeffrey Epstein's sex trafficking and other unlawful conduct by providing banking services to Epstein until 2013. One case, which was filed in November 2022, is a putative class action filed by an alleged sex-trafficking victim of Epstein, and the other case, which was filed in December 2022, was brought on behalf of the government of the United States Virgin Islands and also alleges certain Virgin Islands statutory claims. JPMorgan Chase Bank, N.A. moved to dismiss both complaints. In March 2023, the Court granted in part and denied in part JPMorgan Chase Bank, N.A.'s motions to dismiss, allowing some claims to proceed in both lawsuits. Also in March 2023, JPMorgan Chase Bank, N.A. filed third-party complaints impleading the Firm's former employee, James Edward Staley, into the two lawsuits, asserting claims for indemnification, contribution, breach of fiduciary duty and violation of the faithless servant doctrine. In April 2023, Staley moved to dismiss the complaints. Also in April 2023, the putative class action plaintiff filed a motion for class certification seeking to represent a class of alleged sex-trafficking victims of Epstein. JPMorgan Chase Bank, N.A. intends to oppose both motions.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has responded to inquiries from various governmental agencies and entities around the world relating primarily to the British Bankers Association's ("BBA") London Interbank Offered Rate ("LIBOR") for various currencies and the European Banking Federation's Euro Interbank Offered Rate ("EURIBOR"). The Swiss Competition Commission's investigation relating to EURIBOR, to which the Firm and one other bank remain subject, continues. In December 2016, the European Commission issued a decision against the Firm and other banks finding an infringement of European antitrust rules relating to EURIBOR. The Firm has filed an appeal of that decision with the European General Court, and that appeal is pending.

In addition, the Firm has been named as a defendant along with other banks in various individual and putative class actions related to benchmark rates, including U.S. dollar LIBOR. In actions related to U.S. dollar LIBOR during the period that it was administered by the BBA, the Firm has obtained dismissal of certain actions and resolved certain other actions, and others are in various stages of litigation. The United States District Court for the Southern District of New York has granted class certification of antitrust claims related to bonds and interest rate swaps sold directly by the defendants, including the Firm. A consolidated putative class action related to the period that U.S. dollar LIBOR was administered by ICE Benchmark Administration has been dismissed. In addition, a group of individual plaintiffs filed a lawsuit asserting antitrust claims, alleging that the Firm and other defendants were engaged in an unlawful agreement to set U.S. dollar LIBOR and conspired to monopolize the market for LIBOR-based consumer loans and credit cards. In September 2022, the Court dismissed plaintiffs' complaint in its entirety, and plaintiffs filed an amended complaint asserting similar antitrust claims, which defendants have moved to dismiss. The Firm's settlements of putative class actions related to the Singapore Interbank Offered Rate and the Singapore Swap Offer Rate, and the Australian Bank Bill Swap Reference Rate received final court approval in November 2022, while the settlement related to Swiss franc LIBOR remains subject to court approval.

Securities Lending Antitrust Litigation. JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, J.P. Morgan Prime, Inc., and J.P. Morgan Strategic Securities Lending Corp. are named as defendants in a putative class action filed in the United States District Court for the Southern District of New York. The complaint asserts violations of federal antitrust law and New York State common law in connection with an alleged conspiracy to prevent the emergence of anonymous exchange trading for securities lending transactions. Defendants' motion to dismiss the complaint was denied. Plaintiffs have moved to certify a class in this action, which defendants have opposed.

Shareholder Litigation. Several shareholder putative class actions, as well as shareholder derivative actions purporting to act on behalf of the Firm, have been filed against the Firm, its Board of Directors and certain of its current and former officers.

Certain of these shareholder suits relate to historical trading practices by former employees in the precious metals and U.S. treasuries markets and related conduct which were the subject of the Firm's resolutions with the DOJ, CFTC and SEC in September 2020, and fiduciary activities that were separately the subject of a resolution between JPMorgan Chase Bank, N.A. and the OCC in November 2020. One of these shareholder derivative suits was filed in the Supreme Court of the State of New York in May 2022, asserting breach of fiduciary duty and unjust enrichment claims relating to the historical trading practices and related conduct and fiduciary activities which were the subject of the resolutions described above. In

December 2022, the court granted defendants' motion to dismiss this action in full, and in January 2023, the plaintiff filed a notice of appeal, which remains pending. A second shareholder derivative action was filed in the United States District Court for the Eastern District of New York in December 2022 relating to the historical trading practices and related conduct, which asserts breach of fiduciary duty and contribution claims and alleges that the shareholder is excused from making a demand to commence litigation because such a demand would have been futile. In addition, a consolidated putative class action is pending in the United States District Court for the Eastern District of New York on behalf of shareholders who acquired shares of JPMorgan Chase common stock during the putative class period, alleging that certain SEC filings of the Firm were materially false or misleading because they did not disclose certain information relating to the historical trading practices and conduct. Defendants have moved to dismiss the amended complaint in this action.

