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 September 30, 2020

Commission file number 1-5805

JPMorgan Chase & Co.

(Exact name of registrant as specified in its charter)

Delaware	13-2624428
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)
383 Madison Avenue, New York, New York	10179
(Address of principal executive offices)	(Zip Code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock	JPM	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.10% Non-Cumulative Preferred Stock, Series AA	JPM PR G	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.15% Non-Cumulative Preferred Stock, Series BB	JPM PR H	The New York Stock Exchange
Depositary 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
Depositary 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
Depositary 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
Alerian MLP Index ETNs due May 24, 2024	AMJ	NYSE Arca, Inc.
Guarantee of Callable Step-Up Fixed Rate Notes due April 26, 2028 of JPMorgan Chase Financial Company LLC	JPM/28	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		Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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 September 30, 2020: 3,048,203,063

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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)	3Q20	2Q20	1Q20	4Q19	3Q19	Nine months ended Sept 30, 2020	Nine months ended Sept 30, 2019
Selected income statement data							
Total net revenue[a]	**$ 29,147**	$ 32,980	$ 28,192	$ 28,285	$ 29,291	**$ 90,319**	$ 87,114
Total noninterest expense[a]	**16,875**	16,942	16,791	16,293	16,372	**50,608**	48,976
Pre-provision profit[b]	**12,272**	16,038	11,401	11,992	12,919	**39,711**	38,138
Provision for credit losses	**611**	10,473	8,285	1,427	1,514	**19,369**	4,158
Income before income tax expense	**11,661**	5,565	3,116	10,565	11,405	**20,342**	33,980
Income tax expense	**2,218**	878	251	2,045	2,325	**3,347**	6,069
Net income	**$ 9,443**	$ 4,687	$ 2,865	$ 8,520	$ 9,080	**$ 16,995**	$ 27,911
Earnings per share data							
Net income: Basic	**$ 2.93**	$ 1.39	$ 0.79	$ 2.58	$ 2.69	**$ 5.10**	$ 8.17
Diluted	**2.92**	1.38	0.78	2.57	2.68	**5.09**	8.15
Average shares: Basic	**3,077.8**	3,076.3	3,095.8	3,140.7	3,198.5	**3,083.3**	3,248.7
Diluted	**3,082.8**	3,081.0	3,100.7	3,148.5	3,207.2	**3,088.1**	3,258.0
Market and per common share data							
Market capitalization	**293,451**	286,658	274,323	429,913	369,133	**293,451**	369,133
Common shares at period-end	**3,048.2**	3,047.6	3,047.0	3,084.0	3,136.5	**3,048.2**	3,136.5
Book value per share	**79.08**	76.91	75.88	75.98	75.24	**79.08**	75.24
Tangible book value per share ("TBVPS")[b]	**63.93**	61.76	60.71	60.98	60.48	**63.93**	60.48
Cash dividends declared per share	**0.90**	0.90	0.90	0.90	0.90	**2.70**	2.50
Selected ratios and metrics							
Return on common equity ("ROE")[c]	**15 %**	7 %	4 %	14 %	15 %	**9 %**	15 %
Return on tangible common equity ("ROTCE")[b][c]	**19**	9	5	17	18	**11**	19
Return on assets[b]	**1.14**	0.58	0.40	1.22	1.30	**0.72**	1.37
Overhead ratio	**58**	51	60	58	56	**56**	56
Loans-to-deposits ratio[d]	**49**	52	57	64	64	**49**	64
Liquidity coverage ratio ("LCR") (average)	**114**	117	114	116	115	**114**	115
Common equity Tier 1 ("CET1") capital ratio[e]	**13.1**	12.4	11.5	12.4	12.3	**13.1**	12.3
Tier 1 capital ratio[e]	**15.0**	14.3	13.3	14.1	14.1	**15.0**	14.1
Total capital ratio[e]	**17.3**	16.7	15.5	16.0	15.9	**17.3**	15.9
Tier 1 leverage ratio[e]	**7.0**	6.9	7.5	7.9	7.9	**7.0**	7.9
Supplementary leverage ratio ("SLR")[e]	**7.0**	6.8	6.0	6.3	6.3	**7.0**	6.3
Selected balance sheet data (period-end)							
Trading assets[d]	**$ 505,822**	$ 491,716	$ 510,923	$ 369,687	$ 457,274	**$ 505,822**	$ 457,274
Investment securities, net of allowance for credit losses	**531,136**	558,791	471,144	398,239	394,251	**531,136**	394,251
Loans[d]	**989,740**	1,009,382	1,049,610	997,620	980,019	**989,740**	980,019
Total assets	**3,246,076**	3,213,616	3,139,431	2,687,379	2,764,661	**3,246,076**	2,764,661
Deposits	**2,001,416**	1,931,029	1,836,009	1,562,431	1,525,261	**2,001,416**	1,525,261
Long-term debt	**279,175**	317,003	299,344	291,498	296,472	**279,175**	296,472
Common stockholders' equity	**241,050**	234,403	231,199	234,337	235,985	**241,050**	235,985
Total stockholders' equity	**271,113**	264,466	261,262	261,330	264,348	**271,113**	264,348
Headcount	**256,358**	256,710	256,720	256,981	257,444	**256,358**	257,444
Credit quality metrics							
Allowances for loan losses and lending-related commitments	**$ 33,637**	$ 34,301	$ 25,391	$ 14,314	$ 14,400	**$ 33,637**	$ 14,400
Allowance for loan losses to total retained loans	**3.26 %**	3.27 %[f]	2.32 %	1.39 %	1.42 %	**3.26 %**	1.42 %
Nonperforming assets[d]	**$ 11,462**	$ 9,715	$ 7,062	$ 5,054	$ 5,993	**$ 11,462**	$ 5,993
Net charge-offs	**1,180**	1,560	1,469	1,494	1,371	**4,209**	4,135
Net charge-off rate	**0.49 %**	0.64 %	0.62 %	0.63 %	0.58 %	**0.58 %**	0.59 %

Effective January 1, 2020, the Firm adopted the Financial Instruments - Credit Losses ("CECL") accounting guidance. Refer to Note 1 for further information.

(a) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.

(b) 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 22-23 for a further discussion of these measures.

(c) Quarterly ratios are based upon annualized amounts.

(d) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

(e) Reflects the relief provided by the Federal Reserve Board in response to the COVID-19 pandemic, including the CECL capital transition provisions that became effective in the first quarter of 2020. Effective in the second quarter of 2020, the SLR reflects the temporary exclusions of U.S. Treasury securities and deposits at Federal Reserve Banks. Refer to Regulatory Developments Relating to the COVID-19 Pandemic on pages 11-12 and Capital Risk Management on pages 49-54 of this Form 10-Q for additional information. Refer to Capital Risk Management on pages 85-92 of JPMorgan Chase's 2019 Form 10-K for additional information on the Firm's capital metrics.

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

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 third quarter of 2020.

This Quarterly Report on Form 10-Q for the third quarter of 2020 ("Form 10-Q") should be read together with JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2019 ("2019 Form 10-K"). Refer to the Glossary of terms and acronyms and line of business ("LOB") metrics on pages 192-200 for definitions of terms and acronyms used throughout this Form 10-Q.

This document 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. 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, refer to Forward-looking Statements on page 92 of this Form 10-Q, Part II, Item 1A, Risk Factors on pages 201-202 of this Form 10-Q and Part I, Item 1A, Risk factors, on pages 6-28 of the 2019 Form 10-K.

JPMorgan Chase & Co. (NYSE: JPM), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; JPMorgan Chase had $3.2 trillion in assets and $271.1 billion in stockholders' equity as of September 30, 2020. 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 in the U.S. and many of the world's most prominent corporate, institutional and government clients.

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 38 states and Washington, D.C. as of September 30, 2020. 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 subsidiary outside the U.S. is J.P. Morgan Securities plc, a U.K.-based subsidiary of JPMorgan Chase Bank, N.A.

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 Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset & Wealth Management ("AWM"). For a description of the Firm's business segments and the products and services they provide to their respective client bases, refer to Note 26 of this Form 10-Q and Note 32 of JPMorgan Chase's 2019 Form 10-K.

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 also makes important information about the Firm available on the Investor Relations section of its website at https://www.jpmorganchase.com/corporate/investor-relations/investor-relations.htm.

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 and its various LOBs, this Form 10-Q and the 2019 Form 10-K should be read together and in their entirety.

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. Refer to Note 1 for further information.

Financial performance of JPMorgan Chase

(unaudited) As of or for the period ended, (in millions, except per share data and ratios)	Three months ended September 30,			Nine months ended September 30,		
	2020	2019	Change	**2020**	2019	Change
Selected income statement data						
Total net revenue[a]	**$ 29,147**	$ 29,291	– %	**$ 90,319**	$ 87,114	4 %
Total noninterest expense[a]	**16,875**	16,372	3	**50,608**	48,976	3
Pre-provision profit	**12,272**	12,919	(5)	**39,711**	38,138	4
Provision for credit losses	**611**	1,514	(60)	**19,369**	4,158	366
Net income	**9,443**	9,080	4	**16,995**	27,911	(39)
Diluted earnings per share	**$ 2.92**	$ 2.68	9	**$ 5.09**	$ 8.15	(38)
Selected ratios and metrics						
Return on common equity	**15 %**	15 %		**9 %**	15 %	
Return on tangible common equity	**19**	18		**11**	19	
Book value per share	**$ 79.08**	$ 75.24	5	**$ 79.08**	$ 75.24	5
Tangible book value per share	**63.93**	60.48	6	**63.93**	60.48	6
Capital ratios[b]						
CET1	**13.1 %**	12.3 %		**13.1 %**	12.3 %	
Tier 1 capital	**15.0**	14.1		**15.0**	14.1	
Total capital	**17.3**	15.9		**17.3**	15.9	

(a) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.

(b) Reflects the relief provided by the Federal Reserve Board in response to the COVID-19 pandemic, including the CECL capital transition provisions that became effective in the first quarter of 2020. Refer to Regulatory Developments relating to the COVID-19 Pandemic on pages 11-12 and Capital Risk Management on pages 49-54 of this Form 10-Q for additional information. Refer to Capital Risk Management on pages 85-92 of JPMorgan Chase's 2019 Form 10-K for additional information on the Firm's capital metrics.

Comparisons noted in the sections below are for the third quarter of 2020 versus the third quarter of 2019, unless otherwise specified.

Firmwide overview

JPMorgan Chase reported net income of $9.4 billion for the third quarter of 2020, or $2.92 per share, on net revenue of $29.1 billion. The Firm reported ROE of 15% and ROTCE of 19%. The Firm's results for the third quarter of 2020 included firmwide legal expense of $524 million.

- The Firm had net income of $9.4 billion, up 4%.
- Total net revenue was flat. Net interest income was $13.0 billion, down 9%, predominantly driven by the impact of lower rates largely offset by higher net interest income in CIB Markets as well as balance sheet growth. Noninterest revenue was $16.1 billion, up 7%, predominantly driven by higher Investment Banking fees, Markets revenue, and Credit Adjustments & Other in the CIB, and higher net investment securities gains in Corporate.
- Noninterest expense was $16.9 billion, up 3%, primarily driven by higher legal expense predominantly in CIB and an impairment on a legacy investment in Corporate, partially offset by lower marketing expense in CCB.

- The provision for credit losses was $611 million, down $903 million from the prior year. Net charge-offs of $1.2 billion were down $191 million from the prior year, predominantly driven by Card, which reflected lower charge-offs and higher recoveries, and benefited from the effect of payment assistance and government stimulus programs. The current quarter included a net reduction to the allowance for credit losses that was largely driven by paydowns in the Home Lending portfolio and changes in wholesale loan balances, partially offset by an addition to the allowance for the investment securities portfolio due to the transfer of certain securities from available-for-sale to held-to-maturity. The prior year included net additions to the allowance for credit losses across both the Consumer and Wholesale portfolios.
- The total allowance for credit losses was $33.8 billion at September 30, 2020. The Firm had an allowance for loan losses to retained loans coverage ratio of 3.26%, compared with 3.27% in the second quarter of 2020, and 1.42% in the prior year; the increase from the prior year was driven by the additions to the allowance for credit losses and the adoption of CECL.
- The Firm's nonperforming assets totaled $11.5 billion at September 30, 2020, an increase of $1.7 billion from the second quarter of 2020, driven by customers that have exited COVID-19 payment deferral programs and were 90 or more days past due in Home Lending in CCB, and downgrades in the wholesale portfolio across multiple industries on client credit deterioration. Nonperforming assets increased from $6.0 billion in the prior year due to downgrades in the wholesale portfolio, as well as from the adoption of CECL, as the purchased credit deteriorated loans in the mortgage portfolio became subject to nonaccrual loan treatment.
- Firmwide average loans of $991 billion were up 1%, largely reflecting higher loan balances in AWM, as well as loans originated under the Small Business Administration's ("SBA") Paycheck Protection Program ("PPP"), offset by lower loan balances in Home Lending and Card.
- Firmwide average deposits of $2.0 trillion were up 30%, reflecting significant inflows across the Firm, primarily driven by the COVID-19 pandemic and the related effect of certain government actions.
- As of September 30, 2020 the Firm had average High Quality Liquid Assets ("HQLA") of approximately $670 billion and unencumbered marketable securities with a fair value of approximately $660 billion, resulting in approximately $1.3 trillion of liquidity sources. Refer to Liquidity Risk Management on pages 55–59 for additional information.

Selected capital-related metrics

- The Firm's CET1 capital was $198 billion, and the Standardized and Advanced CET1 ratios were 13.1% and 13.8%, respectively.
- The Firm's SLR was 7.0%. The SLR reflects the temporary exclusions of U.S. Treasury securities and deposits at Federal Reserve Banks, as required by the Federal Reserve's interim final rule issued on April 1, 2020. The Firm's SLR excluding the temporary relief was 5.8%.
- The Firm grew TBVPS, ending the third quarter of 2020 at $63.93, up 6% versus the prior year.

ROTCE and TBVPS are non-GAAP financial measures. Refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 22-23 for a further discussion of each of these measures.

Business segment highlights

Selected business metrics for each of the Firm's four LOBs are presented below for the third quarter of 2020.

CCB ROE 29%	• Average deposits up 28%; client investment assets up 11% • Average loans down 7%; credit card sales volume down 8% • Active mobile customers up 10%
CIB ROE 21%	• $2.2 billion of Global Investment Banking fees, up 9% • #1 ranking for Global Investment Banking fees with 9.4% wallet share year-to-date • Total Markets revenue of $6.6 billion, up 30%, with Fixed Income Markets up 29% and Equity Markets up 32%
CB ROE 19%	• Gross Investment Banking revenue of $840 million, up 20% • Average loans up 5%; average deposits up 44%
AWM ROE 32%	• Assets under management (AUM) of $2.6 trillion, up 16% • Average loans up 13%; average deposits up 23%

Refer to the Business Segment Results on pages 24-47 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 nine months of 2020, consisting of:

$1.8 trillion	Total credit provided and capital raised (including loans and commitments)[(a)]
$164 billion	Credit for consumers
$14 billion	Credit for U.S. small businesses
$611 billion	Credit for corporations
$885 billion	Capital raised for corporate clients and non-U.S. government entities
$82 billion	Credit and capital raised for nonprofit and U.S. government entities[(b)]
$28 billion	Loans under the Small Business Administration's Paycheck Protection Program

(a) Excludes loans under the SBA's PPP.
(b) Includes states, municipalities, hospitals and universities.

Recent events

- On October 28, 2020, JPMorgan Chase announced the election of Phebe N. Novakovic as a member of the Firm's Board of Directors, effective December 7, 2020. Ms. Novakovic is Chairman and Chief Executive Officer of General Dynamics Corporation.
- On October 8, 2020, JPMorgan Chase announced a long-term $30 billion commitment to advance racial equity.
- On October 6, 2020, JPMorgan Chase announced a financing strategy that is aligned to the goals of the Paris Agreement. As part of its strategy, the Firm will work with clients in key sectors to reduce their greenhouse gas emissions intensity and expand investment in low- and zero-carbon energy sources and technologies.
- On September 15, 2020, JPMorgan Chase expanded its Operating Committee to include the heads of several of the Firm's largest businesses in the LOBs. The current business roles and reporting lines of the new members remained unchanged. The Firm also announced that its two Co-Presidents and Co-Chief Operating Officers, Daniel Pinto and Gordon Smith, will be taking on additional responsibility across all of the Firm's businesses.
- On September 15, 2020, the Board of Directors of JPMorgan Chase announced that the independent directors of the Board have appointed Stephen B. Burke as Lead Independent Director, effective January 1, 2021, succeeding Lee Raymond in that role.

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 92 and Risk Factors on page 201 of this Form 10-Q and pages 6–28 of JPMorgan Chase's 2019 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 will be in line with the outlook set forth below, and the Firm does not undertake to update any forward-looking statements.

JPMorgan Chase's current outlook for the remainder of 2020 and for 2021 should be viewed against the backdrop of the global and U.S. economies, the COVID-19 pandemic, 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 and its LOBs. 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 outlook information contained in this Form 10-Q supersedes all outlook information furnished by the Firm in its periodic reports filed with the SEC prior to the date of this Form 10-Q.

Firmwide

- On a managed basis, management expects full-year 2020 net interest income to be approximately $55 billion, and full-year 2021 net interest income to be approximately $54 billion, market dependent.
- Management expects adjusted expense for the full-year 2020 to be approximately $66 billion.

Business Developments

COVID-19 Pandemic

In response to the COVID-19 pandemic, the Firm has implemented strategies and procedures designed to help it respond to increased market volatility, client demand for credit and liquidity, distress in certain industries/sectors and the ongoing impacts to consumers and businesses.

The Firm remains focused on serving its customers, clients and communities, as well as the well-being of its employees during the COVID-19 pandemic. The Firm continues to actively monitor the dynamic health and safety situations at local and regional levels, and plans remain flexible to adapt as these situations evolve.

Supporting clients and customers

Since March 2020 the Firm has provided assistance to clients and customers primarily in the form of payment deferrals on loans and auto leases.

Refer to Credit Portfolio on pages 60-61 for information on assistance granted to customers and clients. Refer to Consumer Credit portfolio on pages 62-66 and Wholesale Credit Portfolio on pages 67-76 for information on retained loans under payment deferral.

The Firm has gradually re-opened its branches since April, with nearly 90% of its branches returning to full service as of the third quarter of 2020. Additionally, the Firm continues to make a wide range of banking services accessible to clients and customers through mobile and other digital channels.

Protecting and supporting employees

At the onset of the pandemic, the Firm implemented alternative work arrangements, with the vast majority of its global workforce working from home.

While the majority of the Firm's employees globally continue to work from home, the Firm continues to return employees to the office.

Supporting communities

Since March, the Firm has committed $250 million to help address humanitarian needs and long-term economic challenges posed by the COVID-19 pandemic on the communities in which the Firm operates. As of September 30, 2020 nearly half of this commitment has been funded.

Departure of the U.K. from the EU

The Firm continues to execute on its Firmwide Brexit Implementation program and remains focused on the following key areas to ensure continuation of service to its EU clients: regulatory and legal entity readiness; client readiness; and business and operational readiness.

The Firm is preparing for the possibility that the U.K. will complete its departure from the EU without having agreed the terms of their future relationship, which is commonly referred to as "hard Brexit." The Firm is therefore preparing to finalize and implement the various components of its Brexit readiness plan by year-end, including completion of the relocation of approximately 200 front office roles from the U.K. to EU locations, and the migration of remaining EU clients and certain positions to EU entities by the end of the year. A key factor in that plan will be to secure client engagement; any delays may impact the Firm's ability to continue servicing EU clients, as the Firm's U.K.-based legal entities are expected to lose their ability to transact business from the U.K. with EU clients at the end of the year.

The COVID-19 pandemic has introduced additional risk to the Firm's Brexit Implementation program. Infection rates and travel restrictions are increasing and lock-downs have been introduced across various U.K. and EU locations. As a result, the risk that clients may not be operationally ready and that the Firm may not be able to relocate employees by year-end is rising. Unless some official-sector solution is forthcoming, the Firm's ability to continue servicing EU clients may be adversely affected.

Interbank Offered Rate (“IBOR”) transition

On March 12, 2020, the Financial Accounting Standards Board (“FASB”) issued an accounting standards update providing optional expedients and exceptions for applying generally accepted accounting principles to contracts and hedge accounting relationships affected by reference rate reform. These optional expedients are intended to simplify the operational impact of applying U.S. GAAP to transactions impacted by reference rate reform. The Firm elected to apply certain of these expedients beginning in the third quarter of 2020. On August 27, 2020, the International Accounting Standards Board (“IASB”) issued guidance that provides similar relief for entities reporting under International Financial Reporting Standards ("IFRS"). Refer to Accounting and Reporting Developments on page 91 for additional information. The Firm continues to monitor the transition relief being considered by the U.S. Treasury Department regarding the tax implications of reference rate reform.

The Firm also continues to develop and implement plans to appropriately mitigate the risks associated with IBOR discontinuation. Refer to Business Developments on page 47 of the 2019 Form 10-K for a discussion of the Firm’s initiatives to address the expected discontinuation of the London Interbank Offered Rate (“LIBOR”) and other IBORs.

Regulatory Developments Relating to the COVID-19 Pandemic

Since March 2020, the U.S. government as well as central banks and banking authorities around the world have taken and continue to take actions to help individuals, households and businesses that have been adversely affected by the economic disruption caused by the COVID-19 pandemic. The CARES Act, which was signed into law on March 27, 2020, provides, among other things, funding to support loan facilities to assist consumers and businesses. Set forth below is a summary as of the date of this Form 10-Q of U.S. government actions currently impacting the Firm and U.S. government programs in which the Firm is participating to support individuals, businesses, and the broader economy. The Firm will continue to assess ongoing developments in government actions in response to the COVID-19 pandemic.

U.S. government actions

Eligible retained income definition. On March 17, 2020, the Office of the Comptroller of the Currency ("OCC"), the Board of Governors of the Federal Reserve System ("Federal Reserve"), and the Federal Deposit Insurance Corporation ("FDIC"), collectively the "federal banking agencies," issued an interim final rule that revised the definition of "eligible retained income" in the regulatory capital rules that apply to all U.S. banking organizations. On March 23, 2020, the Federal Reserve issued an interim final rule that revised the definition of "eligible retained income" for purposes of the total loss-absorbing capacity ("TLAC") buffer requirements that apply to global systemically important banking organizations. The revised definition of eligible retained income makes any automatic limitations on payout distributions that could apply under the agencies' capital rules or TLAC rule take effect on a more graduated basis in the event that a banking organization's capital, leverage and TLAC ratios were to decline below regulatory requirements (including buffers). The March 17, 2020 interim final rule was issued, in conjunction with an interagency statement encouraging banking organizations to use their capital and liquidity buffers, to further support banking organizations' abilities to lend to households and businesses affected by the COVID-19 pandemic. On August 26, 2020, the federal banking agencies issued the final rule consistent with the interim final rules published on March 17, 2020 and March 23, 2020.

Reserve requirements. On March 26, 2020, the Federal Reserve reduced reserve requirement ratios to zero percent, effectively eliminating the reserve requirement for all depository institutions, an action that freed up liquidity in the banking system to support lending to households and businesses.

Refer to Note 21 for additional information on the reduction to the reserve requirement.

Regulatory Capital - Current Expected Credit Losses ("CECL") transition delay. On March 31, 2020, the federal banking agencies issued an interim final rule (issued as final on August 26, 2020) that provided banking organizations with the option to delay the effects of CECL on regulatory capital for two years, followed by a three-year transition period ("CECL capital transition provisions"). The Firm elected to apply the CECL capital transition provisions.

Refer to Capital Risk Management on pages 49-54 and Note 22 on pages 177–178 for additional information on the CECL capital transition provisions and the impact to the Firm's capital metrics.

Supplementary leverage ratio ("SLR") temporary revision. On April 1, 2020, the Federal Reserve issued an interim final rule that requires, on a temporary basis, the calculation of total leverage exposure for purposes of calculating the SLR for bank holding companies, to exclude the on-balance sheet amounts of U.S. Treasury securities and deposits at Federal Reserve Banks. These exclusions became effective April 1, 2020, and will remain in effect through March 31, 2021.

Refer to Capital Risk Management on pages 49-54 and Note 22 for additional information on the Firm's SLR.

Loan modifications. On April 7, 2020, the federal banking agencies along with the National Credit Union Administration, and the Consumer Financial Protection Bureau, in consultation with the state financial regulators, issued an interagency statement revising a March 22, 2020 interagency statement on loan modifications and the reporting for financial institutions working with customers affected by the COVID-19 pandemic (the "IA Statement"). The IA Statement reconfirmed that efforts to work with borrowers where the loans are prudently underwritten, and not considered past due or carried on nonaccrual status, should not result in the loans automatically being considered modified in a troubled debt restructuring ("TDR") for accounting and financial reporting purposes, or for purposes of their respective risk-based capital rules, which would otherwise require financial institutions subject to the capital rules to hold more capital. The IA Statement also clarified the interaction between its previous guidance and Section 4013 of the CARES Act, which provides certain financial institutions with the option to suspend the application of accounting guidance for TDRs for a limited period of time for loan modifications made to address the effects of the COVID-19 pandemic.

The Firm has granted various forms of assistance to customers and clients impacted by the COVID-19 pandemic, including payment deferrals and covenant modifications. The majority of the Firm's COVID-19 related loan modifications have not been considered TDRs as:

- they represent short-term or other insignificant modifications, whether under the Firm's regular loan modification assessments or the IA Statement guidance, or
- the Firm has elected to apply the option to suspend the application of accounting guidance for TDRs as provided under section 4013 of the CARES Act.

To the extent that certain modifications do not meet any of the above criteria, the Firm accounts for them as TDRs. Refer to Credit Portfolio on pages 60-61 and Note 12 for additional information on the Firm's loan modification activities.

U.S. government facilities and programs. Beginning in March 2020, the Federal Reserve announced a suite of facilities using its emergency lending powers under section 13(3) of the Federal Reserve Act to support the flow of credit to individuals, households and businesses adversely affected by the COVID-19 pandemic and to support the broader economy. In addition, beginning April 3, 2020, the PPP, established by the CARES Act and administered by the SBA, authorized eligible lenders to provide nonrecourse loans to eligible borrowers until August 8, 2020 to provide an incentive for these businesses to keep their workers on their payroll. The Firm has participated and is participating in certain of these facilities and programs, as needed, to assist its clients and customers or to support the broader economy.

Refer to Capital Risk Management on pages 49-54, Liquidity Risk Management on pages 55–59 and Note 22 for additional information on the Firm's participation in these facilities. Refer to Capital Risk Management on pages 49-54, Credit Portfolio on pages 60-61 and Note 22 for additional information on the Firm's participation in the PPP.

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 and nine months ended September 30, 2020 and 2019, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. Refer to pages 88–90 of this Form 10-Q and pages 136–138 of JPMorgan Chase's 2019 Form 10-K for a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations.

Revenue

	Three months ended September 30,			Nine months ended September 30,		
(in millions)	**2020**	2019	Change	**2020**	2019	Change
Investment banking fees	**$ 2,187**	$ 1,967	11 %	**$ 6,903**	$ 5,658	22 %
Principal transactions	**4,142**	3,449	20	**14,700**	11,239	31
Lending- and deposit-related fees[(a)]	**1,647**	1,671	(1)	**4,784**	4,854	(1)
Asset management, administration and commissions[(a)]	**4,470**	4,306	4	**13,276**	12,607	5
Investment securities gains	**473**	78	NM	**732**	135	442
Mortgage fees and related income	**1,087**	887	23	**2,324**	1,562	49
Card income[(b)]	**1,169**	1,233	(5)	**3,138**	3,741	(16)
Other income[(c)]	**959**	1,472	(35)	**3,157**	4,239	(26)
Noninterest revenue	**16,134**	15,063	7	**49,014**	44,035	11
Net interest income	**13,013**	14,228	(9)	**41,305**	43,079	(4)
Total net revenue	**$ 29,147**	$ 29,291	– %	**$ 90,319**	$ 87,114	4 %

(a) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.
(b) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.
(c) Included operating lease income of $1.4 billion for each of the three months ended September 30, 2020 and 2019, and $4.2 billion and $4.0 billion for the nine months ended September 30, 2020 and 2019, respectively.

Quarterly results

Investment banking fees increased, driven by CIB, reflecting:

- higher equity underwriting fees primarily in follow-on offerings and IPO markets due to increased industry-wide fees
- higher debt underwriting fees due to wallet share gains despite decreased industry-wide fees,

partially offset by

- lower advisory fees driven by a lower number of completed transactions associated in part with the lower level of announced deal volumes in the first half of the year.

Refer to CIB segment results on pages 31-37 and Note 6 for additional information.

Principal transactions revenue increased, primarily in CIB, reflecting:

- higher revenue in both Fixed Income and Equity Markets driven by strong performance in Commodities and Credit, as well as Cash Equities, respectively, and
- a $169 million gain in Credit Adjustments & Other largely driven by funding and credit spread tightening on derivatives, compared with a $71 million loss in the prior year.

The increase in principal transactions revenue also reflected net gains on certain legacy private equity investments in Corporate.

Principal transactions revenue in CIB may in certain cases have offsets across other revenue lines, including net interest income. The Firm assesses its CIB Markets business performance on a total revenue basis.

Refer to CIB and Corporate segment results on pages 31-37 and pages 46-47, and Note 6 for additional information.

Lending- and deposit-related fees was relatively flat as the lower deposit-related fees in CCB, reflecting lower transaction activity and the impact of fee refunds related to the COVID-19 pandemic, was offset by higher cash management fees, as well as higher lending-related fees, in particular, loan commitment fees in CIB and CB. Refer to CCB segment results on pages 26-30, CIB on pages 31-37 and CB on pages 38-41, respectively, and Note 6 for additional information.

Asset management, administration and commissions revenue increased, reflecting higher asset management fees as a result of cumulative net inflows into liquidity and long-term products in AWM.

For information on asset management, administration and commissions revenue, refer to CCB, CIB and AWM segment results on pages 26-30, pages 31-37 and pages 42-45, respectively, and Note 6.

Investment securities gains increased due to the repositioning of the investment securities portfolio, including sales of U.S. GSE and government agency mortgage-backed securities.

Refer to Corporate segment results on pages 46-47 and Note 10 for information on investment securities gains.

Mortgage fees and related income increased due to:

- higher net mortgage servicing revenue reflecting
  - higher MSR risk management results driven by updates to model inputs, and
  - higher operating revenue reflecting the absence of losses in the prior year from reclassifying certain loans to held-for-sale, predominantly offset by lower revenue on a lower level of third-party loans serviced
- higher net mortgage production revenue reflecting higher production margins and volumes; the prior year included approximately $350 million of gains on the sale of certain loans.

Refer to CCB segment results on pages 26-30, Note 6 and 15 for further information.

Card income decreased due to lower net interchange income reflecting lower card sales volumes as a result of the COVID-19 pandemic, largely offset by lower acquisition costs and higher annual fees.

Refer to CCB segment results on pages 26-30, and Note 6 for further information.

Other income decreased, reflecting:

- net losses related to derivatives in Other Corporate, as well as the costs of hedging certain non-U.S. dollar-denominated net investment exposures in Treasury and CIO
- losses related to the early termination of certain of the Firm's long-term debt in Treasury and CIO
- increased amortization on higher levels of alternative energy investments in CIB. The increased amortization was more than offset by lower income tax expense from the associated tax credits.

Net interest income decreased due to the impact of lower rates, largely offset by higher net interest income in CIB Markets, as well as balance sheet growth.

The Firm's average interest-earning assets were $2.9 trillion, up $510 billion, and the yield was 2.05%, down 151 basis points ("bps"), primarily due to lower rates. The net yield on these assets, on an FTE basis, was 1.82%, a decrease of 59 bps. The net yield excluding CIB Markets was 2.05%, down 118 bps.

Net yield excluding CIB Markets is a non-GAAP financial measure. Refer to the Consolidated average balance sheets, interest and rates schedule on pages 190–191 for further details; and the Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 22-23 for a further discussion of Net interest yield excluding CIB Markets.

Year-to-date results

Investment banking fees increased, driven by CIB, reflecting:

- higher equity underwriting fees primarily in follow-on offerings and convertible securities markets due to increased industry-wide fees
- higher debt underwriting fees due to increased industry-wide fees and wallet share gains in investment-grade and high-yield bonds. The increased activity resulted in part from clients seeking liquidity in the first half of the year as a result of the COVID-19 pandemic,

partially offset by

- lower advisory fees driven by a lower number of completed transactions.

Principal transactions revenue increased, primarily in CIB, reflecting:

- higher revenue in both Fixed Income and Equity Markets driven by strong performance in Rates, Currencies & Emerging Markets, Credit and Commodities, as well as in Cash Equities and equity derivatives, respectively,

partially offset by

- a $272 million net loss in Credit Adjustments & Other driven by losses on certain components of fair value option elected liabilities, as well as the impact of funding spread widening on derivatives.

The increase in principal transactions revenue also reflected net gains on certain legacy private equity investments in Corporate, compared with net losses in the prior year.

Lending- and deposit-related fees was relatively flat as the lower deposit-related fees in CCB, reflecting lower transaction activity and the impact of fee refunds related to the COVID-19 pandemic, was offset by higher cash management fees in CIB and CB, as well as higher lending-related fees, in particular, loan commitment fees in CIB.

Asset management, administration and commissions revenue increased driven by:

- higher asset management fees in AWM as a result of cumulative net inflows into liquidity and long-term products, and in CCB related to a higher level of investment assets
- higher brokerage commissions in CIB and AWM on higher client-driven volume,

partially offset by

- lower volume of annuity sales in CCB.

Investment securities gains increased due to the repositioning of the investment securities portfolio, including sales of U.S. GSE and government agency mortgage-backed securities in the first and third quarters of 2020.

Mortgage fees and related income increased due to:

- higher net mortgage production revenue reflecting higher mortgage production volumes and margins; the prior year included gains on the sales of certain loans
- higher net mortgage servicing revenue reflecting
  - higher MSR risk management results; the prior year included losses resulting from updates to model inputs,

  partially offset by
  - lower operating revenue reflecting a lower level of third-party loans serviced; the prior year included losses from reclassifying certain loans to held-for-sale.

Card income decreased due to lower net interchange income reflecting lower card sales volumes that began in March as a result of the COVID-19 pandemic, partially offset by higher annual fees and lower acquisition costs.

Other income decreased reflecting:

- net losses related to derivatives in Other Corporate, as well as the costs of hedging certain non-U.S. dollar-denominated net investment exposures in Treasury and CIO
- net losses on certain equity investments in CIB, compared with net gains in the prior year
- increased amortization on higher levels of alternative energy investments in CIB. The increased amortization is more than offset by lower income tax expense from the associated tax credits
- lower net valuation gains on certain investments in AWM
- losses related to the early termination of certain of the Firm's long-term debt in Treasury and CIO,

partially offset by

- higher operating lease income from growth in auto operating lease volume in CCB.

Refer to Note 17 for further information.

Net interest income decreased due to the impact of lower rates, predominantly offset by higher net interest income in CIB Markets, as well as balance sheet growth.

The Firm's average interest-earning assets were $2.7 trillion, up $386 billion, and the yield was 2.47%, down 123 bps, primarily due to lower rates. The net yield on these assets, on an FTE basis, was 2.04%, a decrease of 45 bps. The net yield excluding CIB Markets was 2.41%, down 93 bps.

Provision for credit losses

(in millions)	Three months ended September 30, 2020	2019	Change	Nine months ended September 30, 2020	2019	Change
Consumer, excluding credit card	**$ (336)**	$ 19	NM	**$ 1,874**	$ (227)	NM
Credit card	**1,028**	1,375	(25)	**10,119**	4,017	152
Total consumer	**692**	1,394	(50)	**11,993**	3,790	216
Wholesale	**(178)**	120	NM	**7,266**	368	NM
Investment securities	**97**	NA	NM	**110**	NA	NM
Total provision for credit losses	**$ 611**	$ 1,514	(60)%	**$ 19,369**	$ 4,158	366 %

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 1 for further information.

Quarterly results

The **provision for credit losses** decreased driven by both the consumer and wholesale portfolios.

The decrease in **consumer** reflected:

- a $300 million reduction in the allowance for credit losses in Home Lending due to paydowns; a $100 million reduction in the allowance in the Business Banking consumer portfolio, which was offset by an addition to the allowance in the Business Banking wholesale portfolio; resulting in no change to CBB's overall allowance for credit losses, and
- lower net charge-offs in Card, which reflected lower charge-offs and higher recoveries, and benefited from the effect of payment assistance and government stimulus programs.

The prior year included a $138 million net addition to the allowance for credit losses.

The **wholesale** provision was a net benefit as a result of reductions in the allowance for credit losses across CIB, CB and AWM, driven by changes in loan balances, partially offset by an addition to the allowance in CCB Business Banking as noted above. The prior year provision was largely driven by select Commercial & Industrial ("C&I") client downgrades.

The **investment securities** provision was predominantly driven by the transfer of certain securities from available-for-sale ("AFS") to held-to-maturity ("HTM").

Refer to CCB segment results on pages 26-30, CIB on pages 31-37, CB on pages 38-41, AWM on pages 42-45, the Allowance for Credit Losses on pages 77-78, and Note 10 and 13 for additional information on the credit portfolio and the allowance for credit losses.

Year-to-date results

The **provision for credit losses** increased primarily driven by the deterioration and uncertainty in the macroeconomic environment as a result of the impact of the COVID-19 pandemic in consumer and wholesale.

The increase in **consumer** reflected:

- net additions of $8.3 billion to the allowance for credit losses, consisting of $6.6 billion for Card, $900 million for Home Lending, $520 million for Auto, and $252 million for Business Banking,

partially offset by

- lower net charge-offs largely in Card, which reflected higher recoveries, and in Home Lending, reflecting higher recoveries on a loan sale in the first quarter of 2020.

The prior year included an $83 million net reduction in the allowance for credit losses.

The increase in **wholesale** reflected a net addition of $6.7 billion to the allowance for credit losses across the LOBs impacting multiple industry sectors.

The **investment securities** provision was predominantly driven by the transfer of certain securities from AFS to HTM.

Noninterest expense

(in millions)	Three months ended September 30, 2020	2019	Change	Nine months ended September 30, 2020	2019	Change
Compensation expense	**$ 8,630**	$ 8,583	1 %	**$ 27,034**	$ 26,067	4 %
Noncompensation expense:						
Occupancy	**1,142**	1,110	3	**3,288**	3,238	2
Technology, communications and equipment	**2,564**	2,494	3	**7,732**	7,236	7
Professional and outside services	**2,178**	2,056	6	**6,205**	6,307	(2)
Marketing[(a)]	**470**	895	(47)	**1,751**	2,504	(30)
Other expense[(b)(c)]	**1,891**	1,234	53	**4,598**	3,624	27
Total noncompensation expense	**8,245**	7,789	6	**23,574**	22,909	3
Total noninterest expense	**$ 16,875**	$ 16,372	3 %	**$ 50,608**	$ 48,976	3 %

(a) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.
(b) Included Firmwide legal expense/(benefit) of $524 million and $10 million for the three months ended September 30, 2020 and 2019, respectively, and $839 million and $(2) million for the nine months ended September 30, 2020 and 2019, respectively.
(c) Included FDIC-related expense of $186 million and $114 million for the three months ended September 30, 2020 and 2019, respectively, and $503 million and $378 million for the nine months ended September 30, 2020 and 2019, respectively.

Quarterly results

Compensation expense increased driven by investments in new hires, predominantly offset by lower revenue-related expense in CIB.

Noncompensation expense increased as a result of:

- higher legal expense predominantly in CIB
- an impairment on a legacy investment in Corporate
- higher volume-related expense, in particular brokerage expense in CIB,

partially offset by

- lower marketing expense in CCB as a result of lower investments in marketing campaigns and travel-related benefits, and
- lower structural expense, including lower travel and entertainment across the businesses.

Year-to-date results

Compensation expense increased driven by higher revenue-related expense in CIB.

Noncompensation expense increased as a result of:

- higher legal expense predominantly in CIB and from a lower net legal benefit in Corporate
- higher volume-related expense, in particular brokerage expense in CIB and depreciation from growth in auto lease assets in CCB
- an impairment on a legacy investment in Corporate,

partially offset by

- lower marketing expense in CCB as a result of lower investments in marketing campaigns and travel-related benefits, and
- lower structural expense, including lower travel and entertainment across the businesses.

Income tax expense

(in millions)	Three months ended September 30, 2020	2019	Change	Nine months ended September 30, 2020	2019	Change
Income before income tax expense	**$ 11,661**	$ 11,405	2 %	**$ 20,342**	$ 33,980	(40)%
Income tax expense	**2,218**	2,325	(5)	**3,347**	6,069	(45)
Effective tax rate	**19.0 %**	20.4 %		**16.5 %**	17.9 %	

Quarterly results

The **effective tax rate** decreased due to changes in the level and mix of income and expenses subject to U.S. federal, and state and local taxes, as well as prior-year adjustments. The decrease was partially offset by the absence of tax benefits recorded in the prior year related to the resolution of certain tax audits.

Year-to-date results

The **effective tax rate** decreased due to changes in the level and mix of income and expenses subject to U.S. federal, and state and local taxes, as well as prior-year adjustments and the more significant effect of certain tax benefits on a lower level of pre-tax income. The decrease was largely offset by the recognition of $1.0 billion of tax benefits recorded in the prior year related to the resolution of certain tax audits.

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. Refer to Note 1 for further information.

Consolidated balance sheets analysis

The following is a discussion of the significant changes between September 30, 2020, and December 31, 2019.

Selected Consolidated balance sheets data

(in millions)	September 30, 2020	December 31, 2019	Change
Assets			
Cash and due from banks	**$ 20,816**	$ 21,704	(4)%
Deposits with banks	**466,706**	241,927	93
Federal funds sold and securities purchased under resale agreements	**319,849**	249,157	28
Securities borrowed	**142,441**	139,758	2
Trading assets[(a)]	**505,822**	369,687	37
Available-for-sale securities	**389,583**	350,699	11
Held-to-maturity securities, net of allowance for credit losses	**141,553**	47,540	198
Investment securities, net of allowance for credit losses	**531,136**	398,239	33
Loans[(a)]	**989,740**	997,620	(1)
Allowance for loan losses	**(30,814)**	(13,123)	135
Loans, net of allowance for loan losses	**958,926**	984,497	(3)
Accrued interest and accounts receivable	**76,945**	72,861	6
Premises and equipment	**26,672**	25,813	3
Goodwill, MSRs and other intangible assets	**51,594**	53,341	(3)
Other assets[(a)]	**145,169**	130,395	11
Total assets	**$ 3,246,076**	$ 2,687,379	21 %

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

Cash and due from banks and deposits with banks increased primarily as a result of significant deposit inflows, which also funded asset growth across the Firm, including in investment securities and securities purchased under resale agreements. Deposits with banks reflect the Firm's placements of its excess cash with various central banks, including the Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements increased predominantly as a result of higher deployment of cash in Treasury and CIO, as well as the impact of client activity and higher demand for securities to cover short positions in CIB. Refer to Liquidity Risk Management on pages 55–59 and Note 11 for additional information.