A separate shareholder derivative suit was filed in March 2022 in the United States District Court for the Eastern District of New York asserting breaches of fiduciary duty and violations of federal securities laws based on the alleged failure of the Board of Directors to exercise adequate oversight over the Firm's compliance with records preservation requirements which were the subject of resolutions between certain of the Firm's subsidiaries and the SEC and the CFTC. Defendants' motion to dismiss the amended complaint is pending.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upward or downward, as appropriate, based on management's best judgment after consultation with counsel. The Firm's legal expense was \$176 million and \$119 million for the three months ended March 31, 2023 and 2022, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters

present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or consequences related to those matters. JPMorgan Chase believes, based upon its current knowledge and after consultation with counsel, consideration of the material legal proceedings described above and after taking into account its current litigation reserves and its estimated aggregate range of possible losses, that the other legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued or that a matter will not have material reputational consequences. As a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 25 – Business segments

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 currently evaluated by the Firm's Operating Committee. Segment results are presented on a managed basis. Refer to Segment results below, and Note 32 of JPMorgan Chase's 2022 Form 10-K for a further discussion of JPMorgan Chase's business segments.

Segment results

The following table provides a summary of the Firm's segment results as of or for the three months ended March 31, 2023 and 2022, on a managed basis. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (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. Refer to Note 32 of JPMorgan Chase's 2022 Form 10-K for additional information on the Firm's managed basis.

Capital allocation

The amount of capital assigned to each business segment is referred to as equity. 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 93 of JPMorgan Chase's 2022 Form 10-K for additional information on capital allocation.

Segment results and reconciliation^(a)

As of or for the three months ended March 31, (in millions, except ratios)	Consumer & Community Banking		Corporate & Investment Bank		Commercial Banking		Asset & Wealth Management	
	2023	2022	2023	2022	2023	2022	2023	2022
Noninterest revenue	\$ 3,623	\$ 3,855 ^(b)	\$ 11,523	\$ 10,004 ^(b)	\$ 781	\$ 867	\$ 3,333	\$ 3,239
Net interest income	12,833	8,327	2,077	3,572	2,730	1,531	1,451	1,076
Total net revenue	16,456	12,182	13,600	13,576	3,511	2,398	4,784	4,315
Provision for credit losses	1,402	678	58	445	417	157	28	154
Noninterest expense	8,065	7,655 ^(b)	7,483	7,363 ^(b)	1,308	1,129	3,091	2,860
Income/(loss) before income tax expense/(benefit)	6,989	3,849	6,059	5,768	1,786	1,112	1,665	1,301
Income tax expense/(benefit)	1,746	941 ^(b)	1,638	1,396 ^(b)	439	262	298	293
Net income/(loss)	\$ 5,243	\$ 2,908	\$ 4,421	\$ 4,372	\$ 1,347	\$ 850	\$ 1,367	\$ 1,008
Average equity	\$ 52,000	\$ 50,000	\$ 108,000	\$ 103,000	\$ 28,500	\$ 25,000	\$ 16,000	\$ 17,000
Total assets	506,382	486,183	1,436,237	1,460,463	261,181	235,127	232,516	233,070
ROE	40 %	23 %	16 %	16 % ^(b)	18 %	13 %	34 %	23 %
Overhead ratio	49	63	55	54	37	47	65	66

As of or for the three months ended March 31, (in millions, except ratios)	Corporate		Reconciling Items ^(a)		Total	
	2023	2022	2023	2022	2023	2022
Noninterest revenue	\$ (755)	\$ (345)	\$ (867)	\$ (775)	\$ 17,638	\$ 16,845
Net interest income	1,740	(536)	(120)	(98)	20,711	13,872
Total net revenue	985	(881)	(987)	(873)	38,349	30,717
Provision for credit losses	370	29	—	—	2,275	1,463
Noninterest expense	160	184	—	—	20,107	19,191
Income/(loss) before income tax expense/(benefit)	455	(1,094)	(987)	(873)	15,967	10,063
Income tax expense/(benefit)	211	(238)	(987)	(873)	3,345	1,781
Net income/(loss)	\$ 244	\$ (856)	\$ —	\$ —	\$ 12,622	\$ 8,282
Average equity	\$ 66,697	\$ 57,506	\$ —	\$ —	\$ 271,197	\$ 252,506
Total assets	1,307,989	1,539,844	NA	NA	3,744,305	3,954,687
ROE	NM	NM	NM	NM	18 %	13 %
Overhead ratio	NM	NM	NM	NM	52	62

(a) Segment managed results reflect revenue on an FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

(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.