Trading assets increased compared with lower levels at year-end due to client-driven market-making activities in debt and equity instruments in CIB Markets, as well as higher derivative receivables as a result of market movements, also in CIB. Refer to Notes 2 and 5 for additional information.

Investment securities increased, reflecting net purchases of U.S. Treasuries and U.S. GSE and government agency MBS in the available-for-sale ("AFS") portfolio, driven by interest rate risk management activities and cash deployment, partially offset by a non-cash transfer of $100.5 billion of AFS securities to the held-to-maturity ("HTM") portfolio, resulting in a comparable increase in HTM; the transfer was made for capital management purposes.

Refer to Corporate segment results on pages 46-47, Investment Portfolio Risk Management on page 79, and Notes 2 and 10 for additional information on Investment securities.

Loans decreased, reflecting:

- lower loans in Card due to the decline in sales volume that began in March as a result of the COVID-19 pandemic, as well as the impact of seasonality; and lower loans in Home Lending primarily due to paydowns and loan sales, net of originations,

partially offset by

- the impact of the PPP loans in CBB and CB, as well as growth in wholesale loans and mortgages in AWM.

The **allowance for loan losses** increased primarily reflecting the deterioration and uncertainty in the macroeconomic environment as a result of the impact of the COVID-19 pandemic, consisting of:

- a net $8.3 billion addition in consumer, predominantly in the credit card and residential real estate portfolios
- a net $5.2 billion addition in wholesale, across the LOBs impacting multiple industry sectors, and
- a net $4.2 billion addition as a result of the adoption of CECL.

There were also additions to the allowance for lending-related commitments, which is included in other liabilities on the consolidated balance sheets, of $1.5 billion related to the impact of the COVID-19 pandemic, and $98 million related to the adoption of CECL, resulting in total additions to the allowance for credit losses of $15.0 billion and $4.3 billion, respectively, as of September 30, 2020.

Refer to Credit and Investment Risk Management on pages 60-79, and Notes 1, 2, 3, 12 and 13 for a more detailed discussion of loans and the allowance for loan losses.

Goodwill, MSRs and other intangibles decreased reflecting lower MSRs as a result of faster prepayment speeds on lower rates and the realization of expected cash flows, partially offset by net additions to the MSRs. Refer to Note 15 for additional information.

Other assets increased reflecting higher cash collateral placed with central counterparties in CIB. Refer to Liquidity Risk Management on pages 55–59 for additional information.

Selected Consolidated balance sheets data (continued)

(in millions)	September 30, 2020	December 31, 2019	Change
Liabilities			
Deposits	**$ 2,001,416**	$ 1,562,431	28 %
Federal funds purchased and securities loaned or sold under repurchase agreements	**236,440**	183,675	29
Short-term borrowings	**41,992**	40,920	3
Trading liabilities	**162,493**	119,277	36
Accounts payable and other liabilities	**234,256**	210,407	11
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**19,191**	17,841	8
Long-term debt	**279,175**	291,498	(4)
Total liabilities	**2,974,963**	2,426,049	23
Stockholders' equity	**271,113**	261,330	4
Total liabilities and stockholders' equity	**$ 3,246,076**	$ 2,687,379	21 %

Deposits increased reflecting significant inflows across the LOBs primarily driven by the COVID-19 pandemic and the related effect of certain government actions

- in the wholesale businesses, the inflows principally occurred in March as clients looked to remain liquid as a result of market conditions; in general, balances remained elevated through the third quarter, and
- in CCB, the increase was driven by lower spending and higher cash balances across both consumer and small business customers, as well as growth from existing and new accounts.

Refer to Liquidity Risk Management on pages 55–59 and Notes 2 and 16 for additional information.

Federal funds purchased and securities loaned or sold under repurchase agreements increased reflecting:

- in CIB, higher secured financing of trading assets, partially offset by a decline in client-driven market-making activities, and the Firm's nonparticipation in the Federal Reserve's open market operations, and
- in Treasury and CIO, higher secured financing of AFS investment securities. Refer to Liquidity Risk Management on pages 55–59 and Note 11 for additional information.

For information on short-term borrowings, refer to Liquidity Risk Management on pages 55–59 .

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

Accounts payable and other liabilities increased reflecting higher client payables related to client-driven activities in CIB.

Beneficial interests issued by consolidated VIEs increased primarily reflecting higher levels of Firm-administered multi-seller conduit commercial paper held by third parties.

Refer to Off-Balance Sheet Arrangements on page 21 and Notes 14 and 23 for further information on Firm-sponsored VIEs and loan securitization trusts.

Long-term debt decreased as a result of maturities of FHLB advances; net maturities of senior debt, which included the early termination of certain of the Firm's debt; partially offset by an issuance of subordinated debt, and higher fair value hedge accounting adjustments related to lower interest rates. The decrease was also due to a lower level of structured notes in CIB. Refer to Liquidity Risk Management on pages 55–59 for additional information on the Firm's long-term debt activities.

Stockholders' equity increased reflecting the combined impact of net income, capital actions, the adoption of CECL and an increase in accumulated other comprehensive income ("AOCI"). The increase in AOCI was driven by net unrealized gains on AFS securities, and higher valuation of interest rate cash flow hedges. Refer to page 96 for information on changes in stockholders' equity, Capital actions on page 53, and Note 20 for additional information on AOCI.

Consolidated cash flows analysis

The following is a discussion of cash flow activities during the nine months ended September 30, 2020 and 2019.

(in millions)	Nine months ended September 30, 2020	2019
Net cash provided by/(used in)		
Operating activities[(a)]	**$ (51,858)**	$ (78,719)
Investing activities[(a)]	**(198,206)**	(36,501)
Financing activities	**470,687**	96,006
Effect of exchange rate changes on cash	**3,268**	(2,982)
Net increase/(decrease) in cash and due from banks and deposits with banks	**$ 223,891**	$ (22,196)

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

Operating activities

- In 2020, cash used resulted from higher trading assets and other assets, partially offset by higher trading liabilities, accounts payable and other liabilities, and net proceeds from loans held for sale.
- In 2019, cash used primarily resulted from higher trading assets and securities borrowed, partially offset by increased accounts payable and other liabilities, trading liabilities, and net proceeds from loans held-for-sale.

Investing activities

- In 2020, cash used reflected net purchases of investment securities and higher securities purchased under resale agreements, partially offset by net proceeds from sales and securitizations of loans held-for-investment.
- In 2019, cash used resulted from net purchases of investment securities, partially offset by higher securities purchased under resale agreements, and net proceeds from sales and securitizations of loans held-for-investment.

Financing activities

- In 2020, cash provided reflected higher deposits and securities loaned or sold under repurchase agreements, partially offset by net payments of long term borrowings.
- In 2019, cash provided resulted from higher deposits and securities loaned or sold under repurchase agreements.
- For both periods, cash was used for repurchases of common stock and cash dividends on common and preferred stock. On March 15, 2020, in response to the COVID-19 pandemic, the Firm temporarily suspended repurchases of its common equity. Subsequently, the Federal Reserve directed all large bank holding companies, including the Firm, to discontinue net share repurchases through the end of the fourth quarter of 2020.

* * *

Refer to Consolidated Balance Sheets Analysis on pages 18-19, Capital Risk Management on pages 49-54, and Liquidity Risk Management on pages 55-59 of this Form 10-Q, and pages 93-98 of JPMorgan Chase's 2019 Form 10-K for a further discussion of the activities affecting the Firm's cash flows.

OFF-BALANCE SHEET ARRANGEMENTS

In the normal course of business, the Firm enters into various off-balance sheet arrangements and contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are disclosed as off-balance sheet under accounting principles generally accepted in the U.S. ("U.S. GAAP").

Special-purpose entities

The Firm has several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

The Firm holds capital, as appropriate, against all SPE-related transactions and related exposures, such as derivative contracts and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing.

The table below provides an index of where in this Form 10-Q a discussion of the Firm's various off-balance sheet arrangements can be found. Refer to Note 1 for additional information about the Firm's consolidation policies.

Type of off-balance sheet arrangement	Location of disclosure	Page references
Special-purpose entities: variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated VIEs	Refer to Note 14	163-168
Off-balance sheet lending-related financial instruments, guarantees, and other commitments	Refer to Note 23	179-182

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 93-97.

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 noninterest expense
- Net interest income and net yield excluding CIB Markets
- Tangible common equity ("TCE"), ROTCE, and TBVPS
- 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 57–59 of JPMorgan Chase's 2019 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.

	Three months ended September 30,					
	2020			2019		
(in millions, except ratios)	Reported	Fully taxable-equivalent adjustments[b]	Managed basis	Reported	Fully taxable-equivalent adjustments[b]	Managed basis
Other income	**$ 959**	**$ 690**	**$ 1,649**	$ 1,472	$ 596	$ 2,068
Total noninterest revenue[a]	**16,134**	**690**	**16,824**	15,063	596	15,659
Net interest income	**13,013**	**104**	**13,117**	14,228	127	14,355
Total net revenue	**29,147**	**794**	**29,941**	29,291	723	30,014
Total noninterest expense[a]	**16,875**	**NA**	**16,875**	16,372	NA	16,372
Pre-provision profit	**12,272**	**794**	**13,066**	12,919	723	13,642
Provision for credit losses	**611**	**NA**	**611**	1,514	NA	1,514
Income before income tax expense	**11,661**	**794**	**12,455**	11,405	723	12,128
Income tax expense	**2,218**	**794**	**3,012**	2,325	723	3,048
Net income	**$ 9,443**	**NA**	**$ 9,443**	$ 9,080	NA	$ 9,080
Overhead ratio	**58 %**	**NM**	**56 %**	56 %	NM	55 %

	Nine months ended September 30,					
	2020			2019		
(in millions, except ratios)	Reported	Fully taxable-equivalent adjustments[b]	Managed basis	Reported	Fully taxable-equivalent adjustments[b]	Managed basis
Other income	**$ 3,157**	**$ 2,128**	**$ 5,285**	$ 4,239	$ 1,777	$ 6,016
Total noninterest revenue[a]	**49,014**	**2,128**	**51,142**	44,035	1,777	45,812
Net interest income	**41,305**	**321**	**41,626**	43,079	408	43,487
Total net revenue	**90,319**	**2,449**	**92,768**	87,114	2,185	89,299
Total noninterest expense[a]	**50,608**	**NA**	**50,608**	48,976	NA	48,976
Pre-provision profit	**39,711**	**2,449**	**42,160**	38,138	2,185	40,323
Provision for credit losses	**19,369**	**NA**	**19,369**	4,158	NA	4,158
Income before income tax expense	**20,342**	**2,449**	**22,791**	33,980	2,185	36,165
Income tax expense	**3,347**	**$ 2,449**	**5,796**	6,069	2,185	8,254
Net Income	**$ 16,995**	**NA**	**$ 16,995**	$ 27,911	NA	$ 27,911
Overhead ratio	**56 %**	**NM**	**55 %**	56 %	NM	55 %

(a) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.
(b) Predominantly recognized in CIB, CB and Corporate.

The following table provides information on net interest income and net yield excluding CIB Markets.

(in millions, except rates)	Three months ended September 30, 2020	Three months ended September 30, 2019	Change	Nine months ended September 30, 2020	Nine months ended September 30, 2019	Change
Net interest income – reported	**$ 13,013**	$ 14,228	(9)%	**$ 41,305**	$ 43,079	(4)%
Fully taxable-equivalent adjustments	**104**	127	(18)	**321**	408	(21)
Net interest income – managed basis[a]	**$ 13,117**	$ 14,355	(9)	**$ 41,626**	$ 43,487	(4)
Less: CIB Markets net interest income[b]	**2,076**	723	187	**6,208**	1,971	215
Net interest income excluding CIB Markets[a]	**$ 11,041**	$ 13,632	(19)	**$ 35,418**	$ 41,516	(15)
Average interest-earning assets[c]	**$ 2,874,974**	$ 2,364,951	22	**$ 2,720,636**	$ 2,334,406	17
Less: Average CIB Markets interest-earning assets[b][c]	**730,141**	690,390	6	**753,748**	671,019	12
Average interest-earning assets excluding CIB Markets	**$ 2,144,833**	$ 1,674,561	28%	**$ 1,966,888**	$ 1,663,387	18%
Net yield on average interest-earning assets – managed basis	**1.82 %**	2.41 %		**2.04 %**	2.49 %	
Net yield on average CIB Markets interest-earning assets[b]	**1.13**	0.42		**1.10**	0.39	
Net yield on average interest-earning assets excluding CIB Markets	**2.05 %**	3.23 %		**2.41 %**	3.34 %	

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
(b) Refer to page 36 for further information on CIB Markets.
(c) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.

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 Sep 30, 2020	Period-end Dec 31, 2019	Average Three months ended September 30, 2020	Average Three months ended September 30, 2019	Average Nine months ended September 30, 2020	Average Nine months ended September 30, 2019
Common stockholders' equity	**$ 241,050**	$ 234,337	**$ 236,797**	$ 235,613	**$ 235,251**	$ 232,917
Less: Goodwill	**47,819**	47,823	**47,820**	47,707	**47,812**	47,552
Less: Other intangible assets	**759**	819	**769**	842	**791**	776
Add: Certain deferred tax liabilities[a]	**2,405**	2,381	**2,401**	2,344	**2,393**	2,311
Tangible common equity	**$ 194,877**	$ 188,076	**$ 190,609**	$ 189,408	**$ 189,041**	$ 186,900
Return on tangible common equity	**NA**	NA	**19 %**	18 %	**11 %**	19 %
Tangible book value per share	**$ 63.93**	$ 60.98	**NA**	NA	**N/A**	N/A

(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.

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 22-23 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'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, the participating business segments may agree to share revenue from those transactions. Revenue and expense are 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.

Business segment capital allocation

The amount of capital assigned to each business is referred to as equity. Periodically, the assumptions and methodologies used to allocate capital are assessed and as a result, the capital allocated to the LOBs may change. Refer to Line of business equity on page 90 of JPMorgan Chase's 2019 Form 10-K for additional information on business segment capital allocation.

Refer to Business Segment Results – Description of business segment reporting methodology on pages 60–61 of JPMorgan Chase's 2019 Form 10-K for a further discussion of those methodologies.

Business segment changes

In the first quarter of 2020, the Firm began reporting a Wholesale Payments business unit within CIB following a realignment of the Firm's wholesale payments businesses. The Wholesale Payments business comprises:

- Merchant Services, which was realigned from CCB to CIB
- Treasury Services and Trade Finance in CIB. Trade Finance was previously reported in Lending in CIB.

In connection with the alignment of Wholesale Payments, the assets, liabilities and headcount associated with the Merchant Services business were realigned to CIB from CCB, and the revenue and expenses of the Merchant Services business are reported across CCB, CIB and CB based primarily on client relationships. Prior-period amounts have been revised to reflect this realignment and revised allocation methodology.

JPMorgan Chase						
Consumer Businesses			Wholesale Businesses			
Consumer & Community Banking			Corporate & Investment Bank		Commercial Banking	Asset & Wealth Management
Consumer & Business Banking	Home Lending	Card & Auto	Banking	Markets & Securities Services	• Middle Market Banking	• Asset Management
• Consumer Banking/Chase Wealth Management • Business Banking	• Home Lending Production • Home Lending Servicing • Real Estate Portfolios	• Credit Card • Auto	• Investment Banking • Wholesale Payments • Lending	• Fixed Income Markets • Equity Markets • Securities Services • Credit Adjustments & Other	• Corporate Client Banking • Commercial Real Estate Banking	• Wealth Management

Segment results – managed basis

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

Three months ended September 30,	Consumer & Community Banking[a]			Corporate & Investment Bank			Commercial Banking		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change	**2020**	2019	Change
Total net revenue	**$ 12,755**	$ 13,958	(9)%	**$ 11,503**	$ 9,522	21 %	**$ 2,285**	$ 2,274	– %
Total noninterest expense	**6,770**	7,025	(4)	**5,797**	5,504	5	**966**	940	3
Pre-provision profit/(loss)	**5,985**	6,933	(14)	**5,706**	4,018	42	**1,319**	1,334	(1)
Provision for credit losses	**794**	1,311	(39)	**(81)**	92	NM	**(147)**	67	NM
Net income/(loss)	**3,873**	4,245	(9)	**4,304**	2,831	52	**1,088**	943	15
Return on equity ("ROE")	**29 %**	31 %		**21 %**	13 %		**19 %**	16 %	

Three months ended September 30,	Asset & Wealth Management			Corporate			Total[a]		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change	**2020**	2019	Change
Total net revenue	**$ 3,737**	$ 3,568	5 %	**$ (339)**	$ 692	NM	**$ 29,941**	**$ 30,014**	– %
Total noninterest expense	**2,623**	2,622	–	**719**	281	156	**16,875**	**16,372**	3
Pre-provision profit/(loss)	**1,114**	946	18	**(1,058)**	411	NM	**13,066**	**13,642**	(4)
Provision for credit losses	**(51)**	44	NM	**96**	–	NM	**611**	**1,514**	(60)
Net income/(loss)	**877**	668	31	**(699)**	393	NM	**9,443**	**9,080**	4
ROE	**32 %**	24 %		**NM**	NM		**15 %**	15 %	

Nine months ended September 30,	Consumer & Community Banking[a]			Corporate & Investment Bank			Commercial Banking		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change	**2020**	2019	Change
Total net revenue	**$ 38,084**	$ 40,885	(7)%	**$ 37,803**	$ 29,387	29 %	**$ 6,855**	$ 6,972	(2)%
Total noninterest expense	**20,498**	20,784	(1)	**18,457**	16,794	10	**2,853**	2,809	2
Pre-provision profit/(loss)	**17,586**	20,101	(13)	**19,346**	12,593	54	**4,002**	4,163	(4)
Provision for credit losses	**12,394**	3,745	231	**3,307**	179	NM	**3,294**	186	NM
Net income/(loss)	**3,888**	12,349	(69)	**11,756**	9,037	30	**544**	3,005	(82)
ROE	**9 %**	31 %		**19 %**	14 %		**2 %**	17 %	

Nine months ended September 30,	Asset & Wealth Management			Corporate			Total[a]		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change	**2020**	2019	Change
Total net revenue	**$ 10,953**	$ 10,616	3 %	**$ (927)**	$ 1,439	NM	**$ 92,768**	**$ 89,299**	4 %
Total noninterest expense	**7,788**	7,865	(1)	**1,012**	724	40	**50,608**	**48,976**	3
Pre-provision profit/(loss)	**3,165**	2,751	15	**(1,939)**	715	NM	**42,160**	**40,323**	5
Provision for credit losses	**266**	48	454	**108**	–	NM	**19,369**	**4,158**	366
Net income/(loss)	**2,199**	2,048	7	**(1,392)**	1,472	NM	**16,995**	**27,911**	(39)
ROE	**27 %**	25 %		**NM**	NM		**9 %**	15 %	

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation.

(a) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. 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 and nine months ended September 30, 2020 versus the corresponding periods in the prior year, unless otherwise specified.

Consumer & Community Banking offers services to consumers and businesses through bank branches, ATMs, digital (including mobile and online) and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Home Lending (including Home Lending Production, Home Lending Servicing and Real Estate Portfolios) and Card & Auto. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Home Lending includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card & Auto issues credit cards to consumers and small businesses and originates and services auto loans and leases.

Refer to Line of Business Metrics on page 198 for a further discussion of the business profile of CCB.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change
Revenue						
Lending- and deposit-related fees[a]	**$ 771**	$ 1,026	(25)%	**$ 2,360**	$ 2,906	(19)%
Asset management, administration and commissions[a]	**596**	606	(2)	**1,717**	1,807	(5)
Mortgage fees and related income	**1,076**	886	21	**2,313**	1,561	48
Card income[b]	**890**	905	(2)	**2,332**	2,680	(13)
All other income	**1,425**	1,383	3	**4,111**	3,994	3
Noninterest revenue	**4,758**	4,806	(1)	**12,833**	12,948	(1)
Net interest income	**7,997**	9,152	(13)	**25,251**	27,937	(10)
Total net revenue	**12,755**	13,958	(9)	**38,084**	40,885	(7)
Provision for credit losses	**794**	1,311	(39)	**12,394**	3,745	231
Noninterest expense						
Compensation expense	**2,679**	2,544	5	**7,833**	7,641	3
Noncompensation expense[b][c]	**4,091**	4,481	(9)	**12,665**	13,143	(4)
Total noninterest expense	**6,770**	7,025	(4)	**20,498**	20,784	(1)
Income before income tax expense	**5,191**	5,622	(8)	**5,192**	16,356	(68)
Income tax expense	**1,318**	1,377	(4)	**1,304**	4,007	(67)
Net income	**$ 3,873**	$ 4,245	(9)	**$ 3,888**	$ 12,349	(69)
Revenue by line of business						
Consumer & Business Banking	**$ 5,557**	$ 6,782	(18)	**$ 16,755**	$ 20,340	(18)
Home Lending	**1,714**	1,465	17	**4,562**	3,929	16
Card & Auto[b]	**5,484**	5,711	(4)	**16,767**	16,616	1
Mortgage fees and related income details:						
Net production revenue	**765**	738	4	**1,826**	1,291	41
Net mortgage servicing revenue[d]	**311**	148	110	**487**	270	80
Mortgage fees and related income	**$ 1,076**	$ 886	21 %	**$ 2,313**	$ 1,561	48 %
Financial ratios						
Return on equity	**29 %**	31 %		**9 %**	31 %	
Overhead ratio	**53**	50		**54**	51	

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation.

(a) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.

(b) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.

(c) Included depreciation expense on leased assets of $1.0 billion for both of the three months ended September 30, 2020 and 2019, and $3.2 billion and $2.9 billion for nine months ended September 30, 2020 and 2019, respectively.

(d) Included MSR risk management results of $145 million and $53 million for the three months ended September 30, 2020 and 2019, respectively, and $134 million and $(200) million for nine months ended September 30, 2020 and 2019, respectively.

Quarterly results

Net income was $3.9 billion, a decrease of 9%.

Net revenue was $12.8 billion, a decrease of 9%.

Net interest income was $8.0 billion, down 13%, driven by:

- the impact of deposit margin compression in CBB and lower loans in Card due to the decline in sales volume as a result of the COVID-19 pandemic,

largely offset by

- growth in deposits in CBB, and loan margin expansion in Card; the prior year included a charge for the unwind of the internal funding from Treasury and CIO associated with the sale of certain mortgage loans.

Noninterest revenue was $4.8 billion, flat, reflecting:

- lower deposit-related fees due to lower transaction activity and the impact of fee refunds related to the COVID-19 pandemic, and
- lower card income due to lower net interchange income reflecting lower card sales volumes as a result of the COVID-19 pandemic, offset by lower acquisition costs and higher annual fees,

offset by

- higher net mortgage servicing revenue reflecting:
  - higher MSR risk management results driven by updates to model inputs, and
  - higher operating revenue reflecting the absence of losses in the prior year from reclassifying certain loans to held-for-sale, predominantly offset by lower revenue on a lower level of third-party loans serviced
- higher net mortgage production revenue reflecting higher production margins and volumes; the prior year included approximately $350 million of gains on the sale of certain mortgage loans.

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

Noninterest expense was $6.8 billion, down 4%, driven by lower marketing expense as a result of lower investments in marketing campaigns and travel-related benefits.

The provision for credit losses was $794 million, a decrease of $517 million from the prior year, driven by:

- a $300 million reduction in the allowance for credit losses in Home Lending due to paydowns, and
- lower net charge-offs in Card, which reflected lower charge-offs and higher recoveries, and benefited from the effect of payment assistance and government stimulus programs.

The prior year included a $50 million net addition in the allowance for credit losses.

Refer to Credit and Investment Risk Management on pages 60-79 and Allowance for Credit Losses on pages 77–78 for further discussions of the credit portfolios and the allowance for credit losses.

Year-to-date results

Net income was $3.9 billion, a decrease of 69%, predominantly driven by an increase in the provision for credit losses.

Net revenue was $38.1 billion, a decrease of 7%.

Net interest income was $25.3 billion, down 10%, driven by:

- the impact of deposit margin compression in CBB, and lower loans in Home Lending predominantly due to prior year loan sales,

partially offset by

- growth in deposits in CBB, and loan margin expansion in Card; the prior year included charges for the unwind of the internal funding from Treasury and CIO associated with the sales of certain mortgage loans.

Noninterest revenue was $12.8 billion, flat, reflecting:

- lower deposit-related fees due to lower transaction activity and the impact of fee refunds related to the COVID-19 pandemic, and
- lower card income due to lower net interchange income reflecting lower card sales volumes that began in March as a result of the COVID-19 pandemic, partially offset by higher annual fees and lower acquisition costs,

offset by

- higher net mortgage production revenue reflecting higher mortgage production volumes and margins; the prior year included gains on the sales of certain mortgage loans
- higher net mortgage servicing revenue driven by
  - higher MSR risk management results; the prior year included losses resulting from updates to model inputs,

  partially offset by
  - lower operating revenue reflecting a lower level of third-party loans serviced; the prior year included losses from reclassifying certain loans to held-for-sale
- higher auto lease volume.

Noninterest expense was $20.5 billion, down 1%, compared to the prior year, reflecting:

- lower marketing expense as a result of lower investments in marketing campaigns and travel-related benefits, and
- lower structural expenses, including lower payment processing costs,

largely offset by

- higher volume- and revenue-related expense, including depreciation on auto lease assets, and investments in the business.

The provision for credit losses was $12.4 billion, an increase of $8.6 billion from the prior year, driven by:

- additions to the allowance for credit losses as a result of the impact of the COVID-19 pandemic, consisting of: $6.6 billion for Card, $900 million for Home Lending, $649 million for CBB, and $560 million for Auto,

partially offset by

- lower net charge-offs largely in Card, which reflected higher recoveries, and in Home Lending, reflecting higher recoveries on a loan sale in the first quarter of 2020.

The prior year included a $150 million net reduction in the allowance for credit losses.

Selected metrics

(in millions, except headcount)	As of or for the three months ended September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Selected balance sheet data (period-end)						
Total assets	**$ 480,325**	$ 525,223	(9)%	**$ 480,325**	$ 525,223	(9)%
Loans:						
Consumer & Business Banking	**47,077** [e]	26,699	76	**47,077** [e]	26,699	76
Home Lending[a][b]	**188,561**	213,901	(12)	**188,561**	213,901	(12)
Card	**140,377**	159,571	(12)	**140,377**	159,571	(12)
Auto	**62,304**	61,410	1	**62,304**	61,410	1
Total loans	**438,319**	461,581	(5)	**438,319**	461,581	(5)
Deposits	**900,920**	701,111	28	**900,920**	701,111	28
Equity	**52,000**	52,000	–	**52,000**	52,000	–
Selected balance sheet data (average)						
Total assets	**$ 483,478**	$ 530,649	(9)	**$ 499,551**	$ 537,044	(7)
Loans:						
Consumer & Business Banking	**47,102**	26,550	77	**38,552**	26,537	45
Home Lending[a][c]	**192,172**	226,139	(15)	**200,980**	235,292	(15)
Card	**140,386**	158,168	(11)	**148,445**	154,375	(4)
Auto	**60,345**	61,371	(2)	**60,514**	62,118	(3)
Total loans	**440,005**	472,228	(7)	**448,491**	478,322	(6)
Deposits	**887,138**	693,943	28	**817,848**	688,663	19
Equity	**52,000**	52,000	–	**52,000**	52,000	–
Headcount[d]	**121,959**	123,532	(1)%	**121,959**	123,532	(1)%

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation, including a decrease to period-end assets and headcount of $7.3 billion and 4,155, respectively, as of September 30, 2019.

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(b) At September 30, 2020 and 2019, Home Lending loans held-for-sale and loans at fair value were $10.0 billion and $15.4 billion, respectively.
(c) Average Home Lending loans held-for sale and loans at fair value were $9.2 billion and $18.2 billion for the three months ended September 30, 2020 and 2019, respectively, and were $11.2 billion and $12.3 billion for the nine months ended September 30, 2020 and 2019, respectively.
(d) During the second and third quarter of 2020, certain technology and support functions, comprising approximately 850 and 800 staff, respectively, were transferred from AWM to CCB as part of the ongoing reorganization of the U.S. Wealth Management business.
(e) At September 30, 2020, included $20.3 billion of loans in Business Banking under the PPP. Refer to Credit Portfolio on pages 60-61 for a further discussion of the PPP.

Selected metrics

(in millions, except ratio data)	As of or for the three months ended September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Credit data and quality statistics						
Nonaccrual loans[a][b][c]	**$ 5,159** [f]	$ 3,109	66 %	**$ 5,159** [f]	$ 3,109	66 %
Net charge-offs/(recoveries)						
Consumer & Business Banking	**53**	79	(33)	**187**	204	(8)
Home Lending	**8**	(42)	NM	**(119)**	(75)	(59)
Card	**1,028**	1,175	(13)	**3,519**	3,617	(3)
Auto	**5**	49	(90)	**98**	149	(34)
Total net charge-offs/(recoveries)	**$ 1,094**	$ 1,261	(13)	**$ 3,685**	$ 3,895	(5)
Net charge-off/(recovery) rate						
Consumer & Business Banking	**0.45 %** [g]	1.18 %		**0.65 %** [g]	1.03 %	
Home Lending	**0.02**	(0.08)		**(0.08)**	(0.04)	
Card	**2.92**	2.95		**3.17**	3.13	
Auto	**0.03**	0.32		**0.22**	0.32	
Total net charge-off/(recovery) rate	**1.01 %**	1.10 %		**1.13**	1.12	
30+ day delinquency rate						
Home Lending[d][e]	**1.62 %** [h]	1.63 %		**1.62 %** [h]	1.63 %	
Card	**1.57** [h]	1.84		**1.57** [h]	1.84	
Auto	**0.54** [h]	0.88		**0.54** [h]	0.88	
90+ day delinquency rate — Card	**0.69 %** [h]	0.90 %		**0.69 %** [h]	0.90 %	
Allowance for loan losses						
Consumer & Business Banking	**$ 1,370**	$ 746	84	**$ 1,370**	$ 746	84
Home Lending	**2,685**	2,159	24	**2,685**	2,159	24
Card	**17,800**	5,583	219	**17,800**	5,583	219
Auto	**1,044**	465	125	**1,044**	465	125
Total allowance for loan losses	**$ 22,899**	$ 8,953	156 %	**$ 22,899**	$ 8,953	156 %

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. The adoption resulted in a change in the accounting for PCI loans, which are considered purchased credit deteriorated ("PCD") loans under CECL. Refer to Note 1 for further information.

(a) At September 30, 2020, nonaccrual loans included $1.5 billion of PCD loans. Prior to the adoption of CECL, nonaccrual loans excluded PCI loans as the Firm recognized interest income on each pool of PCI loans as each of the pools was performing.

(b) At September 30, 2020 and 2019, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $851 million and $1.6 billion, respectively. Prior-period amount has been revised to conform with the current presentation, refer to footnote (c) below for additional information. These amounts have been excluded based upon the government guarantee.

(c) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.

(d) At September 30, 2020, the 30+ day delinquency rates included PCD loans. The rate prior to January 1, 2020 was revised to include the impact of PCI loans.

(e) At September 30, 2020 and 2019, excluded mortgage loans insured by U.S. government agencies of $1.1 billion and $2.7 billion, respectively, that are 30 or more days past due. Prior-period amount has been revised to conform with the current presentation, refer to footnote (c) above for additional information. These amounts have been excluded based upon the government guarantee.

(f) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic. Refer to Consumer Credit Portfolio on pages 62-66 for further information on consumer payment assistance activity. Includes loans to customers that have exited COVID-19 payment deferral programs and are 90 or more days past due, predominantly all of which were considered collateral-dependent and charged down to the lower of amortized cost or fair value of the underlying collateral less costs to sell.

(g) At September 30, 2020, included $20.3 billion of loans in Business Banking under the PPP. Given that PPP loans are guaranteed by the SBA, the Firm does not expect to realize material credit losses on these loans. Refer to Credit Portfolio on pages 60-61 for a further discussion of the PPP.

(h) At September 30, 2020, the principal balance of loans in Home Lending, Card and Auto under payment deferral programs offered in response to the COVID-19 pandemic were $10.2 billion, $368 million and $411 million, respectively. Loans that are performing according to their modified terms are generally not considered delinquent. Refer to Consumer Credit Portfolio on pages 62-66 for further information on consumer payment assistance activity.

Selected metrics

(in billions, except ratios and where otherwise noted)	As of or for the three months ended September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Business Metrics						
Number of branches	**4,960**	4,949	– %	**4,960**	4,949	– %
Active digital customers (in thousands)[a]	**54,745**	51,843	6	**54,745**	51,843	6
Active mobile customers (in thousands)[b]	**40,143**	36,510	10	**40,143**	36,510	10
Debit and credit card sales volume	**$ 278.2**	$ 282.2	(1)	**$ 781.8**	$ 818.8	(5)
Consumer & Business Banking						
Average deposits	**$ 865.9**	$ 678.3	28	**$ 799.6**	$ 674.5	19
Deposit margin	**1.43 %**	2.47 %		**1.65 %**	2.56 %	
Business banking origination volume	**$ 1.4** [f]	$ 1.6	(13)	**$ 25.9** [f]	$ 4.8	443
Client investment assets	**376.1**	337.9	11	**376.1**	337.9	11
Home Lending						
Mortgage origination volume by channel						
Retail	**$ 20.7**	$ 14.2	46	**$ 52.8**	$ 34.6	53
Correspondent	**8.3**	18.2	(54)	**28.5**	37.3	(24)
Total mortgage origination volume[c]	**$ 29.0**	$ 32.4	(10)	**$ 81.3**	$ 71.9	13
Total loans serviced (period-end)	**$ 654.0**	$ 774.8	(16)	**$ 654.0**	$ 774.8	(16)
Third-party mortgage loans serviced (period-end)	**454.8**	535.8	(15)	**454.8**	535.8	(15)
MSR carrying value (period-end)	**3.0**	4.4	(32)	**3.0**	4.4	(32)
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**0.66 %**	0.82 %		**0.66 %**	0.82 %	
MSR revenue multiple[d]	**2.28 x**	2.41 x		**2.28 x**	2.34 x	
Credit Card						
Credit card sales volume, excluding Commercial Card	**$ 178.1**	$ 193.6	(8)	**$ 505.7**	$ 558.6	(9)
Net revenue rate[e]	**10.96 %**	10.40 %		**10.82 %**	10.42 %	
Auto						
Loan and lease origination volume	**$ 11.4**	$ 9.1	25	**$ 27.4**	$ 25.5	7
Average auto operating lease assets	**21.7**	21.8	– %	**22.4**	21.3	5 %

(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) Firmwide mortgage origination volume was $36.2 billion and $35.8 billion for the three months ended September 30, 2020 and 2019, respectively, and $96.4 billion and $78.5 billion for the nine months ended September 30, 2020 and 2019, respectively.
(d) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of annualized loan servicing-related revenue to third-party mortgage loans serviced (average).
(e) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.
(f) Included $396 million and $21.9 billion of origination volume under the PPP for the three and nine months ended September 30, 2020, respectively. Refer to Credit Portfolio on pages 60-61 for a further discussion of the PPP.

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

Refer to Line of Business Metrics on page 198 for a further discussion of the business profile of CIB.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change
Revenue						
Investment banking fees	**$ 2,165**	$ 1,981	9 %	**$ 6,919**	$ 5,671	22 %
Principal transactions	**3,990**	3,418	17	**14,578**	11,467	27
Lending- and deposit-related fees[(a)]	**546**	398	37	**1,496**	1,206	24
Asset management, administration and commissions[(a)]	**1,086**	1,160	(6)	**3,493**	3,339	5
All other income	**288**	397	(27)	**703**	1,167	(40)
Noninterest revenue	**8,075**	7,354	10	**27,189**	22,850	19
Net interest income	**3,428**	2,168	58	**10,614**	6,537	62
Total net revenue[(b)]	**11,503**	9,522	21	**37,803**	29,387	29
Provision for credit losses	**(81)**	92	NM	**3,307**	179	NM
Noninterest expense						
Compensation expense	**2,651**	2,873	(8)	**9,654**	8,803	10
Noncompensation expense	**3,146**	2,631	20	**8,803**	7,991	10
Total noninterest expense	**5,797**	5,504	5	**18,457**	16,794	10
Income before income tax expense	**5,787**	3,926	47	**16,039**	12,414	29
Income tax expense	**1,483**	1,095	35	**4,283**	3,377	27
Net income	**$ 4,304**	$ 2,831	52 %	**$ 11,756**	$ 9,037	30 %
Financial ratios						
Return on equity	**21 %**	13 %		**19 %**	14 %	
Overhead ratio	**50**	58		**49**	57	
Compensation expense as percentage of total net revenue	**23**	30		**26**	30	

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation.

(a) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.

(b) Includes tax-equivalent adjustments, predominantly due to income tax credits 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 $641 million and $527 million for the three months ended September 30, 2020 and 2019, respectively, and $2.0 billion and $1.6 billion for the nine months ended September 30, 2020 and 2019, respectively.

Selected income statement data

(in millions)	Three months ended September 30, 2020	2019	Change	Nine months ended September 30, 2020	2019	Change
Revenue by business						
Investment Banking	**$ 2,087**	$ 1,871	12 %	**$ 6,374**	$ 5,392	18 %
Wholesale Payments	**1,289**	1,361	(5)	**4,004**	4,178	(4)
Lending	**333**	253	32	**953**	771	24
Total Banking	**3,709**	3,485	6	**11,331**	10,341	10
Fixed Income Markets	**4,597**	3,557	29	**16,928**	10,972	54
Equity Markets	**1,999**	1,517	32	**6,616**	4,986	33
Securities Services	**1,029**	1,034	–	**3,200**	3,093	3
Credit Adjustments & Other[(a)]	**169**	(71)	NM	**(272)**	(5)	NM
Total Markets & Securities Services	**7,794**	6,037	29	**26,472**	19,046	39
Total net revenue	**$ 11,503**	$ 9,522	21 %	**$ 37,803**	$ 29,387	29 %

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation.

(a) Includes credit valuation adjustments ("CVA") managed centrally within CIB and funding valuation adjustments ("FVA") on derivatives 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.

Quarterly results

Net income was $4.3 billion, up 52%.

Net revenue was $11.5 billion, up 21%.

Banking revenue was $3.7 billion, up 6%.

- Investment Banking revenue was $2.1 billion, up 12%, predominantly driven by higher Investment Banking fees, up 9%, reflecting higher equity and debt underwriting fees, partially offset by lower advisory fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic.
  - Equity underwriting fees were $732 million, up 42%, primarily in the follow-on offerings and IPO markets due to increased industry-wide fees.
  - Debt underwriting fees were $1.0 billion, up 5%, driven by wallet share gains despite decreased industry-wide fees.
  - Advisory fees were $428 million, down 15%, driven by a lower number of completed transactions associated in part with the lower level of announced deal volumes in the first half of the year.
- Wholesale Payments revenue was $1.3 billion, down 5%, predominantly driven by deposit margin compression and a reporting reclassification for certain expenses which are now reported as a reduction of revenue in Merchant Services, largely offset by the impact of higher deposit balances.
- Lending revenue was $333 million, up 32%, predominantly driven by higher net interest income reflecting overall spread widening and higher loan balances.

Markets & Securities Services revenue was $7.8 billion, up 29%. Markets revenue was $6.6 billion, up 30%.

- Fixed Income Markets revenue was $4.6 billion, up 29%, driven by strong performance across products, primarily in Commodities, Credit, and Securitized Products.
- Equity Markets revenue was $2.0 billion, up 32%, driven by strong performance across products.
- Securities Services revenue was $1.0 billion, flat compared to the prior year, as deposit margin compression was offset by balance growth.
- Credit Adjustments & Other was a gain of $169 million, largely driven by funding and credit spread tightening on derivatives.

Noninterest expense was $5.8 billion, up 5%, predominantly driven by higher legal expense and volume-related expense, largely offset by lower revenue-related compensation expense and structural expense.

The provision for credit losses was a net benefit of $81 million, driven by a reduction in the allowance for credit losses across multiple sectors, compared with an expense of $92 million in the prior year.

Year-to-date results

Net income was $11.8 billion, up 30%.

Net revenue was $37.8 billion, up 29%.

Banking revenue was $11.3 billion, up 10%.

- Investment Banking revenue was $6.4 billion, up 18%, driven by higher Investment Banking fees, up 22%, reflecting higher equity and debt underwriting fees, partially offset by lower advisory fees. The Firm maintained its #1 ranking for Global Investment Banking fees, according to Dealogic.
  - Equity underwriting fees were $2.0 billion, up 59%, primarily in follow-on offerings and convertible securities markets due to increased industry-wide fees.
  - Debt underwriting fees were $3.3 billion, up 23%, driven by increased industry-wide fees and wallet share gains in investment-grade and high-yield bonds. The increased activity resulted in part from clients seeking liquidity in the first half of the year as a result of the COVID-19 pandemic.

- Advisory fees of $1.5 billion were down 8%, driven by a lower number of completed transactions.

- Wholesale payments revenue was $4.0 billion, down 4%, predominantly driven by a reporting reclassification for certain expenses which are now reported as a reduction of revenue in Merchant Services. In addition, the impact of deposit margin compression was predominantly offset by higher deposit balances.
- Lending revenue was $953 million, up 24%, predominantly driven by higher net interest income reflecting overall spread widening and higher loan balances.

Markets & Securities Services revenue was $26.5 billion, up 39%. Markets revenue was $23.5 billion, up 48%.

- Fixed Income Markets revenue was $16.9 billion, up 54%, driven by strong client activity across products primarily in Rates, Credit, Currencies & Emerging Markets, and Securitized Products.
- Equity Markets revenue was $6.6 billion, up 33%, driven by strong client activity across products.
- Securities Services revenue was $3.2 billion, up 3%, predominantly driven by deposit balance and fee growth largely offset by deposit margin compression.
- Credit Adjustments & Other was a net loss of $272 million, driven by losses on certain components of fair value option elected liabilities, as well as the impact of funding spread widening on derivatives.

Noninterest expense was $18.5 billion, up 10%, predominantly driven by higher revenue-related compensation expense and legal expense.