Note 26 – Subsequent events

On May 1, 2023, the Firm acquired the substantial majority of assets and assumed the deposits and certain other liabilities of First Republic Bank from the Federal Deposit Insurance Corporation. In carrying out this transaction, the Firm expects to further advance the Firm's wealth management strategy and complement its existing franchises. The Firm is estimating the impact of the acquisition on its financial statements and expects these estimates to be further refined during the purchase accounting measurement period. The Firm has concluded that, due to the limited amount of time since the date of this transaction, in accordance with the accounting guidance, it is impracticable to provide all of the disclosures required for a business combination at the time of this filing.



Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of JPMorgan Chase & Co.:

Results of Review of Interim Financial Statements

We have reviewed the accompanying consolidated balance sheet of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of March 31, 2023, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for the three-month periods ended March 31, 2023 and 2022, including the related notes (collectively referred to as the "interim financial statements"). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Firm as of December 31, 2022, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and of cash flows for the year then ended (not presented herein), and in our report dated February 21, 2023, which included a paragraph describing a change in the manner of accounting for credit losses on certain financial instruments in 2020, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet information as of December 31, 2022, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

Basis for Review Results

These interim financial statements are the responsibility of the Firm's management. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our review in accordance with the standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

May 3, 2023

JPMorgan Chase & Co.
Consolidated average balance sheets, interest and rates (unaudited)
(Taxable-equivalent interest and rates; in millions, except rates)

	Three months ended March 31, 2023			Three months ended March 31, 2022		
	Average balance	Interest ^(f)	Rate (annualized)	Average balance	Interest ^(f)	Rate (annualized)
Assets						
Deposits with banks	\$ 505,662	\$ 4,819	3.87 %	\$ 742,311	\$ 238	0.13 %
Federal funds sold and securities purchased under resale agreements	313,187	3,131	4.06	294,951	397	0.55
Securities borrowed	192,843	1,716	3.61	218,030	(87)	(0.16) ^(h)
Trading assets – debt instruments	357,682	3,660	4.15	272,116	1,775	2.65
Taxable securities	596,723	3,967	2.70	642,633	1,979	1.25
Nontaxable securities ^(a)	25,327	308	4.93	28,532	307	4.36
Total investment securities	622,050	4,275	2.79 ^(g)	671,165	2,286	1.38 ^(g)
Loans	1,129,624	17,754	6.37	1,068,637	10,661	4.05
All other interest-earning assets ^(b)	95,709	1,769	7.50	134,741	324	0.97
Total interest-earning assets	3,216,757	37,124	4.68	3,401,951	15,594	1.86
Allowance for loan losses	(19,126)			(16,415)		
Cash and due from banks	26,056			27,964		
Trading assets – equity and other instruments	152,081			156,908		
Trading assets – derivative receivables	64,526			67,334		
Goodwill, MSRs and other intangible Assets	60,855			57,546		
All other noninterest-earning assets	208,828			211,500		
Total assets	\$ 3,709,977			\$ 3,906,788		
Liabilities						
Interest-bearing deposits	\$ 1,670,036	\$ 7,637	1.85 %	\$ 1,781,320	\$ 182	0.04 %
Federal funds purchased and securities loaned or sold under repurchase agreements	252,310	2,804	4.51	250,215	113	0.18
Short-term borrowings ^(c)	38,763	421	4.40	47,871	44	0.36
Trading liabilities – debt and all other interest-bearing liabilities ^{(d)(e)}	277,576	1,971	2.88	263,025	191	0.30
Beneficial interests issued by consolidated VIEs	13,483	147	4.43	10,891	18	0.69
Long-term debt	249,336	3,313	5.39	254,180	1,076	1.72
Total interest-bearing liabilities	2,501,504	16,293	2.64	2,607,502	1,624	0.25
Noninterest-bearing deposits	650,443			734,233		
Trading liabilities – equity and other instruments ^(e)	29,769			43,394		
Trading liabilities – derivative payables	49,357			54,522		
All other liabilities, including the allowance for lending-related commitments	180,303			181,105		
Total liabilities	3,411,376			3,620,756		
Stockholders' equity						
Preferred stock	27,404			33,526		
Common stockholders' equity	271,197			252,506		
Total stockholders' equity	298,601			286,032		
Total liabilities and stockholders' equity	\$ 3,709,977			\$ 3,906,788		
Interest rate spread			2.04 %			1.61 %
Net interest income and net yield on interest-earning assets		\$ 20,831	2.63		\$ 13,970	1.67

(a) Represents securities which are tax-exempt for U.S. federal income tax purposes.

(b) Includes brokerage-related held-for-investment customer receivables, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated Balance Sheets.

(c) Includes commercial paper.

(d) All other interest-bearing liabilities include brokerage-related customer payables.

(e) The combined balance of trading liabilities – debt and equity instruments was \$143.3 billion and \$140.1 billion for the three months ended March 31, 2023 and 2022, respectively.

(f) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(g) The annualized rate for securities based on amortized cost was 2.74% and 1.38% for the three months ended March 31, 2023 and 2022, respectively, and does not give effect to changes in fair value that are reflected in AOCI.

(h) Negative interest and rates reflect the net impact of interest earned offset by fees paid on client-driven prime brokerage securities borrowed transactions.

GLOSSARY OF TERMS AND ACRONYMS

2022 Form 10-K: Annual report on Form 10-K for year ended December 31, 2022, filed with the U.S. Securities and Exchange Commission.

ABS: Asset-backed securities

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

AFS: Available-for-sale

Allowance for loan losses to total retained loans: represents period-end allowance for loan losses divided by retained loans.

Amortized cost: Amount at which a financing receivable or investment is originated or acquired, adjusted for accretion or amortization of premium, discount, and net deferred fees or costs, collection of cash, charge-offs, foreign exchange, and fair value hedge accounting adjustments. For AFS securities, amortized cost is also reduced by any impairment losses recognized in earnings. Amortized cost is not reduced by the allowance for credit losses, except where explicitly presented net.

AOCI: Accumulated other comprehensive income/(loss)

ARM(s): Adjustable rate mortgage(s)

AUC: "Assets under custody": Represents assets held directly or indirectly on behalf of clients under safekeeping, custody and servicing arrangements.

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

AWM: Asset & Wealth Management

Beneficial interests issued by consolidated VIEs: represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

BHC: Bank holding company

BWM: Banking & Wealth Management

Bridge Financing Portfolio: A portfolio of held-for-sale unfunded loan commitments and funded loans. The unfunded commitments include both short-term bridge loan commitments that will ultimately be replaced by longer term financing as well as term loan commitments. The funded loans include term loans and funded revolver facilities.

CB: Commercial Banking

CCAR: Comprehensive Capital Analysis and Review

CCB: Consumer & Community Banking

CDS: Credit default swaps

CECL: Current Expected Credit Losses

CEO: Chief Executive Officer

CET1 capital: Common equity Tier 1 capital

CFO: Chief Financial Officer

CFTC: Commodity Futures Trading Commission

CIB: Corporate & Investment Bank

CIO: Chief Investment Office

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third-party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs.

Client investment assets: Represent assets under management as well as custody, brokerage and annuity accounts, and deposits held in investment accounts.

CLTV: Combined loan-to-value

CMT: Constant Maturity Treasury

Collateral-dependent: A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided substantially through the operation or sale of the collateral when the borrower is experiencing financial difficulty, including when foreclosure is deemed probable based on borrower delinquency.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caa1 and below, as defined by S&P and Moody's.

CRR: Capital Requirements Regulation

CVA: Credit valuation adjustment

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

DVA: Debit valuation adjustment

EC: European Commission

Eligible HQLA: Eligible high-quality liquid assets, for purposes of calculating the LCR, is the amount of unencumbered HQLA that satisfy certain operational considerations as defined in the LCR rule.

Eligible LTD: Long-term debt satisfying certain eligibility criteria

Embedded derivatives: are implicit or explicit terms or features of a financial instrument that affect some or all of the cash flows or the value of the instrument in a manner similar to a derivative. An instrument containing such terms or features is referred to as a "hybrid." The component of the hybrid that is the non-derivative instrument is referred to as the "host." For example, callable debt is a hybrid instrument that contains a plain vanilla debt instrument (i.e., the host) and an embedded option that allows the issuer to redeem the debt issue at a specified date for a specified amount (i.e., the embedded derivative). However, a floating rate instrument is not a hybrid composed of a fixed-rate instrument and an interest rate swap.

EPS: Earnings per share

ERISA: Employee Retirement Income Security Act of 1974

ESG: Environmental, Social and Governance

ETD: "Exchange-traded derivatives": Derivative contracts that are executed on an exchange and settled via a central clearing house.