The provision for credit losses was $3.3 billion, compared with $179 million in the prior year. The increase was driven by net additions to the allowance for credit losses as a result of the impact of the COVID-19 pandemic across multiple industry sectors.

Refer to Credit and Investment Risk Management on pages 60-79 and Allowance for Credit Losses on pages 77–78 for further discussions of the credit portfolios and the allowance for credit losses.

Selected metrics

	As of or for the three months ended September 30,			As of or for the nine months ended September 30,		
(in millions, except headcount)	**2020**	2019	Change	**2020**	2019	Change
Selected balance sheet data (period-end)						
Assets	**$ 1,089,293**	$ 1,030,396	6 %	**$ 1,089,293**	$ 1,030,396	6 %
Loans:						
Loans retained[(a)]	**126,841**	118,290	7	**126,841**	118,290	7
Loans held-for-sale and loans at fair value[(b)]	**33,046**	32,563	1	**33,046**	32,563	1
Total loans	**159,887**	150,853	6	**159,887**	150,853	6
Equity	**80,000**	80,000	–	**80,000**	80,000	–
Selected balance sheet data (average)						
Assets	**$ 1,100,657**	$ 1,011,246	9	**$ 1,117,035**	$ 993,292	12
Trading assets-debt and equity instruments[(b)]	**425,789**	387,377	10	**415,453**	377,976	10
Trading assets-derivative receivables	**78,339**	48,266	62	**70,091**	49,221	42
Loans:						
Loans retained[(a)]	**$ 131,187**	$ 119,007	10	**$ 137,996**	$ 123,368	12
Loans held-for-sale and loans at fair value[(b)]	**30,205**	32,545	(7)	**32,974**	32,611	1
Total loans	**$ 161,392**	$ 151,552	6	**$ 170,970**	$ 155,979	10
Equity	**80,000**	80,000	–	**80,000**	80,000	–
Headcount	**61,830**	60,028	3 %	**61,830**	60,028	3 %

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation, including an increase to period-end assets and headcount of $7.3 billion and 4,155, respectively, as of September 30, 2019.

(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) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

Selected metrics

(in millions, except ratios)	As of or for the three months ended September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Credit data and quality statistics						
Net charge-offs/(recoveries)	**$ 23**	$ 38	(39)%	**$ 282**	$ 140	101 %
Nonperforming assets:						
Nonaccrual loans:						
Nonaccrual loans retained[a]	**$ 1,178**	$ 712	65 %	**$ 1,178**	$ 712	65
Nonaccrual loans held-for-sale and loans at fair value[b][c]	**2,111**	902	134	**2,111**	902	134
Total nonaccrual loans	**3,289**	1,614	104	**3,289**	1,614	104
Derivative receivables	**140**	26	438	**140**	26	438
Assets acquired in loan satisfactions	**88**	75	17	**88**	75	17
Total nonperforming assets	**$ 3,517**	$ 1,715	105	**$ 3,517**	$ 1,715	105
Allowance for credit losses:						
Allowance for loan losses	**$ 2,863**	$ 1,171	144	**$ 2,863**	$ 1,171	144
Allowance for lending-related commitments	**1,706**	824	107	**1,706**	824	107
Total allowance for credit losses	**$ 4,569**	$ 1,995	129 %	**$ 4,569**	$ 1,995	129 %
Net charge-off/(recovery) rate[d]	**0.07 %**	0.13 %		**0.27 %**	0.15 %	
Allowance for loan losses to period-end loans retained	**2.26**	0.99		**2.26**	0.99	
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[e]	**3.15**	1.33		**3.15**	1.33	
Allowance for loan losses to nonaccrual loans retained[a]	**243**	164		**243**	164	
Nonaccrual loans to total period-end loans[b]	**2.06 %**	1.07 %		**2.06 %**	1.07 %	

(a) Allowance for loan losses of $320 million and $207 million were held against these nonaccrual loans at September 30, 2020 and 2019, respectively.
(b) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(c) At September 30, 2020 and 2019, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $297 million and $116 million, respectively. These amounts have been excluded based upon the government guarantee.
(d) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(e) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Investment banking fees

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Change	Nine months ended September 30, 2020	Nine months ended September 30, 2019	Change
Advisory	**$ 428**	$ 506	(15)%	**$ 1,533**	$ 1,675	(8)%
Equity underwriting	**732**	514	42	**2,040**	1,284	59
Debt underwriting[a]	**1,005**	961	5	**3,346**	2,712	23
Total investment banking fees	**$ 2,165**	$ 1,981	9 %	**$ 6,919**	$ 5,671	22 %

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

League table results – wallet share

	Three months ended September 30, 2020		Three months ended September 30, 2019		Nine months ended September 30, 2020		Nine months ended September 30, 2019		Full-year 2019	
	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share
Based on fees[a]										
M&A[b]										
Global	**# 1**	**9.2 %**	# 2	8.0 %	**# 2**	**9.1 %**	# 2	8.8 %	# 2	9.0 %
U.S.	**1**	**11.4**	3	8.3	**2**	**9.4**	2	9.0	2	9.2
Equity and equity-related[c]										
Global	**3**	**7.7**	1	12.0	**2**	**9.5**	1	10.2	1	9.3
U.S.	**2**	**10.4**	1	17.5	**2**	**11.8**	1	13.6	2	13.2
Long-term debt[d]										
Global	**1**	**8.3**	1	8.7	**1**	**9.1**	1	7.9	1	7.8
U.S.	**1**	**11.6**	1	13.8	**1**	**12.6**	1	12.3	1	12.0
Loan syndications										
Global	**1**	**13.5**	1	9.7	**1**	**11.3**	1	10.6	1	10.1
U.S.	**1**	**18.3**	1	12.0	**1**	**12.8**	1	12.9	1	12.5
Global investment banking fees[e]	**# 1**	**8.7 %**	# 1	9.2 %	**# 1**	**9.4 %**	# 1	9.1 %	# 1	8.9 %

(a) Source: Dealogic as of October 1, 2020. 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, 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 deals.

Markets revenue

The following table summarizes select income statement data for the Markets businesses. Markets includes both Fixed Income Markets and Equity Markets. Markets revenue comprises 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 recorded in principal transactions revenue. Refer to Notes 6 and 7 for a description of the composition of these income statement line items. Refer to Markets revenue on page 69 of JPMorgan Chase's 2019 Form 10-K for further information.

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

	Three months ended September 30,			Three months ended September 30,		
	2020			2019		
(in millions)	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	**$ 2,411**	**$ 1,402**	**$ 3,813**	$ 2,292	$ 1,263	$ 3,555
Lending- and deposit-related fees	**62**	**3**	**65**	51	1	52
Asset management, administration and commissions	**100**	**437**	**537**	110	472	582
All other income	**138**	**(33)**	**105**	108	54	162
Noninterest revenue	**2,711**	**1,809**	**4,520**	2,561	1,790	4,351
Net interest income	**1,886**	**190**	**2,076**	996	(273)	723
Total net revenue	**$ 4,597**	**$ 1,999**	**$ 6,596**	$ 3,557	$ 1,517	$ 5,074

	Nine months ended September 30,			Nine months ended September 30,		
	2020			2019		
(in millions)	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	**$ 10,205**	**$ 4,862**	**$ 15,067**	$ 7,205	$ 4,428	$ 11,633
Lending- and deposit-related fees	**157**	**7**	**164**	149	5	154
Asset management, administration and commissions	**304**	**1,542**	**1,846**	310	1,359	1,669
All other income	**315**	**(56)**	**259**	500	31	531
Noninterest revenue	**10,981**	**6,355**	**17,336**	8,164	5,823	13,987
Net interest income	**5,947**	**261**	**6,208**	2,808	(837)	1,971
Total net revenue	**$ 16,928**	**$ 6,616**	**$ 23,544**	$ 10,972	$ 4,986	$ 15,958

CIB Markets had no loss days in the third quarter of 2020 and three loss days for the nine months ended September 30, 2020. Loss days represent the number of days for which CIB Markets, which consists of Fixed Income Markets and Equity Markets, posted losses to total net revenue. The loss days determined under this measure differ from the measure used to determine backtesting gains and losses. Daily backtesting gains and losses include positions in the Firm's Risk Management value-at-risk ("VaR") measure and exclude select components of total net revenue, which may more than offset backtesting gains or losses on a particular day. For more information on daily backtesting gains and losses, refer to the VaR discussion on pages 80–82.

Selected metrics

	As of or for the three months ended September 30,			As of or for the nine months ended September 30,		
(in millions, except where otherwise noted)	**2020**	2019	Change	**2020**	2019	Change
Assets under custody ("AUC") by asset class (period-end) (in billions):						
Fixed Income	**$ 15,360**	$ 13,349	15 %	**$ 15,360**	$ 13,349	15 %
Equity	**9,914**	9,301	7	**9,914**	9,301	7
Other[(a)]	**3,354**	3,045	10	**3,354**	3,045	10
Total AUC	**$ 28,628**	$ 25,695	11	**$ 28,628**	$ 25,695	11
Merchant processing volume (in billions)[(b)]	**$ 406.1**	$ 380.5	7	**$ 1,152.8**	$ 1,108.6	4
Client deposits and other third-party liabilities (average)[(c)]	**$ 634,961**	$ 471,328	35 %	**$ 585,955**	$ 457,973	28 %

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation.

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Represents total merchant processing volume across CIB, CCB and CB.
(c) Client deposits and other third-party liabilities pertain to the Wholesale Payments and Securities Services businesses.

International metrics

(in millions, except where otherwise noted)	As of or for the three months ended September 30, 2020	2019[c]	Change	As of or for the nine months ended September 30, 2020	2019[c]	Change
Total net revenue[a]						
Europe/Middle East/Africa	**$ 3,126**	$ 2,873	9 %	**$ 10,692**	$ 8,951	19 %
Asia-Pacific	**1,909**	1,389	37	**5,881**	4,072	44
Latin America/Caribbean	**423**	399	6	**1,517**	1,184	28
Total international net revenue	**5,458**	4,661	17	**18,090**	14,207	27
North America	**6,045**	4,861	24	**19,713**	15,180	30
Total net revenue	**$ 11,503**	$ 9,522	21	**$ 37,803**	$ 29,387	29
Loans retained (period-end)[a]						
Europe/Middle East/Africa	**$ 26,945**	$ 27,234	(1)	**$ 26,945**	$ 27,234	(1)
Asia-Pacific	**12,734**	14,402	(12)	**12,734**	14,402	(12)
Latin America/Caribbean	**6,306**	5,782	9	**6,306**	5,782	9
Total international loans	**45,985**	47,418	(3)	**45,985**	47,418	(3)
North America	**80,856**	70,872	14	**80,856**	70,872	14
Total loans retained	**$ 126,841**	$ 118,290	7	**$ 126,841**	$ 118,290	7
Client deposits and other third-party liabilities (average)[b]						
Europe/Middle East/Africa	**$ 212,635**	$ 175,354	21	**$ 206,629**	$ 171,601	20
Asia-Pacific	**128,519**	91,556	40	**119,417**	87,868	36
Latin America/Caribbean	**39,674**	30,164	32	**35,638**	28,845	24
Total international	**$ 380,828**	$ 297,074	28	**$ 361,684**	$ 288,314	25
North America	**254,133**	174,254	46	**224,271**	169,659	32
Total client deposits and other third-party liabilities	**$ 634,961**	$ 471,328	35	**$ 585,955**	$ 457,973	28
AUC (period-end)[b] (in billions)						
North America	**$ 18,534**	$ 16,146	15	**$ 18,534**	$ 16,146	15
All other regions	**10,094**	9,549	6	**10,094**	9,549	6
Total AUC	**$ 28,628**	$ 25,695	11 %	**$ 28,628**	$ 25,695	11 %

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. Prior-period amounts have been revised to conform with the current presentation.

(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 Wholesale Payments and Securities Services businesses, and AUC, are based on the domicile of the client.

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

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

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

Corporate Client Banking covers large corporations.

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

Refer to Line of Business Metrics on page 199 for a discussion of the business profile of CB.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions)	**2020**	2019	Change	**2020**	2019	Change
Revenue						
Lending- and deposit-related fees[(a)]	**$ 304**	$ 228	33 %	**$ 862**	$ 685	26 %
All other income[(a)]	**457**	438	4	**1,335**	1,337	–
Noninterest revenue	**761**	666	14	**2,197**	2,022	9
Net interest income	**1,524**	1,608	(5)	**4,658**	4,950	(6)
Total net revenue[(b)]	**2,285**	2,274	–	**6,855**	6,972	(2)
Provision for credit losses	**(147)**	67	NM	**3,294**	186	NM
Noninterest expense						
Compensation expense	**492**	454	8	**1,394**	1,341	4
Noncompensation expense	**474**	486	(2)	**1,459**	1,468	(1)
Total noninterest expense	**966**	940	3	**2,853**	2,809	2
Income/(loss) before income tax expense/(benefit)	**1,466**	1,267	16	**708**	3,977	(82)
Income tax expense/(benefit)	**378**	324	17	**164**	972	(83)
Net income/(loss)	**$ 1,088**	$ 943	15 %	**$ 544**	$ 3,005	(82)%

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB and the revenue and expense of the business is reported across CCB, CIB and CB based primarily on client relationship. In conjunction with this realignment, treasury services product revenue has been renamed wholesale payments. Prior-period revenue and expense amounts have been revised to conform with the current presentation.

(a) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions (which are included in all other income) to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.

(b) 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 $114 million for the three months ended September 30, 2020 and 2019, respectively, and $243 million and $308 million for the nine months ended September 30, 2020 and 2019, respectively.

Quarterly results

Net income was $1.1 billion, up 15%.

Net revenue was $2.3 billion, flat compared to the prior year. Net interest income was $1.5 billion, down 5%, driven by deposit margin compression, predominantly offset by higher deposit balances and lending revenue. Noninterest revenue was $761 million, up 14%, driven by higher deposit related fees and investment banking income.

Noninterest expense was $966 million, up 3%, driven by higher compensation expense.

The provision for credit losses was a net benefit of $147 million, driven by net reductions in the allowance for credit losses across multiple sectors, compared with an expense of $67 million in the prior year.

Year-to-date results

Net income was $544 million, down 82%, driven by an increase in the provision for credit losses.

Net revenue was $6.9 billion, down 2%. Net interest income was $4.7 billion, down 6%, driven by deposit margin compression, largely offset by higher deposit balances and lending revenue. Noninterest revenue was $2.2 billion, up 9%, driven by higher deposit related fees and a gain on a strategic investment. The increase was partially offset by lower card income primarily due to lower volumes as a result of the COVID-19 pandemic and a $57 million markdown of a held-for-sale position.

Noninterest expense was $2.9 billion, up 2%, driven by higher compensation expense.

The provision for credit losses was $3.3 billion, compared with $186 million in the prior year. The increase was driven by net additions to the allowance for credit losses as a result of the impact of the COVID-19 pandemic across multiple industry sectors.

Refer to Credit and Investment Risk Management on pages 60-79 and Allowance for Credit Losses on pages 77–78 for further discussions of the credit portfolios and the allowance for credit losses.

CB product revenue consists of the following:

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

Wholesale payments includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

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

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activities and certain income derived from principal transactions.

Selected income statement data (continued)

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except ratios)	**2020**	2019	Change	**2020**	2019	Change
Revenue by product						
Lending	**$ 1,138**	$ 1,006	13 %	**$ 3,219**	$ 3,030	6 %
Wholesale payments	**867**	1,017	(15)	**2,775**	3,184	(13)
Investment banking[(a)]	**260**	226	15	**751**	708	6
Other	**20**	25	(20)	**110**	50	120
Total Commercial Banking net revenue	**$ 2,285**	$ 2,274	–	**$ 6,855**	$ 6,972	(2)
Investment banking revenue, gross[(b)]	**$ 840**	$ 700	20	**$ 2,377**	$ 2,110	13
Revenue by client segments						
Middle Market Banking	**$ 877**	$ 925	(5)	**$ 2,689**	$ 2,860	(6)
Corporate Client Banking	**807**	767	5	**2,347**	2,362	(1)
Commercial Real Estate Banking	**576**	547	5	**1,683**	1,632	3
Other	**25**	35	(29)	**136**	118	15
Total Commercial Banking net revenue	**$ 2,285**	$ 2,274	– %	**$ 6,855**	$ 6,972	(2)%
Financial ratios						
Return on equity	**19 %**	16 %		**2 %**	17 %	
Overhead ratio	**42**	41		**42**	40	

In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB and the revenue and expense of the business is reported across CCB, CIB and CB based primarily on client relationship. In conjunction with this realignment, treasury services product revenue has been renamed wholesale payments. Prior-period revenue and expense amounts have been revised to conform with the current presentation.

(a) Includes CB's share of revenue from investment banking products sold to CB clients through the CIB.
(b) Refer to Business Segment Results on page 24 for discussion of revenue sharing.

Selected metrics

(in millions, except headcount)	As of or for the three months ended September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Selected balance sheet data (period-end)						
Total assets	**$ 228,587**	$ 222,483	3 %	**$ 228,587**	$ 222,483	3 %
Loans:						
Loans retained	**214,352**	209,448	2	**214,352**	209,448	2
Loans held-for-sale and loans at fair value	**349**	3,187	(89)	**349**	3,187	(89)
Total loans	**$ 214,701**	$ 212,635	1	**$ 214,701**	$ 212,635	1
Equity	**22,000**	22,000	–	**22,000**	22,000	–
Period-end loans by client segment						
Middle Market Banking	**$ 61,812** [(a)]	$ 54,298	14	**$ 61,812** [(a)]	$ 54,298	14
Corporate Client Banking	**49,857**	55,976	(11)	**49,857**	55,976	(11)
Commercial Real Estate Banking	**102,484**	101,326	1	**102,484**	101,326	1
Other	**548**	1,035	(47)	**548**	1,035	(47)
Total Commercial Banking loans	**$ 214,701** [(a)]	$ 212,635	1	**$ 214,701** [(a)]	$ 212,635	1
Selected balance sheet data (average)						
Total assets	**$ 231,691**	$ 218,620	6	**$ 235,079**	$ 218,560	8
Loans:						
Loans retained	**217,498**	207,286	5	**220,167**	206,183	7
Loans held-for-sale and loans at fair value	**629**	963	(35)	**986**	1,097	(10)
Total loans	**$ 218,127**	$ 208,249	5	**$ 221,153**	$ 207,280	7
Average loans by client segment						
Middle Market Banking	**$ 63,029**	$ 54,806	15	**$ 61,789**	$ 56,221	10
Corporate Client Banking	**51,608**	51,389	–	**55,967**	49,407	13
Commercial Real Estate Banking	**102,905**	101,044	2	**102,650**	100,663	2
Other	**585**	1,010	(42)	**747**	989	(24)
Total Commercial Banking loans	**$ 218,127**	$ 208,249	5	**$ 221,153**	$ 207,280	7
Client deposits and other third-party liabilities	**$ 248,289**	$ 172,714	44	**$ 224,774**	$ 169,427	33
Equity	**22,000**	22,000	–	**22,000**	22,000	–
Headcount	**11,704**	11,501	2 %	**11,704**	11,501	2 %

(a) At September 30, 2020, total loans included $6.6 billion of loans under the PPP, of which $6.4 billion were in Middle Market Banking. Refer to Credit Portfolio on pages 60-61 for a further discussion of the PPP.

Selected metrics (continued)

(in millions, except ratios)	As of or for the three months ended September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Credit data and quality statistics						
Net charge-offs/(recoveries)	**$ 60**	$ 45	33 %	**$ 239**	$ 71	237 %
Nonperforming assets						
Nonaccrual loans:						
Nonaccrual loans retained[(a)]	**$ 1,468**	$ 659	123 %	**$ 1,468**	$ 659	123 %
Nonaccrual loans held-for-sale and loans at fair value	**85**	–	NM	**85**	–	NM
Total nonaccrual loans	**$ 1,553**	$ 659	136	**$ 1,553**	$ 659	136
Assets acquired in loan satisfactions	**24**	19	26	**24**	19	26
Total nonperforming assets	**$ 1,577**	$ 678	133	**$ 1,577**	$ 678	133
Allowance for credit losses:						
Allowance for loan losses	**$ 4,466**	$ 2,759	62	**$ 4,466**	$ 2,759	62
Allowance for lending-related commitments	**864**	293	195	**864**	293	195
Total allowance for credit losses	**$ 5,330**	$ 3,052	75 %	**$ 5,330**	$ 3,052	75 %
Net charge-off/(recovery) rate[(b)]	**0.11 %**	0.09 %		**0.15 %**	0.05 %	
Allowance for loan losses to period-end loans retained	**2.08**	1.32		**2.08**	1.32	
Allowance for loan losses to nonaccrual loans retained[(a)]	**304**	419		**304**	419	
Nonaccrual loans to period-end total loans	**0.72**	0.31		**0.72**	0.31	

(a) Allowance for loan losses of $367 million and $119 million was held against nonaccrual loans retained at September 30, 2020 and 2019, 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 74–76 of JPMorgan Chase's 2019 Form 10-K and Line of Business Metrics on pages 199-200 for a discussion of the business profile of AWM.