EU: European Union

Expense categories:

- **Volume- and/or revenue-related** expenses generally correlate with changes in the related business/transaction volume or revenue. Examples of volume- and revenue-related expenses include commissions and incentive compensation, depreciation expense related to operating lease assets, and brokerage expense related to equities trading transaction volume.
- **Investments** include expenses associated with supporting medium- to longer-term strategic plans of the Firm. Examples of investments include initiatives in technology (including related compensation), marketing, and compensation for new bankers and client advisors.
- **Structural** expenses are those associated with the day-to-day cost of running the bank and are expenses not covered by the above two categories. Examples of structural expenses include employee salaries and benefits, as well as noncompensation costs such as real estate and all other expenses.

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FDIC: Federal Deposit Insurance Corporation

FDM: "Financial difficulty modification" applies to loan modifications effective January 1, 2023, and is deemed to occur when the Firm modifies specific terms of the original loan agreement. The following types of modifications are considered FDMs: principal forgiveness, interest rate reduction, other-than-insignificant payment delay, term extension or a combination of these modifications.

Federal Reserve: The Board of the Governors of the Federal Reserve System

FFIEC: Federal Financial Institutions Examination Council

FHA: Federal Housing Administration

FHLB: Federal Home Loan Bank

FICO score: A measure of consumer credit risk based on information in consumer credit reports produced by Fair Isaac Corporation. Because certain aged data is excluded from credit reports based on rules in the Fair Credit Reporting Act, FICO scores may not reflect all historical information about a consumer.

FICC: Fixed Income Clearing Corporation

FINRA: Financial Industry Regulatory Authority

Firm: JPMorgan Chase & Co.

Forward points: represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Freddie Mac: Federal Home Loan Mortgage Corporation

Free-standing derivatives: is a derivative contract entered into either separate and apart from any of the Firm's other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FTE: Fully taxable-equivalent

FVA: Funding valuation adjustment

FX: Foreign exchange

G7: "Group of Seven nations": Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government securities: Securities issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association

GSIB: Global systemically important banks

HELOC: Home equity line of credit

Home equity – senior lien: represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity – junior lien: represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

HQLA: High-quality liquid assets

HTM: Held-to-maturity

IBOR: Interbank Offered Rate

IDI: Insured depository institutions

IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

IR: Interest rate

ISDA: International Swaps and Derivatives Association

JPMorgan Chase: JPMorgan Chase & Co.

JPMorgan Chase Bank, N.A.: JPMorgan Chase Bank, National Association

JPMorgan Chase Foundation or Foundation: a not-for-profit organization that makes contributions for charitable and educational purposes.

J.P. Morgan Securities: J.P. Morgan Securities LLC

JPMSE: J.P. Morgan SE

LCR: Liquidity coverage ratio

LIBOR: London Interbank Offered Rate

LLC: Limited Liability Company

LOB: Line of business

LTV: "Loan-to-value ratio": For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Macro businesses: the macro businesses include Rates, Currencies and Emerging Markets, Fixed Income Financing and Commodities in CIB's Fixed Income Markets.

Managed basis: A non-GAAP presentation of Firmwide financial results that includes reclassifications to present

revenue on a fully taxable-equivalent basis. Management also uses this financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Markets: consists of CIB's Fixed Income Markets and Equity Markets businesses.

Master netting agreement: A single agreement with a counterparty that permits multiple transactions governed by that agreement to be terminated or accelerated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due).

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

Measurement alternative: Measures equity securities without readily determinable fair values at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer.

Merchant Services: offers merchants payment processing capabilities, fraud and risk management, data and analytics, and other payments services. Through Merchant Services, merchants of all sizes can accept payments via credit and debit cards and payments in multiple currencies.

MEV: Macroeconomic variable

Moody's: Moody's Investor Services

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high CLTV ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest

accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

MREL: Minimum requirements for own funds and eligible liabilities

MSR: Mortgage servicing rights

NA: Data is not applicable or available for the period presented.

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net interchange income includes the following components:

- **Interchange income:** Fees earned by credit and debit card issuers on sales transactions.
- **Rewards costs:** The cost to the Firm for points earned by cardholders enrolled in credit card rewards programs generally tied to sales transactions.
- **Partner payments:** Payments to co-brand credit card partners based on the cost of loyalty program rewards earned by cardholders on credit card transactions.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NFA: National Futures Association

NM: Not meaningful

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and

interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfactions, predominantly real estate owned and other commercial and personal property.

NSFR: Net Stable Funding Ratio

OCC: Office of the Comptroller of the Currency

OCI: Other comprehensive income/(loss)

OPEB: Other postretirement employee benefit

OTC: "Over-the-counter derivatives": Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

OTC cleared: "Over-the-counter cleared derivatives": Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Parent Company: JPMorgan Chase & Co.

Participating securities: represents unvested share-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its share-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

PCD: "Purchased credit deteriorated" assets represent acquired financial assets that as of the date of acquisition have experienced a more-than-insignificant deterioration in credit quality since origination, as determined by the Firm.

Pillar 1: The Basel framework consists of a three "Pillar" approach. Pillar 1 establishes minimum capital requirements, defines eligible capital instruments, and prescribes rules for calculating RWA.

Pillar 3: The Basel framework consists of a three "Pillar" approach. Pillar 3 encourages market discipline through disclosure requirements which allow market participants to assess the risk and capital profiles of banks.

PPP: Paycheck Protection Program under the Small Business Association ("SBA")

PRA: Prudential Regulation Authority

Pre-provision profit/(loss): represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Principal transactions revenue: Principal transactions revenue is driven by many factors, including the bid-offer spread, which is the difference between the price at which the Firm is willing to buy a financial or other instrument and the price at which the Firm is willing to sell that instrument. It also consists of realized (as a result of closing out or termination of transactions, or interim cash payments) and unrealized (as a result of changes in valuation) gains and losses on financial and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities). Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk and foreign exchange risk, and (c) other derivatives.

PSU(s): Performance share units

Regulatory VaR: Daily aggregated VaR calculated in accordance with regulatory rules.

REO: Real estate owned

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).

Revenue wallet: Total fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third-party provider of investment banking competitive analysis and volume based league tables for the above noted industry products.

RHS: Rural Housing Service of the U.S. Department of Agriculture

ROE: Return on equity

ROTCE: Return on tangible common equity

ROU assets: Right-of-use assets

RSU(s): Restricted stock units

RWA: "Risk-weighted assets": Basel III establishes two comprehensive approaches for calculating RWA (a

Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.

S&P: Standard and Poors

SA-CCR: Standardized Approach for Counterparty Credit Risk

SAR as it pertains to Hong Kong: Special Administrative Region

SAR(s) as it pertains to employee stock awards: Stock appreciation rights

SCB: Stress capital buffer

Scored portfolios: Consumer loan portfolios that predominantly include residential real estate loans, credit card loans, auto loans to individuals and certain small business loans.

SEC: U.S. Securities and Exchange Commission

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Shelf securities: Securities registered with the SEC under a shelf registration statement that have not been issued, offered or sold. These securities are not included in league tables until they have actually been issued.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SOFR: Secured Overnight Financing Rate

SPEs: Special purpose entities

Structural interest rate risk: represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are financial instruments whose cash flows are linked to the movement in one or more indexes, interest rates, foreign exchange rates, commodities prices, prepayment rates, underlying reference pool of loans or other market variables. The notes typically contain embedded (but not separable or detachable) derivatives. Contractual cash flows for principal, interest, or both can vary in amount and timing throughout the life of the note based on non-traditional

indexes or non-traditional uses of traditional interest rates or indexes.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent 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; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

TBVPS: Tangible book value per share

TCE: Tangible common equity

TDR: "Troubled debt restructuring" applies to loan modifications granted prior to January 1, 2023 and is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty. Loans with short-term and other insignificant modifications that are not considered concessions are not TDRs.

TLAC: Total Loss Absorbing Capacity

U.K.: United Kingdom

U.S.: United States of America

U.S. GAAP: Accounting principles generally accepted in the United States of America.

U.S. government agencies: U.S. government agencies include, but are not limited to, agencies such as Ginnie Mae and FHA, and do not include Fannie Mae and Freddie Mac which are U.S. government-sponsored enterprises ("U.S. GSEs"). In general, obligations of U.S. government agencies are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government in the event of a default.

U.S. GSE(s): "U.S. government-sponsored enterprises" are quasi-governmental, privately-held entities established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae or FHA. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury

Unaudited: Financial statements and/or information that have not been subject to auditing procedures by an independent registered public accounting firm.

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

VIEs: Variable interest entities

Warehouse loans: consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as loans.

LINE OF BUSINESS METRICS

CONSUMER & COMMUNITY BANKING ("CCB")

Debit and credit card sales volume: Dollar amount of card member purchases, net of returns.

Deposit margin: Represents net interest income expressed as a percentage of average deposits.

Home Lending Production and Home Lending Servicing revenue comprises the following:

Net mortgage servicing revenue: Includes operating revenue earned from servicing third-party mortgage loans, which is recognized over the period in which the service is provided; changes in the fair value of MSRs; the impact of risk management activities associated with MSRs; and gains and losses on securitization of excess mortgage servicing. Net mortgage servicing revenue also includes gains and losses on sales and lower of cost or fair value adjustments of certain repurchased loans insured by U.S. government agencies.