Selected income statement data

(in millions, except ratios)	Three months ended September 30, 2020	2019	Change	Nine months ended September 30, 2020	2019	Change
Revenue						
Asset management, administration and commissions	**$ 2,753**	$ 2,574	7 %	**$ 8,048**	$ 7,558	6 %
All other income	**134**	139	(4)	**268**	431	(38)
Noninterest revenue	**2,887**	2,713	6	**8,316**	7,989	4
Net interest income	**850**	855	(1)	**2,637**	2,627	–
Total net revenue	**3,737**	3,568	5	**10,953**	10,616	3
Provision for credit losses	**(51)**	44	NM	**266**	48	454
Noninterest expense						
Compensation expense	**1,357**	1,391	(2)	**4,083**	4,259	(4)
Noncompensation expense	**1,266**	1,231	3	**3,705**	3,606	3
Total noninterest expense	**2,623**	2,622	–	**7,788**	7,865	(1)
Income before income tax expense	**1,165**	902	29	**2,899**	2,703	7
Income tax expense	**288**	234	23	**700**	655	7
Net income	**$ 877**	$ 668	31	**$ 2,199**	$ 2,048	7
Revenue by line of business						
Asset Management	**$ 1,924**	$ 1,816	6	**$ 5,444**	$ 5,362	2
Wealth Management	**1,813**	1,752	3	**5,509**	5,254	5
Total net revenue	**$ 3,737**	$ 3,568	5 %	**$ 10,953**	$ 10,616	3 %
Financial ratios						
Return on equity	**32 %**	24 %		**27 %**	25 %	
Overhead ratio	**70**	73		**71**	74	
Pre-tax margin ratio:						
Asset Management	**30**	25		**27**	25	
Wealth Management	**33**	25		**26**	26	
Asset & Wealth Management	**31**	25		**26**	25	

Quarterly results

Net income was $877 million, up 31%.

Net revenue was $3.7 billion, up 5%. Net interest income of $850 million was relatively flat, as deposit margin compression was predominantly offset by growth in average deposit and loan balances. Noninterest revenue was $2.9 billion, up 6%, predominantly driven by higher asset management fees due to strong cumulative net inflows into liquidity and long-term products and increased brokerage commissions on higher client-driven volume.

Revenue from Asset Management was $1.9 billion, up 6%, predominantly driven by asset management fees due to strong cumulative net inflows into liquidity products.

Revenue from Wealth Management was $1.8 billion, up 3%, predominantly driven by higher deposit and loan balances, increased brokerage commissions on higher client-driven volume, and higher asset management fees due to cumulative net inflows across all products, largely offset by deposit margin compression.

Noninterest expense of $2.6 billion was flat.

The provision for credit losses was a benefit of $51 million, driven by a reduction in the allowance for credit losses.

Refer to Credit and Investment Risk Management on pages 60-79 and Allowance for Credit Losses on pages 77–78 for further discussions of the credit portfolios and the allowance for credit losses.

Year-to-date results

Net income was $2.2 billion, an increase of 7%.

Net revenue was $11.0 billion, an increase of 3%. Net interest income of $2.6 billion, was flat reflecting higher deposit and loan balances, offset by deposit margin compression. Noninterest revenue was $8.3 billion, up 4%, predominantly driven by higher asset management fees as a result of cumulative net inflows into liquidity and long-term products as well as increased brokerage commissions on higher client-driven volume, partially offset by net valuation losses on certain investments, compared with gains in the prior year.

Revenue from Asset Management was $5.4 billion, up 2%, driven by higher asset management fees as a result of cumulative net inflows into liquidity products, largely offset by lower investment valuation gains.

Revenue from Wealth Management was $5.5 billion, up 5%, predominantly driven by higher deposit and loan balances as well as increased brokerage commissions on higher client-driven volume and higher asset management fees, largely offset by deposit margin compression.

Noninterest expense was $7.8 billion, a decrease of 1%, driven by lower structural expense, predominantly offset by higher investments, legal expense and volume- and revenue-related expense.

The provision for credit losses was $266 million, driven by additions to the allowance for credit losses predominantly as a result of the impact of the COVID-19 pandemic.

Selected metrics

	As of or for the three months ended September 30,			As of or for the nine months ended September 30,		
(in millions, except ranking data, headcount and ratios)	**2020**	2019	Change	**2020**	2019	Change
% of JPM mutual fund assets rated as 4- or 5-star[a]	**54 %**	65 %		**54 %**	65 %	
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[b]						
1 year	**50**	74		**50**	74	
3 years	**68**	80		**68**	80	
5 years	**68**	86		**68**	86	
Selected balance sheet data (period-end)[c]						
Total assets	**$ 194,596**	$ 174,226	12 %	**$ 194,596**	$ 174,226	12 %
Loans	**175,264**	153,245	14	**175,264**	153,245	14
Deposits	**174,327**	138,439	26	**174,327**	138,439	26
Equity	**10,500**	10,500	–	**10,500**	10,500	–
Selected balance sheet data (average)[c]						
Total assets	**$ 188,466**	$ 171,121	10	**$ 184,714**	$ 168,688	10
Loans	**170,139**	150,486	13	**165,152**	147,481	12
Deposits	**170,986**	138,822	23	**163,424**	139,127	17
Equity	**10,500**	10,500	–	**10,500**	10,500	–
Headcount[d]	**22,004**	24,228	(9)	**22,004**	24,228	(9)
Number of Wealth Management client advisors	**2,968**	2,872	3	**2,968**	2,872	3
Credit data and quality statistics[c]						
Net charge-offs/(recoveries)	**$ 2**	$ 26	(92)	**$ 2**	$ 27	(93)
Nonaccrual loans	**959**	176	445	**959**	176	445
Allowance for credit losses:						
Allowance for loan losses	**$ 582**	$ 350	66	**$ 582**	$ 350	66
Allowance for lending-related commitments	**41**	16	156	**41**	16	156
Total allowance for credit losses	**$ 623**	$ 366	70 %	**$ 623**	$ 366	70 %
Net charge-off rate	**– %**	0.07 %		**– %**	0.02 %	
Allowance for loan losses to period-end loans	**0.33**	0.23		**0.33**	0.23	
Allowance for loan losses to nonaccrual loans	**61**	199		**61**	199	
Nonaccrual loans to period-end loans	**0.55**	0.11		**0.55**	0.11	

(a) Represents the Nomura "star rating" for Japan domiciled funds and Morningstar for all other domiciled funds. 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 Lipper, Morningstar, Nomura and Fund Doctor 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 Wealth Management business.
(d) During the second and third quarter of 2020, certain technology and support functions, comprising approximately 850 and 800 staff, respectively, were transferred from AWM to CCB as part of the ongoing reorganization of the U.S. Wealth Management business.

Client assets

Client assets of $3.5 trillion and assets under management of $2.6 trillion were up 15% and 16%, respectively, driven by cumulative net inflows into liquidity and long term products as well as higher market levels.

Client assets

(in billions)	As of September 30, 2020	2019	Change
Assets by asset class			
Liquidity	**$ 674**	$ 505	33 %
Fixed income	**663**	590	12
Equity	**509**	437	16
Multi-asset and alternatives	**749**	714	5
Total assets under management	**2,595**	2,246	16
Custody/brokerage/administration/deposits	**917**	815	13
Total client assets	**$ 3,512**	$ 3,061	15
Memo:			
Alternatives client assets [(a)]	**$ 195**	$ 183	7
Assets by client segment			
Private Banking	**$ 698**	$ 636	10
Institutional	**1,233**	1,029	20
Retail	**664**	581	14
Total assets under management	**$ 2,595**	$ 2,246	16
Private Banking	**$ 1,577**	$ 1,424	11
Institutional	**1,266**	1,051	20
Retail	**669**	586	14
Total client assets	**$ 3,512**	$ 3,061	15 %

(a) Represents assets under management, as well as client balances in brokerage accounts

Client assets (continued)

(in billions)	Three months ended September 30, 2020	2019	Nine months ended September 30, 2020	2019
Assets under management rollforward				
Beginning balance	**$ 2,511**	$ 2,178	**$ 2,364**	$ 1,987
Net asset flows:				
Liquidity	**(33)**	24	**137**	23
Fixed income	**24**	41	**42**	97
Equity	**9**	(2)	**19**	(9)
Multi-asset and alternatives	**1**	1	**–**	(2)
Market/performance/other impacts	**83**	4	**33**	150
Ending balance, September 30	**$ 2,595**	$ 2,246	**$ 2,595**	$ 2,246
Client assets rollforward				
Beginning balance	**$ 3,370**	$ 2,998	**$ 3,226**	$ 2,733
Net asset flows	**17**	59	**240**	120
Market/performance/other impacts	**125**	4	**46**	208
Ending balance, September 30	**$ 3,512**	$ 3,061	**$ 3,512**	$ 3,061

International metrics

(in millions)	Three months ended September 30, 2020	2019	Change	Nine months ended September 30, 2020	2019	Change
Total net revenue [(a)]						
Europe/Middle East/Africa	**$ 755**	$ 704	7 %	**$ 2,097**	$ 2,113	(1)%
Asia-Pacific	**413**	382	8	**1,191**	1,122	6
Latin America/Caribbean	**199**	180	11	**585**	541	8
Total international net revenue	**1,367**	1,266	8	**3,873**	3,776	3
North America	**2,370**	2,302	3	**7,080**	6,840	4
Total net revenue[(a)]	**$ 3,737**	$ 3,568	5 %	**$ 10,953**	$ 10,616	3 %

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

(in billions)	As of September 30, 2020	2019	Change	As of September 30, 2020	2019	Change
Assets under management						
Europe/Middle East/Africa	**$ 481**	$ 398	21 %	**$ 481**	$ 398	21 %
Asia-Pacific	**203**	184	10	**203**	184	10
Latin America/Caribbean	**67**	58	16	**67**	58	16
Total international assets under management	**751**	640	17	**751**	640	17
North America	**1,844**	1,606	15	**1,844**	1,606	15
Total assets under management	**$ 2,595**	$ 2,246	16	**$ 2,595**	$ 2,246	16
Client assets						
Europe/Middle East/Africa	**$ 578**	$ 484	19	**$ 578**	$ 484	19
Asia-Pacific	**295**	258	14	**295**	258	14
Latin America/Caribbean	**153**	138	11	**153**	138	11
Total international client assets	**1,026**	880	17	**1,026**	880	17
North America	**2,486**	2,181	14	**2,486**	2,181	14
Total client assets	**$ 3,512**	$ 3,061	15 %	**$ 3,512**	$ 3,061	15 %

CORPORATE

Refer to pages 77–78 of JPMorgan Chase's 2019 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 September 30, 2020	2019	Change	As of or for the nine months ended September 30, 2020	2019	Change
Revenue						
Principal transactions	**$ 87**	$ 10	NM	**$ (28)**	$ (227)	88 %
Investment securities gains	**466**	78	497 %	**725**	135	437 %
All other income	**(210)**	32	NM	**(90)**	95	NM
Noninterest revenue	**343**	120	186 %	**607**	3	NM
Net interest income	**(682)**	572	NM	**(1,534)**	1,436	NM
Total net revenue[(a)]	**(339)**	692	NM	**(927)**	1,439	NM
Provision for credit losses	**96**	–	NM	**108**	–	NM
Noninterest expense[(b)]	**719**	281	156 %	**1,012**	724	40
Income/(loss) before income tax expense/(benefit)	**(1,154)**	411	NM	**(2,047)**	715	NM
Income tax expense/(benefit)	**(455)**	18	NM	**(655)**	(757)	13 %
Net income/(loss)	**$ (699)**	$ 393	NM	**$ (1,392)**	$ 1,472	NM
Total net revenue						
Treasury and CIO	**$ (243)**	$ 801	NM	**$ (745)**	$ 1,930	NM
Other Corporate	**(96)**	(109)	12	**(182)**	(491)	63
Total net revenue	**$ (339)**	$ 692	NM	**$ (927)**	$ 1,439	NM
Net income/(loss)						
Treasury and CIO	**$ (349)**	$ 576	NM	**$ (816)**	$ 1,372	NM
Other Corporate	**(350)**	(183)	(91)	**(576)**	100	NM
Total net income/(loss)	**$ (699)**	$ 393	NM	**$ (1,392)**	$ 1,472	NM
Total assets (period-end)	**$ 1,253,275**	$ 812,333	54	**$ 1,253,275**	$ 812,333	54
Loans (period-end)	**1,569**	1,705	(8)	**1,569**	1,705	(8)
Headcount	**38,861**	38,155	2 %	**38,861**	38,155	2 %

(a) Included tax-equivalent adjustments, driven by tax-exempt income from municipal bonds, of $62 million and $74 million for the three months ended September 30, 2020 and 2019, respectively, and $186 million and $241 million for the nine months ended September 30, 2020 and 2019, respectively.
(b) Included a net legal benefit of $(6) million and $(32) million for the three months ended September 30, 2020 and 2019, respectively, and $(38) million and $(189) million for the nine months ended September 30, 2020 and 2019, respectively.

Quarterly results

Net loss was $699 million compared with net income of $393 million in the prior year.

Net revenue was a loss of $339 million, down $1.0 billion, driven by lower net interest income, largely on lower rates, including the impact of faster prepayments on mortgage-backed securities. The prior year included income related to the unwind of the internal funding provided to CCB upon the sale of certain mortgage loans.

Noninterest revenue increased, reflecting:

- higher investment securities gains due to the repositioning of the investment securities portfolio, including sales of U.S. GSE and government agency mortgage-backed securities, and
- net gains on certain legacy private equity investments,

largely offset by

- net losses related to derivatives in Other Corporate, as well as the costs of hedging certain non-U.S. dollar-denominated net investment exposures in Treasury and CIO, and
- losses related to the early termination of certain of the Firm's long-term debt in Treasury and CIO.

Noninterest expense of $719 million was up $438 million predominantly driven by an impairment on a legacy investment.

The provision for credit losses was predominantly driven by the transfer of certain securities from AFS to HTM.

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

The current period income tax benefit was driven by the change in the level and mix of income and expenses subject to U.S. federal, and state and local taxes as well as the impact of the Firm's estimated full-year expected tax rate relative to the level of year-to-date pretax income. The prior period included tax benefits related to the resolution of certain tax audits.

Year-to-date results

Net loss was $1.4 billion compared with net income of $1.5 billion in the prior year.

Net revenue was a loss of $927 million, compared with income of $1.4 billion in the prior year driven by lower net interest income on lower rates. The prior year included income related to the unwind of the internal funding provided to CCB upon the sale of certain mortgage loans.

Noninterest revenue increased primarily due to

- higher net investment securities gains due to the repositioning of the investment securities portfolio, including sales of U.S. GSE and government agency mortgage-backed securities in the first and third quarters of 2020, and
- net gains on certain legacy private equity investments, compared with net losses in the prior year,

largely offset by

- net losses related to derivatives in Other Corporate, as well as the costs of hedging certain non-U.S. dollar-denominated net investment exposures in Treasury and CIO, and
- losses related to the early termination of certain of the Firm's long-term debt in Treasury and CIO.

Noninterest expense of $1.0 billion was up $288 million driven by an impairment on a legacy investment, and a lower net legal benefit, partially offset by lower structural expense.

The provision for credit losses was predominantly driven by the transfer of certain securities from AFS to HTM.

The current period income tax benefit was predominantly driven by the change in the level and mix of income and expenses subject to U.S. federal, and state and local taxes. The prior period included tax benefits of $957 million related to the resolution of certain tax audits.

Treasury and CIO overview

At September 30, 2020, 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 10 for further information on the Firm's investment securities portfolio and internal risk ratings.

Refer to Liquidity Risk Management on pages 55–59 for further information on liquidity and funding risk. Refer to Market Risk Management on pages 80–84 for information on interest rate, foreign exchange and other risks.

Selected income statement and balance sheet data

	As of or for the three months ended September 30,			As of or for the nine months ended September 30,		
(in millions)	**2020**	2019	Change	**2020**	2019	Change
Investment securities gains	**$ 466**	$ 78	497 %	**$ 725**	$ 135	437 %
Available-for-sale securities (average)	**$ 442,943**	$ 305,894	45 %	**$ 414,228**	$ 260,661	59 %
Held-to-maturity securities (average)	**103,596**	35,494	192	**74,102**	32,518	128
Investment securities portfolio (average)	**$ 546,539**	$ 341,388	60	**$ 488,330**	$ 293,179	67
Available-for-sale securities (period-end)	**$ 387,663**	$ 351,599	10	**$ 387,663**	$ 351,599	10
Held-to-maturity securities, net of allowance for credit losses (period-end)[(a)(b)]	**141,553**	40,830	247	**141,553**	40,830	247
Investment securities portfolio, net of allowance for credit losses (period-end)[(a)]	**$ 529,216**	$ 392,429	35 %	**$ 529,216**	$ 392,429	35 %

(a) At September 30, 2020, the allowance for credit losses on HTM securities was $120 million.

(b) During the nine months ended September 30, 2020, the Firm transferred $100.5 billion of investment securities, consisting of $74.4 billion in the third quarter of 2020 and $26.1 billion in the first quarter of 2020, from AFS to HTM for capital management purposes.

Refer to Note 10 for further information.

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 businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects 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 risk issues, by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management within each of the LOBs and Corporate; and
- Firmwide structures for risk governance.

The Firm strives for continual improvement in its efforts to enhance controls, ongoing employee training and development, talent retention, and other measures. 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 and oversight framework

The Firm's risk management governance and oversight framework involves understanding drivers of risks, types of risks, and impacts of risks.

Refer to pages 79-83 of JPMorgan Chase's 2019 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 2019 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		84
Capital risk	49-54	85-92
Liquidity risk	55-59	93-98
Reputation risk		99
Consumer credit risk	62-66	103-107
Wholesale credit risk	67-76	108-115
Investment portfolio risk	79	118
Market risk	80-84	119-126
Country risk	85	127-128
Operational risk	86	129-135
Compliance risk		132
Conduct risk		133
Legal risk		134
Estimations and Model risk	87	135

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 85–92 of JPMorgan Chase's 2019 Form 10-K, Note 22 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 Management, including capital planning and stress testing.

COVID-19 Pandemic
The Firm has been impacted by recent market events as a result of the COVID-19 pandemic, but remains well-capitalized. However, the continuation or further deterioration of the current macroeconomic environment could result in impacts to the Firm's capital and leverage.

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 ("BHC") 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.

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 Approach banking organizations, including the Firm, to calculate the SLR. Refer to SLR on page 90 of JPMorgan Chase's 2019 Form 10-K for additional information.

Key Regulatory Developments
Current Expected Credit Losses. As disclosed in the Firm's 2019 Form 10-K, the Firm initially elected to phase-in the January 1, 2020 ("day 1") CECL adoption impact to retained earnings of $2.7 billion to CET1 capital, at 25% per year in each of 2020 to 2023. As part of their response to the impact of the COVID-19 pandemic, on March 31, 2020, the federal banking agencies issued an interim final rule (issued as final on August 26, 2020) that provided the option to delay the effects of CECL on regulatory capital for two years, followed by a three-year transition period ("CECL capital transition provisions").

The final rule provides a uniform approach for estimating the effects of CECL compared to the legacy incurred loss model during the first two years of the transition period (the "day 2" transition amount), whereby the Firm may exclude from CET1 capital 25% of the change in the allowance for credit losses (excluding allowances on PCD loans). The cumulative day 2 transition amount as at December 31, 2021 that is not recognized in CET1 capital as well as the $2.7 billion day 1 impact, will be phased into CET1 capital at 25% per year beginning January 1, 2022. The Firm has elected to apply the CECL capital transition provisions, and accordingly, for the period ended September 30, 2020, the capital metrics of the Firm exclude $6.4 billion, which is the $2.7 billion day 1 impact to retained earnings and 25% of the $15.2 billion increase in the allowance for credit losses (excluding allowances on PCD loans).

The impacts of the CECL capital transition provisions on Tier 2 capital, adjusted average assets, and total leverage exposure have also been incorporated into the Firm's capital metrics. Refer to Note 1 for further information on the CECL accounting guidance.

Money Market Mutual Fund Liquidity Facility ("MMLF"). On March 18, 2020, the Federal Reserve established the MMLF facility, authorized through September 30, 2020, to enhance the liquidity and functioning of money markets. On July 28, 2020, the Federal Reserve announced that it was extending the MMLF through December 31, 2020. Under the MMLF, the FRBB makes nonrecourse advances to participating financial institutions to purchase certain types of assets from eligible money market mutual fund clients. These assets, which are reflected in other assets on the Firm's Consolidated balance sheets, are pledged to the FRBB as collateral. On March 23, 2020, the federal banking agencies issued an interim final rule (issued as final on September 29, 2020) to neutralize the effects of purchasing assets through the program on risk-based and leverage-based capital ratios. As of September 30, 2020, the Firm excluded assets purchased from money market mutual fund clients pursuant to nonrecourse advances provided under the MMLF in the amount of $932 million from its RWA and $2.2 billion from adjusted average assets and total leverage exposure.

Supplementary leverage ratio temporary revision. On April 1, 2020, the Federal Reserve issued an interim final rule that requires, on a temporary basis, the calculation of total leverage exposure for purposes of calculating the SLR for bank holding companies, to exclude the on-balance sheet amounts of U.S. Treasury securities and deposits at Federal Reserve Banks. These exclusions became effective April 1, 2020, and will remain in effect through March 31, 2021.

On June 1, 2020, the Federal Reserve, OCC and FDIC issued an interim final rule that provides IDI subsidiaries with an option to apply this temporary exclusion subject to certain

restrictions. As of September 30, 2020, JPMorgan Chase Bank, N.A. has not elected to apply this exclusion.