Production revenue: Includes fees and income recognized as earned on mortgage loans originated with the intent to sell, and the impact of risk management activities associated with the mortgage pipeline and warehouse loans. Production revenue also includes gains and losses on sales and lower of cost or fair value adjustments on mortgage loans held-for-sale (excluding certain repurchased loans insured by U.S. government agencies), and changes in the fair value of financial instruments measured under the fair value option.

Mortgage origination channels comprise the following:

Retail: Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent: Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Credit card: is a business that primarily issues credit cards to consumers and small businesses.

Net revenue rate: Represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

CORPORATE & INVESTMENT BANK ("CIB")

Definition of selected CIB revenue:

Investment Banking: incorporates all revenue associated with investment banking activities, and is reported net of investment banking revenue shared with other LOBs.

Payments is a full service provider of cash management solutions, which primarily includes merchant acquiring, cross border and domestic payments, liquidity and account services, and global trade for multinational corporations, e-commerce and marketplace operators, and financial institutions.

Lending: includes net interest income, fees, gains or losses on loan sale activity, gains or losses on securities received as part of a loan restructuring, and the risk management results related to the credit portfolio.

Fixed Income Markets: primarily includes revenue related to market-making across global fixed income markets, including foreign exchange, interest rate, credit and commodities markets.

Equity Markets: primarily includes revenue related to market-making across global equity products, including cash instruments, derivatives, convertibles and prime brokerage.

Securities Services: primarily includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds. Also includes collateral management and depositary receipts businesses which provide collateral management products, and depositary bank services for American and global depositary receipt programs.

Description of certain business metrics:

Assets under custody ("AUC"): represents activities associated with the safekeeping and servicing of assets on which Securities Services earns fees.

Investment banking fees: represents advisory, equity underwriting, bond underwriting and loan syndication fees.

COMMERCIAL BANKING (“CB”)

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 mid-sized 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.

CB product revenue comprises 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 cash management solutions, which primarily includes merchant acquiring, cross border and domestic payments, liquidity and account services, and global trade solutions offered to CB clients.

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 market 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.

ASSET & WEALTH MANAGEMENT (“AWM”)

Assets under management (“AUM”): represent assets managed by AWM on behalf of its Private Banking, Global Institutional and Global Funds clients. Includes “Committed capital not Called.”

Client assets: represent assets under management, as well as custody, brokerage, administration and deposit accounts.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

AWMs lines of business consist of the following:

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, trusts and estates, loans, mortgages, deposits and investment management to high net worth clients.

AWMs client segments consist of the following:

Private Banking: clients include high- and ultra-high-net-worth individuals, families, money managers and business owners.

Global Institutional: clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Global Funds: clients include financial intermediaries and individual investors.

Asset Management has two high-level measures of its overall fund performance:

Percentage of mutual fund assets under management in funds rated 4- or 5-star: Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. An overall Morningstar rating is derived from a weighted average of the performance associated with a fund’s three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S.-domiciled funds, separate star ratings are provided at the individual share class level. The Nomura “star rating” is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from these rankings. All ratings, the assigned peer

categories and the asset values used to derive these rankings are sourced from the applicable fund rating provider. Where applicable, the fund rating providers redenominate asset values into U.S. dollars. The percentage of AUM is based on star ratings at the share class level for U.S.-domiciled funds, and at a "primary share class" level to represent the star rating of all other funds, except for Japan, for which Nomura provides ratings at the fund level. The performance data may have been different if all share classes had been included. Past performance is not indicative of future results.

Percentage of mutual fund 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 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 and Taiwan funds. If these share classes are not available, the oldest share class is used as the primary share class.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Refer to the Market Risk Management section of Management's discussion and analysis and pages 131-138 of JPMorgan Chase's 2022 Form 10-K for a discussion of the quantitative and qualitative disclosures about market risk.

Item 4. Controls and Procedures.

As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. Refer to Exhibits 31.1 and 31.2 for the Certifications furnished by the Chairman and Chief Executive Officer and Chief Financial Officer, respectively.

The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Deficiencies or lapses in internal controls may occur from time to time, and there can be no assurance that any such deficiencies will not result in significant deficiencies or material weaknesses in internal control in the future and collateral consequences therefrom. Refer to "Management's report on internal control over financial reporting" on page 155 of JPMorgan Chase's 2022 Form 10-K for further information. There was no change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) that occurred during the three months ended March 31, 2023, that has materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

Part II – Other Information

Item 1. Legal Proceedings.

Refer to the discussion of the Firm's material legal proceedings in Note 24 of this Form 10-Q for information that updates the disclosures set forth under Part I, Item 3: Legal Proceedings, in JPMorgan Chase's 2022 Form 10-K.

Item 1A. Risk Factors.