Paycheck Protection Program. On April 13, 2020, the federal banking agencies issued an interim final rule (issued as final on September 29, 2020) to neutralize the regulatory capital effects of participating in the PPP on risk-based capital ratios by applying a zero percent risk weight to loans originated under the program. Given that PPP loans are guaranteed by the SBA, the Firm does not expect to realize material credit losses on these loans. As of September 30, 2020, the Firm had approximately $28 billion of loans under the program.

The rule also provides that if the PPP loan is pledged as collateral for a non-recourse loan under the Federal Reserve's Paycheck Protection Program Lending ("PPPL") Facility, the PPP loans can be excluded from leverage-based capital ratios. As of September 30, 2020, the Firm had not participated in the PPPL Facility.

Refer to Regulatory Developments Relating to the COVID-19 Pandemic on pages 11-12 for additional information on regulatory actions and significant financing programs that the U.S. government and regulators have introduced to address the effects of the COVID-19 pandemic.

Stress Capital Buffer ("SCB"). On March 4, 2020, the Federal Reserve issued the final rule introducing the SCB framework for the Basel III Standardized approach that is designed to more closely integrate the results of the quantitative assessment in the annual CCAR with the ongoing minimum capital requirements for BHCs under the U.S. Basel III rules. The final rule replaces the static 2.5% CET1 capital conservation buffer in the Standardized approach with a dynamic institution-specific SCB. The final rule does not apply to the Advanced approach capital requirements. The SCB requirement for BHCs will be effective on October 1 of each year and is expected to remain in effect until September 30 of the following year.

TLAC Holdings rule. On October 20, 2020, the federal banking agencies issued a final rule prescribing the regulatory capital treatment for holdings of TLAC debt instruments by certain large banking organizations, such as the Firm and JPMorgan Chase Bank, N.A. This rule expands the scope of the existing capital deductions rule around the holdings of capital instruments of financial institutions to also include TLAC debt instruments issued by systemically important banking organizations. The rule is intended to limit interconnectedness within the financial system and reduce systemic risk. The final rule will become effective on April 1, 2021.

The following tables present the Firm's risk-based and leverage-based capital metrics under both the Basel III Standardized and Advanced Approaches. Refer to Capital Risk Management on pages 85–92 of JPMorgan Chase's 2019 Form 10-K for a further discussion of these capital metrics.

	September 30, 2020[c][d]		December 31, 2019		
(in millions, except ratios)	Standardized	Advanced	Standardized	Advanced	Minimum capital ratios[e]
Risk-based capital metrics:					
CET1 capital	**$ 197,719**	**$ 197,719**	$ 187,753	$ 187,753	
Tier 1 capital	**227,486**	**227,486**	214,432	214,432	
Total capital	**262,397**	**249,947**	242,589	232,112	
Risk-weighted assets	**1,514,509**	**1,429,334**	1,515,869	1,397,878	
CET1 capital ratio	**13.1 %**	**13.8 %**	12.4 %	13.4 %	10.5 %
Tier 1 capital ratio	**15.0**	**15.9**	14.1	15.3	12.0
Total capital ratio	**17.3**	**17.5**	16.0	16.6	14.0
Leverage-based capital metrics:					
Adjusted average assets[a]	**$ 3,243,290**	**$ 3,243,290**	$ 2,730,239	$ 2,730,239	
Tier 1 leverage ratio	**7.0 %**	**7.0 %**	7.9 %	7.9 %	4.0 %
Total leverage exposure[b]	**NA**	**$ 3,247,392**	NA	$ 3,423,431	
SLR[b]	**NA**	**7.0 %**	NA	6.3 %	5.0 %

(a) Adjusted average assets, for purposes of calculating the leverage ratios, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill and other intangible assets.
(b) As of September 30, 2020, total leverage exposure for purposes of calculating the SLR excludes U.S. Treasury securities and deposits at Federal Reserve Banks, as provided by the interim final rule issued by the Federal Reserve on April 1, 2020.
(c) As of September 30, 2020, the capital metrics reflect the CECL capital transition provisions.
(d) As of September 30, 2020, the capital metrics reflect the exclusion of assets purchased from money market mutual fund clients pursuant to nonrecourse advances provided under the MMLF. Additionally, loans originated under the PPP receive a zero percent risk weight.
(e) Represents minimum requirements and regulatory buffers applicable to the Firm. Refer to Note 22 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 September 30, 2020 and December 31, 2019.

(in millions)	September 30, 2020	December 31, 2019
Total stockholders' equity	**$ 271,113**	$ 261,330
Less: Preferred stock	30,063	26,993
Common stockholders' equity	**241,050**	234,337
Add:		
Certain deferred tax liabilities[a]	2,405	2,381
Less:		
Goodwill	47,819	47,823
Other intangible assets	759	819
Other CET1 capital adjustments[b]	(2,842)	323
Standardized/Advanced CET1 capital	**197,719**	187,753
Preferred stock	30,063	26,993
Less: Other Tier 1 adjustments	296	314
Standardized/Advanced Tier 1 capital	**$ 227,486**	$ 214,432
Long-term debt and other instruments qualifying as Tier 2 capital	$ 16,965	$ 13,733
Qualifying allowance for credit losses[c]	17,855	14,314
Other	91	110
Standardized Tier 2 capital	**$ 34,911**	$ 28,157
Standardized Total capital	**$ 262,397**	$ 242,589
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital[d]	(12,450)	(10,477)
Advanced Tier 2 capital	**$ 22,461**	$ 17,680
Advanced Total capital	**$ 249,947**	$ 232,112

(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 September 30, 2020, the impact of the CECL capital transition provision was an increase in CET1 capital of $6.4 billion.
(c) 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.
(d) 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 nine months ended September 30, 2020.

Nine months ended September 30, (in millions)	2020
Standardized/Advanced CET1 capital at December 31, 2019	$ 187,753
Net income applicable to common equity	15,792
Dividends declared on common stock	(8,339)
Net purchase of treasury stock	(5,238)
Changes in additional paid-in capital	(233)
Changes related to AOCI	7,371
Adjustment related to AOCI[a]	(3,006)
Changes related to other CET1 capital adjustments[b]	3,619
Change in Standardized/Advanced CET1 capital	9,966
Standardized/Advanced CET1 capital at September 30, 2020	**$ 197,719**
Standardized/Advanced Tier 1 capital at December 31, 2019	$ 214,432
Change in CET1 capital[b]	9,966
Net issuance of noncumulative perpetual preferred stock	3,070
Other	18
Change in Standardized/Advanced Tier 1 capital	13,054
Standardized/Advanced Tier 1 capital at September 30, 2020	**$ 227,486**
Standardized Tier 2 capital at December 31, 2019	$ 28,157
Change in long-term debt and other instruments qualifying as Tier 2	3,232
Change in qualifying allowance for credit losses[b]	3,542
Other	(20)
Change in Standardized Tier 2 capital	6,754
Standardized Tier 2 capital at September 30, 2020	**$ 34,911**
Standardized Total capital at September 30, 2020	**$ 262,397**
Advanced Tier 2 capital at December 31, 2019	$ 17,680
Change in long-term debt and other instruments qualifying as Tier 2	3,232
Change in qualifying allowance for credit losses[b]	1,569
Other	(20)
Change in Advanced Tier 2 capital	4,781
Advanced Tier 2 capital at September 30, 2020	**$ 22,461**
Advanced Total capital at September 30, 2020	**$ 249,947**

(a) Includes cash flow hedges and DVA related to structured notes recorded in AOCI.
(b) Includes the impact of the CECL capital transition provisions.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced approaches for the nine months ended September 30, 2020. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Standardized			Advanced			
Nine months ended September 30, 2020 (in millions)	Credit risk RWA	Market risk RWA	**Total RWA**	Credit risk RWA	Market risk RWA	Operational risk RWA	**Total RWA**
December 31, 2019	$ 1,440,220	$ 75,649	**$ 1,515,869**	$ 932,948	$ 75,652	$ 389,278	**$ 1,397,878**
Model & data changes[(a)]	300	(16,650)	**(16,350)**	(6,300)	(16,650)	–	**(22,950)**
Portfolio runoff[(b)]	(3,600)	–	**(3,600)**	(3,100)	–	–	**(3,100)**
Movement in portfolio levels[(c)]	(16,469)	35,059	**18,590**	30,445	35,376	(8,315)	**57,506**
Changes in RWA	(19,769)	18,409	**(1,360)**	21,045	18,726	(8,315)	**31,456**
September 30, 2020	**$ 1,420,451**	**$ 94,058**	**$ 1,514,509**	**$ 953,993**	**$ 94,378**	**$ 380,963**	**$ 1,429,334**

(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) Portfolio runoff for credit risk RWA primarily reflects reduced risk from position rolloffs in legacy portfolios in Home Lending.
(c) Movement in portfolio levels (inclusive of rule changes) refers to: changes in book size, composition, credit quality, and market movements for credit risk RWA; changes in position and market movements for market risk RWA; updates to cumulative losses for operational risk RWA; and deductions to credit risk RWA for excess eligible credit reserves not eligible for inclusion in Tier 2 capital.

Supplementary leverage ratio

Refer to Supplementary Leverage Ratio on pages 87-88 of JPMorgan Chase's 2019 Form 10-K for additional information.

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

(in millions, except ratio)	**September 30, 2020**	December 31, 2019
Tier 1 capital	**$ 227,486**	$ 214,432
Total average assets	3,290,157	2,777,270
Less: Regulatory capital adjustments[(a)]	46,867	47,031
Total adjusted average assets[(b)]	3,243,290	2,730,239
Add: Off-balance sheet exposures[(c)]	702,203	693,192
Less: Exclusion for U.S Treasuries and Federal Reserve Bank deposits	698,101	–
Total leverage exposure	**$ 3,247,392**	$ 3,423,431
SLR	**7.0 %**	6.3 %

(a) For purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill and other intangible assets. As of September 30, 2020, includes adjustments for the CECL capital transition provisions and the exclusion of assets purchased from money market mutual fund clients pursuant to nonrecourse advances provided under the MMLF.
(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 during the reporting quarter.

Refer to Note 22 for JPMorgan Chase Bank, N.A.'s SLR ratios.

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 90 of JPMorgan Chase's 2019 Form 10-K for additional information on capital allocation.

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

(in billions)	**September 30, 2020**	December 31, 2019
Consumer & Community Banking	**$ 52.0**	$ 52.0
Corporate & Investment Bank	**80.0**	80.0
Commercial Banking	**22.0**	22.0
Asset & Wealth Management	**10.5**	10.5
Corporate	**76.6**	69.8
Total common stockholders' equity	**$ 241.1**	$ 234.3

Capital planning and stress testing

Comprehensive Capital Analysis and Review

On June 29, 2020, the Firm announced that it had completed the 2020 CCAR stress test process. On August 10, 2020, the Federal Reserve affirmed the Firm's SCB requirement of 3.3% and the Firm's minimum Standardized CET1 capital ratio of 11.3% (up from 10.5%). The SCB requirement became effective on October 1, 2020.

The Federal Reserve has determined that changes in financial markets or the macroeconomic outlook due to the COVID-19 pandemic could have a material effect on a firm's risk profile and financial condition and therefore is requiring all large bank holding companies, including the Firm, to update and resubmit their capital plans by November 2, 2020. The Firm anticipates that the Federal Reserve will disclose firm-specific results under the additional scenarios before December 31, 2020.

Refer to Key Regulatory Developments on pages 49-50 of this Form 10-Q and capital planning and stress testing on pages 85-86 of JPMorgan Chase's 2019 Form 10-K for additional information.

Capital actions

Preferred stock

Preferred stock dividends declared were $381 million and $1.2 billion for the three and nine months ended September 30, 2020.

The Firm has not issued or redeemed any preferred stock since the first quarter of 2020. Refer to Note 18 of this Form 10-Q and Note 21 of JPMorgan Chase's 2019 Form 10-K for additional information on the Firm's preferred stock, including the issuance and redemption of preferred stock during the three months ended March 31, 2020.

Common stock dividends

The Firm's quarterly common stock dividend is currently $0.90 per share. The Firm's dividends are subject to the Board of Directors' approval on a quarterly basis.

Common equity

On March 15, 2020, in response to the COVID-19 pandemic, the Firm temporarily suspended repurchases of its common equity. In June 2020, the Federal Reserve directed all large bank holding companies, including the Firm, to discontinue net share repurchases, at least through the end of the third quarter of 2020. As such, there were no shares repurchased during the second and third quarters of 2020. On September 30, 2020, the Federal Reserve directed all large bank holding companies, including the Firm, to extend the discontinuation of net share repurchases through the end of the fourth quarter of 2020.

The following table sets forth the Firm's repurchases of common equity for the three and nine months ended September 30, 2020 and 2019.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Total number of shares of common stock repurchased	**–**	62.0	**50.0**	159.0
Aggregate purchase price of common stock repurchases	**$ –**	$ 6,949	**$ 6,397**	$17,250

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 page 202 of this Form 10-Q and page 30 of JPMorgan Chase's 2019 Form 10-K, respectively, for additional information regarding repurchases of the Firm's equity securities.

Other capital requirements

Total Loss-Absorbing Capacity

The Federal Reserve's TLAC rule requires the U.S. global systemically important bank ("GSIB") top-tier holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible long-term debt ("eligible LTD").

Refer to other capital requirements on page 91 of JPMorgan Chase's 2019 Form 10-K for additional information on TLAC.

The following table presents the TLAC and external long-term debt minimum requirements including applicable regulatory buffers, as of September 30, 2020 and December 31, 2019.

	Minimum Requirements
TLAC to RWA	23.0 %
TLAC to leverage exposure	9.5
External long-term debt to RWA	9.5
External long-term debt to leverage	4.5

The following table presents the eligible external TLAC and eligible LTD amounts, as well as a representation of the 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 September 30, 2020.

	September 30, 2020		December 31, 2019	
(in billions, except ratio)	Eligible external TLAC	Eligible LTD	Eligible external TLAC	Eligible LTD
Total eligible TLAC & LTD	$ 405.4	$ 174.0	$ 386.4	$ 161.8
% of RWA	26.8 %	11.5 %	25.5 %	10.7 %
Surplus/ (shortfall)	$ 57.1	$ 30.2	$ 37.7	$ 17.8
% of total leverage exposure	12.5 %	5.4 %	11.3 %	4.7 %
Surplus/ (shortfall)	$ 96.9	$ 27.9	$ 61.2	$ 7.8

Refer to Part I, Item 1A: Risk Factors on pages 6–28 of JPMorgan Chase's 2019 Form 10-K for information on the financial consequences to holders of the Firm's debt and equity securities in a resolution scenario.

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 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 subject to the Rules of the Commodity Futures Trading Commission ("CFTC").

Refer to Capital risk management on pages 85–92 of JPMorgan Chase's 2019 Form 10-K for a discussion on J.P. Morgan Securities' capital requirements.

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

September 30, 2020		
(in millions)	Actual[(a)]	Minimum
Net Capital	**$ 28,047**	**$ 5,150**

(a) Net capital reflects the exclusion of assets purchased from money market mutual fund clients pursuant to nonrecourse advances provided under the MMLF.

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 by the U.K. Prudential Regulation Authority ("PRA") and the Financial Conduct Authority ("FCA").

Refer to Capital risk management on pages 85–92 of JPMorgan Chase's 2019 Form 10-K for a further discussion on J.P. Morgan Securities plc.

The Bank of England requires, on a transitional basis, that U.K. banks, including U.K. regulated subsidiaries of overseas groups, maintain a minimum requirement for own funds and eligible liabilities ("MREL"). As of September 30, 2020, J.P. Morgan Securities plc was compliant with the requirements of the MREL rule. Refer to Supervision and Regulation on pages 1–6 of JPMorgan Chase's 2019 Form 10-K for additional information on MREL.

The following table presents J.P. Morgan Securities plc's capital metrics:

September 30, 2020		
(in millions, except ratios)	Estimated	Minimum ratios
Total capital	**$ 55,334**	
CET1 ratio	**17.5 %**	**4.5 %**
Total capital ratio	**22.3 %**	**8.0 %**

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 93–98 of JPMorgan Chase's 2019 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 Management.

LCR and HQLA

The LCR rule requires that the Firm maintain an amount of unencumbered HQLA that is sufficient to meet its estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. Under the LCR rule, the amount of 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 HQLA. The LCR is required to be a minimum of 100%. Refer to page 94 of JPMorgan Chase's 2019 Form 10-K and the Firm's U.S. LCR Disclosure reports for additional information on HQLA and net cash outflows.

The following table summarizes the Firm's average LCR for the three months ended September 30, 2020, June 30, 2020 and September 30, 2019 based on the Firm's interpretation of the finalized LCR framework.

	Three months ended		
Average amount (in millions)	**September 30, 2020**	June 30, 2020	September 30, 2019
HQLA			
Eligible cash[(a)]	**$ 458,336**	$ 426,053	$ 199,757
Eligible securities[(b)(c)]	**211,841**	225,135	337,704
Total HQLA[(d)]	**$ 670,177**	$ 651,188	$ 537,461
Net cash outflows	**$ 587,811**	$ 556,395	$ 468,452
LCR	**114 %**	117 %	115 %
Net excess HQLA[(d)]	**$ 82,366**	$ 94,793	$ 69,009

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

The Firm's average LCR decreased during the three months ended September 30, 2020, compared with the three-month period ended June 30, 2020, due to an increase in net cash outflows largely due to market activities in the CIB. Liquidity in JPMorgan Chase Bank, N.A. increased during the quarter primarily due to growth in deposits and a reduction in loans. Deposits continued to increase in the third quarter primarily driven by the COVID-19 pandemic and the related effect of certain government actions. However, these increases in excess liquidity in JPMorgan Chase Bank, N.A. are excluded from the Firm's reported LCR under the LCR rule.

The Firm's average LCR was negatively impacted during the three months ended September 30, 2020, compared with the prior year period due to a significant increase in deposits impacting both HQLA and net cash outflows. However, the average net excess HQLA has increased during the same period, primarily due to an increase in cash from unsecured long-term debt issuances.

The Firm's average LCR fluctuates from period to period, due to changes in its HQLA and estimated net cash outflows as a result of ongoing business activity.

Other liquidity sources

In addition to the assets reported in the Firm's HQLA above, the Firm had unencumbered marketable securities, such as equity securities and fixed income debt securities, that the Firm believes would be available to raise liquidity. This includes securities included as part of the excess HQLA at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates, as described above. The fair value of these securities was approximately $660 billion and $315 billion as of September 30, 2020 and December 31, 2019, respectively, although the amount of liquidity that could be raised would be dependent on prevailing market conditions. The fair value increased compared to December 31, 2019, due to an increase in excess HQLA at JPMorgan Chase Bank, N.A. which was primarily a result of increased deposits as noted above.

The Firm also had available borrowing capacity at FHLBs and the discount window at the Federal Reserve Bank as a result of collateral pledged by the Firm to such banks of approximately $295 billion and $322 billion as of September 30, 2020 and December 31, 2019, respectively. This borrowing capacity excludes the benefit of cash and securities reported in the Firm's HQLA or other unencumbered securities that are currently pledged at the Federal Reserve Bank discount window and other central banks. Available borrowing capacity decreased from December 31, 2019 primarily due to lower credit card receivable balances driven by the COVID-19 pandemic and a decrease in pledged mortgage collateral as a result of paydown and maturity activity. Although available, the Firm does not view this borrowing capacity at the Federal Reserve Bank 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" and "required" amounts of stable funding over a one-year horizon. On October 20, 2020, the federal banking agencies issued a final NSFR rule under which large banking organizations such as the Firm will be required to maintain an NSFR of at least 100% on an ongoing basis. The final NSFR rule will become effective on July 1, 2021, and the Firm will be required to publicly disclose its quarterly average NSFR semi-annually beginning in 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.

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 also access funding through short- or long-term secured borrowings, through the issuance of unsecured long-term debt, or from borrowings from the Parent Company or the Intermediate Holding Company ("IHC"). The Firm's non-bank subsidiaries are primarily funded from long-term unsecured borrowings and short-term secured borrowings, 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.

Deposits

The table below summarizes, by LOB and Corporate, the deposit balances as of September 30, 2020, and December 31, 2019, and the average deposit balances for the three and nine months ended September 30, 2020 and 2019, respectively.

Deposits (in millions)	September 30, 2020	December 31, 2019	Three months ended September 30, Average 2020	Three months ended September 30, Average 2019	Nine months ended September 30, Average 2020	Nine months ended September 30, Average 2019
Consumer & Community Banking	**$ 900,920**	$ 718,354 [(a)]	**$ 887,138**	$ 693,943 [(a)]	**$ 817,848**	$ 688,663 [(a)]
Corporate & Investment Bank	**667,308**	511,905 [(a)]	**678,843**	524,558 [(a)]	**631,351**	509,788 [(a)]
Commercial Banking	**258,635**	184,115	**248,078**	172,653	**224,591**	169,361
Asset & Wealth Management	**174,327**	147,804	**170,986**	138,822	**163,424**	139,127
Corporate	**226**	253	**554**	904	**760**	887
Total Firm	**$ 2,001,416**	$ 1,562,431	**$ 1,985,599**	$ 1,530,880	**$ 1,837,974**	$ 1,507,826

(a) In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB as part of the Firm's Wholesale Payments business. The prior-period amounts were revised to conform with the current presentation.

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 considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm.

The table below shows the loan and deposit balances, the loans-to-deposits ratios, and deposits as a percentage of total liabilities, as of September 30, 2020 and December 31, 2019.