The following discussion supplements the discussion of risk factors affecting the Firm as set forth in Part I, Item 1A: Risk Factors on pages 9-32 of JPMorgan Chase's 2022 Form 10-K and Forward-Looking Statements on page 78 of this Form 10-Q. The discussion of risk factors, as so supplemented, sets forth the material risk factors that could affect JPMorgan Chase's financial condition and operations. Readers should not consider any descriptions of such factors to be a complete set of all potential risks that could affect the Firm.

JPMorgan Chase's acquisition of certain assets and liabilities of First Republic Bank may not result in all of the benefits anticipated.

On May 1, 2023, JPMorgan Chase Bank, N.A. acquired the substantial majority of assets and assumed certain liabilities of First Republic Bank from the FDIC (the "Acquisition"). There can be no assurance that the Acquisition will have the anticipated positive results, including with respect to:

- the total cost of integration
- the time required to complete the integration
- the amount of longer-term cost savings
- the overall performance of the assets and liabilities acquired in the Acquisition, or
- an improved price for JPMorgan Chase's common stock.

Integration of an acquired business can be complex and costly, and typically will involve the combination of relevant accounting and data processing systems and management controls, as well as managing relevant relationships with employees, clients, suppliers and other business partners. Integration efforts could divert management attention and resources, which could adversely affect JPMorgan Chase's operations or results. In addition, JPMorgan Chase could incur unanticipated costs or losses in connection with the Acquisition and its integration efforts.

Acquisitions may also result in business disruptions that cause JPMorgan Chase to lose clients and customers, or cause clients and customers to move their business to competing financial institutions. It is possible that the integration process could result in the disruption of ongoing businesses or inconsistencies in standards, controls, procedures and policies that could adversely affect JPMorgan Chase's ability to maintain relationships with clients, customers, depositors and employees. In addition, the loss of key employees in connection with the Acquisition could adversely affect JPMorgan Chase's ability to successfully conduct its business.

Supervision and regulation

Refer to the Supervision and regulation section on pages 4–8 of JPMorgan Chase's 2022 Form 10-K for information on Supervision and Regulation.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

The Firm did not have any unregistered sale of equity securities during the three months ended March 31, 2023.

Repurchases under the common share repurchase program

Refer to Capital Risk Management on pages 36-41 of this Form 10-Q and pages 86-96 of JPMorgan Chase's 2022 Form 10-K for information regarding repurchases under the Firm's common share repurchase program.

The Firm is authorized to purchase up to \$30 billion under its common share repurchase program previously approved by the Board of Directors.

Shares repurchased pursuant to the common share repurchase program during the three months ended March 31, 2023 were as follows.

Three months ended March 31, 2023	Total number of shares of common stock repurchased	Average price paid per share of common stock ^(a)	Aggregate purchase price of common stock repurchases (in millions) ^(a)	Dollar value of remaining authorized repurchase (in millions) ^{(a)(b)}
January	—	\$ —	\$ —	\$ —
February	3,393,245	141.29	479	29,154
March	18,602,008	132.27	2,461	26,693
First quarter	21,995,253	\$ 133.67	\$ 2,940	\$ 26,693

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

(b) Represents the amount remaining under the \$30 billion repurchase program

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibit No.	Description of Exhibit
15	Letter re: Unaudited Interim Financial Information. ^(a)
22	Subsidiary Guarantors and Issuers of Guaranteed Securities. ^(a)
31.1	Certification. ^(a)
31.2	Certification. ^(a)
32	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. ^(b)
101.INS	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document. ^(c)
101.SCH	XBRL Taxonomy Extension Schema Document. ^(a)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document. ^(a)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document. ^(a)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document. ^(a)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document. ^(a)
104	Cover Page Interactive Data File (embedded within the Inline XBRL document and included in Exhibit 101).

(a) Filed herewith.

(b) Furnished herewith. This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

(c) Pursuant to Rule 405 of Regulation S-T, includes the following financial information included in the Firm's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income (unaudited) for the three months ended March 31, 2023 and 2022, (ii) the Consolidated statements of comprehensive income (unaudited) for the three months ended March 31, 2023 and 2022, (iii) the Consolidated balance sheets (unaudited) as of March 31, 2023, and December 31, 2022, (iv) the Consolidated statements of changes in stockholders' equity (unaudited) for the three months ended March 31, 2023 and 2022, (v) the Consolidated statements of cash flows (unaudited) for the three months ended March 31, 2023 and 2022, and (vi) the Notes to Consolidated Financial Statements (unaudited).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

JPMorgan Chase & Co.

(Registrant)

By:

/s/ Elena Korablina

Elena Korablina

Managing Director and Firmwide Controller
(Principal Accounting Officer)

Date: May 3, 2023