(in billions except ratios)	September 30, 2020	December 31, 2019
Deposits	**$ 2,001.4**	$ 1,562.4
Deposits as a % of total liabilities	**67 %**	64 %
Loans	**$ 989.7**	$ 997.6
Loans-to-deposits ratio	**49 %**	64 %

The Firm believes that average deposit balances are generally more representative of deposit trends than period-end deposit balances, over time. However, during periods of market disruption those trends could be affected.

Average deposits increased for the three and nine months ended September 30, 2020, reflecting significant inflows across the LOBs primarily driven by the COVID-19 pandemic and the related effect of certain government actions. In the wholesale businesses, the inflows principally occurred in March as clients looked to remain liquid as a result of market conditions; in general, balances remained elevated through the third quarter. In CCB, the increase was driven by lower spending and higher cash balances across both consumer and small business customers, as well as growth from existing and new accounts.

Refer to the discussion of the Firm's Business Segment Results and the Consolidated Balance Sheets Analysis on pages 24-47 and pages 18-19, respectively, for further information on deposit and liability balance trends.

The following table summarizes short-term and long-term funding, excluding deposits, as of September 30, 2020, and December 31, 2019, and average balances for the three and nine months ended September 30, 2020 and 2019, respectively. Refer to the Consolidated Balance Sheets Analysis on pages 18-19 and Note 11 for additional information.

Sources of funds (excluding deposits) (in millions)	September 30, 2020	December 31, 2019	Three months ended September 30, Average 2020	Three months ended September 30, Average 2019	Nine months ended September 30, Average 2020	Nine months ended September 30, Average 2019
Commercial paper	**$ 8,752**	$ 14,754	**$ 10,921**	$ 19,607	**$ 12,968**	$ 24,756
Other borrowed funds	**10,431**	7,544	**8,791**	10,537	**8,832**	10,869
Total short-term unsecured funding	**$ 19,183**	$ 22,298	**$ 19,712**	$ 30,144	**$ 21,800**	$ 35,625
Securities sold under agreements to repurchase[(a)]	**$ 227,834**	$ 175,709	**$ 244,638**	$ 229,581	**$ 249,087**	$ 215,148
Securities loaned[(a)]	**6,076**	5,983	**6,563**	8,505	**6,620**	9,117
Other borrowed funds[(b)]	**22,809**	18,622	**23,755**	21,758	**23,907**	28,343
Obligations of Firm-administered multi-seller conduits[(c)]	**$ 11,622**	$ 9,223	**$ 12,120**	$ 12,167	**$ 11,484**	$ 10,987
Total short-term secured funding	**$ 268,341**	$ 209,537	**$ 287,076**	$ 272,011	**$ 291,098**	$ 263,595
Senior notes	**$ 164,986**	$ 166,185	**$ 178,282**	$ 172,059	**$ 174,014**	$ 167,495
Subordinated debt	**21,999**	17,591	**22,234**	17,797	**20,448**	17,196
Structured notes[(d)]	**71,944**	74,724	**74,038**	69,144	**72,665**	62,984
Total long-term unsecured funding	**$ 258,929**	$ 258,500	**$ 274,554**	$ 259,000	**$ 267,127**	$ 247,675
Credit card securitization[(c)]	**$ 4,942**	$ 6,461	**$ 5,070**	$ 7,394	**$ 5,714**	$ 10,802
FHLB advances	**16,126**	28,635	**30,628**	29,646	**31,293**	35,998
Other long-term secured funding[(e)]	**4,120**	4,363	**4,189**	4,558	**4,432**	4,708
Total long-term secured funding	**$ 25,188**	$ 39,459	**$ 39,887**	$ 41,598	**$ 41,439**	$ 51,508
Preferred stock[(f)]	**$ 30,063**	$ 26,993	**$ 30,063**	$ 28,241	**$ 29,844**	$ 27,457
Common stockholders' equity[(f)]	**$ 241,050**	$ 234,337	**$ 236,797**	$ 235,613	**$ 235,251**	$ 232,917

(a) Primarily consists of short-term securities loaned or sold under agreements to repurchase.
(b) Effective March 2020, includes nonrecourse advances provided under the MMLF.
(c) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(d) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.
(e) Includes long-term structured notes which are secured.
(f) Refer to Capital Risk Management on pages 49-54 and Consolidated statements of changes in stockholders' equity on page 96 of this Form 10-Q, and Note 21 and Note 22 of JPMorgan Chase's 2019 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 September 30, 2020, compared with December 31, 2019, reflecting in CIB, higher secured financing of trading assets, partially offset by a decline in client-driven market-making activities, and the Firm's nonparticipation in the Federal Reserve's open market operations, and in Treasury and CIO, higher secured financing of AFS investment securities.

The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities, 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.

As of September 30, 2020, the Firm participated in the MMLF government facility. The secured nonrecourse advances under the MMLF are included in other borrowed funds. Refer to Capital Risk Management on pages 49-54 for additional information on the MMLF.

The Primary Dealer Credit Facility ("PDCF") was established by the Federal Reserve on March 20, 2020. Under the PDCF, the Federal Reserve Bank of New York ("FRBNY") provides collateralized financing on a term basis to primary dealers. These financing transactions were reported as securities sold under agreements to repurchase. The Firm participated in the PDCF in the first quarter of 2020, and ceased its participation in May 2020 as the secured financing market normalized.

The Firm's sources of short-term unsecured funding consist of other borrowed funds and issuance of wholesale commercial paper. The decrease in commercial paper at September 30, 2020, from December 31, 2019 and for the average three and nine months ended September 30, 2020 compared to the prior year period, was due to lower net issuance primarily for short-term liquidity management. The increase in other borrowed funds at September 30, 2020 from December 31, 2019 is primarily driven by an increase in financing activities in CIB Equity Markets.

Long-term funding and issuance

Long-term funding provides additional sources 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 both bank and non-bank subsidiary funding needs. 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 and nine months ended September 30, 2020 and 2019. Refer to Liquidity Risk Management on pages 93–98 and Note 20 of JPMorgan Chase's 2019 Form 10-K for additional information on the IHC and long-term debt.

Long-term unsecured funding

	Three months ended September 30,		Nine months ended September 30,		Three months ended September 30,		Nine months ended September 30,	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019
(Notional in millions)	Parent Company				Subsidiaries			
Issuance								
Senior notes issued in the U.S. market	**$ 1,000**	$ 5,000	**$ 19,750**	$ 13,250	**$ –**	$ –	**$ –**	$ 1,750
Senior notes issued in non-U.S. markets	**–**	1,672	**1,355**	3,920	**–**	–	**–**	–
Total senior notes	**1,000**	6,672	**21,105**	17,170	**–**	–	**–**	1,750
Subordinated debt	**–**	–	**3,000**	–	**–**	–	**–**	–
Structured notes[(a)]	**1,170**	780	**6,478**	2,596	**3,778**	8,511	**16,892**	23,643
Total long-term unsecured funding – issuance	**$ 2,170**	$ 7,452	**$ 30,583**	$ 19,766	**$ 3,778**	$ 8,511	**$ 16,892**	$ 25,393
Maturities/redemptions								
Senior notes	**$ 16,697**	$ 2,700	**$ 24,781**	$ 10,607	**$ 5**	$ 2,751	**$ 7,642**	$ 4,567
Subordinated debt	**100**	37	**100**	183	**–**	–	**–**	–
Structured notes	**1,879**	477	**4,713**	1,436	**7,513**	4,540	**22,250**	12,700
Total long-term unsecured funding – maturities/ redemptions	**$ 18,676**	$ 3,214	**$ 29,594**	$ 12,226	**$ 7,518**	$ 7,291	**$ 29,892**	$ 17,267

(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 and nine months ended September 30, 2020 and 2019, respectively.

Long-term secured funding

	Three months ended September 30,				Nine months ended September 30,			
	Issuance		Maturities/Redemptions		Issuance		Maturities/Redemptions	
(in millions)	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Credit card securitization	**$ –**	$ –	**$ 851**	$ 2,850	**$ 1,000**	$ –	**$ 2,525**	$ 6,975
FHLB advances	**–**	–	**20,002**	5	**15,000**	–	**27,507**	14,810
Other long-term secured funding[(a)]	**553**	62	**473**	180	**876**	115	**907**	633
Total long-term secured funding	**$ 553**	$ 62	**$ 21,326**	$ 3,035	**$ 16,876**	$ 115	**$ 30,939**	$ 22,418

(a) Includes long-term structured notes which 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 2019 Form 10-K for further description of the 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 SPEs on page 21, and liquidity risk and credit-related contingent features in Note 5 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 September 30, 2020 were as follows:

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A.			J.P. Morgan Securities LLC J.P. Morgan Securities plc		
September 30, 2020	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service	A2	P-1	Stable	Aa2	P-1	Stable	Aa3	P-1	Stable
Standard & Poor's	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings[(a)]	AA-	F1+	Negative	AA	F1+	Negative	AA	F1+	Negative

(a) On April 18, 2020, Fitch affirmed the credit ratings of the Parent Company and the Firm's principal bank and non-bank subsidiaries but revised the outlook on the credit ratings from stable to negative given expectations that credit fundamentals will deteriorate as a result of the COVID-19 pandemic.

Refer to page 98 of JPMorgan Chase's 2019 Form 10-K for a discussion of the factors that could affect 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 pages 60-78 for a further discussion of Credit Risk.

Refer to page 79 for a further discussion of Investment Portfolio Risk. Refer to Credit and Investment Risk Management on pages 100–118 of JPMorgan Chase's 2019 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.

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. The adoption resulted in a change in the accounting for PCI loans, which are considered PCD loans under CECL. In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 1 for further information.

The Firm has provided various forms of assistance to customers and clients impacted by the COVID-19 pandemic, including payment deferrals and covenant modifications. The majority of the Firm's COVID-19 related loan modifications have not been considered troubled debt restructurings ("TDRs") as:

- they represent short-term or other insignificant modifications, whether under the Firm's regular loan modification assessments or the IA Statement guidance, or
- the Firm has elected to apply the option to suspend the application of accounting guidance for TDRs as provided under section 4013 of the CARES Act.

To the extent that certain modifications do not meet any of the above criteria, the Firm accounts for them as TDRs. The Firm considers expected losses of principal and accrued interest associated with all COVID-19 related loan modifications in its allowance for credit losses. Refer to Business Developments on pages 9-10 for more information on customer and client assistance granted. Refer to Notes 12 and 13 for further information on the Firm's accounting policies on loan modifications and the allowance for credit losses.

The effectiveness of the Firm's actions in helping borrowers recover and in mitigating the Firm's credit losses remains uncertain in light of the unpredictable nature and duration of the COVID-19 pandemic. Assistance provided in response to the COVID-19 pandemic could delay the recognition of delinquencies, nonaccrual status, and net charge-offs for those customers and clients who would have otherwise moved into past due or nonaccrual status. Refer to Consumer Credit Portfolio on pages 62-66 and Wholesale Credit Portfolio on pages 67-76 for information on loan modifications as of September 30, 2020.

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale; and certain loans accounted for at fair value. The following tables do not include loans which the Firm accounts for at fair value and classifies as trading assets; refer to Notes 2 and 3 for further information regarding these loans. Refer to Notes 12, 23, and 5 for additional information on the Firm's loans, lending-related commitments and derivative receivables, including the Firm's accounting policies.

Refer to Note 10 for information regarding the credit risk inherent in the Firm's investment securities portfolio; and refer to Note 11 for information regarding the credit risk inherent in the securities financing portfolio. Refer to Consumer Credit Portfolio on pages 62-66 and Note 12 for further discussions of the consumer credit environment and consumer loans. Refer to Wholesale Credit Portfolio on pages 67-76 and Note 12 for further discussions of the wholesale credit environment and wholesale loans.

Total credit portfolio

(in millions)	Credit exposure		Nonperforming[f][g]	
	Sep 30, 2020	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019
Loans retained	**$ 945,537**	$ 945,601	**$ 8,792**	$ 3,983
Loans held-for-sale	**5,983**	7,064	**200**	7
Loans at fair value[a]	**38,220**	44,955	**2,010**	647
Total loans–reported	**989,740**	997,620	**11,002**	4,637
Derivative receivables	**76,626**	49,766	**140**	30
Receivables from customers and other[b]	**30,847**	33,706	**–**	–
Total credit-related assets	**1,097,213**	1,081,092	**11,142**	4,667
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**298**	344
Other	**NA**	NA	**22**	43
Total assets acquired in loan satisfactions	**NA**	NA	**320**	387
Lending-related commitments[a]	**1,150,520**	1,108,399	**607**	474
Total credit portfolio	**$ 2,247,733**	$ 2,189,491	**$ 12,069**	$ 5,528
Credit derivatives used in credit portfolio management activities[c][d]	**$ (27,274)**	$ (18,530)	**$ –**	$ –
Liquid securities and other collateral held against derivatives[e]	**(20,384)**	(16,009)	**NA**	NA

(in millions, except ratios)	Three months ended September 30,		Nine months ended September 30,	
	2020	2019	**2020**	2019
Net charge-offs	**$ 1,180**	$ 1,371	**$ 4,209**	$ 4,135
Average retained loans	**950,850**	932,493	**962,054**	944,666
Net charge-off rates	**0.49 %**	0.58 %	**0.58 %**	0.59 %

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(b) Receivables from customers and other reflect brokerage-related held-for-investment customer receivables.
(c) Represents the net notional amount of protection purchased and sold through credit derivatives 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 76 and Note 5 for additional information.
(d) Prior-period amount has been revised to conform with the current presentation.
(e) Includes collateral related to derivative instruments where appropriate legal opinions have not been either sought or obtained with respect to master netting agreements.
(f) At both September 30, 2020, and December 31, 2019, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $1.1 billion. Prior-period amount has been revised to conform with the current presentation, refer to footnote (a) above for additional information. At September 30, 2020, and December 31, 2019, nonperforming assets also excluded real estate owned ("REO") insured by U.S. government agencies of $10 million and $41 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 issued by the Federal Financial Institutions Examination Council ("FFIEC").
(g) At September 30, 2020, nonperforming loans included $1.5 billion of PCD loans on nonaccrual status. Prior to the adoption of CECL, nonaccrual loans excluded PCI loans as the Firm recognized interest income on each pool of PCI loans as each of the pools was performing.

Paycheck Protection Program

The PPP, established by the CARES Act and implemented by the SBA, provided the Firm with delegated authority to process and originate PPP loans until the program closed in early August 2020. When certain criteria are met, PPP loans are subject to forgiveness and the Firm will receive payment of the forgiveness amount from the SBA. PPP loans have a contractual term of two or five years and provide borrowers with an automatic payment deferral of principal and interest. Given that PPP loans are guaranteed by the SBA, the Firm does not expect to realize material credit losses on these loans. PPP processing fees are deferred and accreted into interest income over the contractual life of the loans, but may be accelerated upon forgiveness or prepayment. The impact on interest income related to PPP loans was not material for the three and nine months ended September 30, 2020.

At September 30, 2020, the Firm had approximately $28 billion of loans under the PPP, of which $20 billion and $8 billion are in Consumer and Wholesale, respectively.

CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of residential real estate loans, credit card loans, scored auto and business banking loans, as well as associated lending-related commitments. The Firm's focus is on serving primarily the prime segment of the consumer credit market. Refer to Note 12 for further information on consumer loans, as well as the Firm's nonaccrual and charge-off accounting policies. Refer to Note 23 for further information on lending-related commitments.

Weakness in the macroeconomic environment driven by the impacts of the COVID-19 pandemic, resulted in an increase in the allowance for credit losses in the first half of 2020. The continuation or worsening of the effects of the COVID-19 pandemic on the macroeconomic environment and the extent to which customer assistance and government stimulus efforts are effective could result in further impacts to credit quality metrics, including delinquencies, nonaccrual loans and charge-offs.

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

Consumer credit portfolio

					Three months ended September 30,				Nine months ended September 30,			
	Credit exposure		Nonaccrual loans[j][k][l]		Net charge-offs/ (recoveries)		Net charge-off/ (recovery) rate[m]		Net charge-offs/ (recoveries)		Net charge-off/ (recovery) rate[m]	
(in millions, except ratios)	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Consumer, excluding credit card												
Residential real estate[a]	**$ 229,751**	$ 243,317	**$ 4,909**	$ 2,780	**$ 10**	$ (40)	**0.02 %**	(0.06)%	**$ (115)**	$ (72)	**(0.06)%**	(0.04)%
Auto and other[b][c][d]	**75,355**	51,682	**138**	146	**50**	121	**0.27** [d]	0.93	**252**	327	**0.53** [d]	0.84
Total loans – retained	**305,106**	294,999	**5,047**	2,926	**60**	81	**0.08**	0.11	**137**	255	**0.06**	0.11
Loans held-for-sale	**1,391**	3,002	**–**	2	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Loans at fair value[e][f]	**15,601**	19,816	**1,358**	438	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Total consumer, excluding credit card loans	**322,098**	317,817	**6,405**	3,366	**60**	81	**0.08**	0.11	**137**	255	**0.06**	0.11
Lending-related commitments[g]	**46,425**	40,169										
Total consumer exposure, excluding credit card	**368,523**	357,986										
Credit card												
Loans retained[h]	**139,590**	168,924	**–**	–	**1,028**	1,175	**2.92**	2.95	**3,519**	3,617	**3.17**	3.13
Loans held-for-sale	**787**	–	**–**	–	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Total credit card loans	**140,377**	168,924	**–**	–	**1,028**	1,175	**2.92**	2.95	**3,519**	3,617	**3.17**	3.13
Lending-related commitments[g][i]	**662,860**	650,720										
Total credit card exposure[i]	**803,237**	819,644										
Total consumer credit portfolio[i]	**$1,171,760**	$1,177,630	**$ 6,405**	$ 3,366	**$1,088**	$1,256	**0.97 %**	1.08 %	**$3,656**	$3,872	**1.09 %**	1.09 %

(a) Includes scored mortgage and home equity loans held in CCB and AWM, and scored mortgage loans held in Corporate.
(b) At September 30, 2020 and December 31, 2019, excluded operating lease assets of $21.2 billion and $22.8 billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets. Refer to Note 17 for further information.
(c) Includes scored auto and business banking loans and overdrafts.
(d) At September 30, 2020, included $20.3 billion of loans in Business Banking under the PPP. Given that PPP loans are guaranteed by the SBA, the Firm does not expect to realize material credit losses on these loans. Refer to Credit Portfolio on pages 60-61 for a further discussion of the PPP.
(e) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(f) Includes scored mortgage loans held in CCB and CIB.
(g) 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 23 for further information.
(h) Includes billed interest and fees.
(i) Also includes commercial card lending-related commitments primarily in CB and CIB.
(j) At both September 30, 2020 and December 31, 2019, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $1.1 billion. Prior-period amount has been revised to conform with the current presentation, refer to footnote (e) above for additional information. 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 issued by the FFIEC.
(k) At September 30, 2020, nonaccrual loans included $1.5 billion of PCD loans. Prior to the adoption of CECL, nonaccrual loans excluded PCI loans as the Firm recognized interest income on each pool of PCI loans as each of the pools was performing.
(l) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic. Includes loans to customers that have exited COVID-19 payment deferral programs and are 90 or more days past due, predominantly all of which were considered collateral-dependent and charged down to the lower of amortized cost or fair value of the underlying collateral less costs to sell.
(m) Average consumer loans held-for-sale and loans at fair value were $16.0 billion and $24.8 billion for the three months ended September 30, 2020 and 2019, respectively, and were $18.2 billion and $18.8 billion for the nine months ended September 30, 2020 and 2019, respectively. Prior-period amounts have been revised to conform with the current presentation, refer to footnote (e) above for additional information. These amounts were excluded when calculating net charge-off/(recovery) rates.

Consumer assistance

In March 2020, the Firm began providing assistance to customers in response to the COVID-19 pandemic, predominantly in the form of payment deferrals.

As of September 30, 2020, the Firm had $12.3 billion of loans under payment deferral programs, which represented a decrease of approximately $16.0 billion from June 30, 2020. During the third quarter of 2020, there were approximately $2.2 billion of new enrollments in payment deferral programs largely in the residential real estate loan class. Predominantly all borrowers that exited payment deferral programs are current. The Firm continues to monitor the credit risk associated with loans subject to payment deferrals throughout the deferral period and on an ongoing basis after the borrowers are required to resume making regularly scheduled payments and considers expected losses of principal and accrued interest on these loans in its allowance for credit losses.

The following table presents information related to the $12.3 billion and $28.3 billion unpaid principal balance of retained loans under payment deferral programs as of September 30, 2020 and June 30, 2020, respectively, and those that have exited payment deferral programs as of September 30, 2020.

	September 30, 2020			June 30, 2020		
(in millions, except ratios)	Loan balance	Percent of loan class balance[d]	Percent of accounts who exited payment deferral and are current	Loan balance	Percent of loan class balance[d]	Type of assistance
Residential real estate[a]	**$ 11,458**	**5.0 %**	**88 %**	$ 20,548	8.7 %	Rolling three month payment deferral up to one year; final work-out is determined at the end of the deferral period with most common being deferred payments are due at the end of the loan term
Auto and other[b]	**457**	**0.6**	**95**	3,357	4.6	• Auto: Currently offering one month payment deferral (initially offered three month payment deferral). Maturity date is extended by number of months deferred • Business Banking: Three month deferral with automatic deferment to either maturity (loan) or one year forward (line)
Credit card	**368**	**0.3**	**91**	4,384	3.1	Currently offering deferral of one month minimum payment (initially offered three month minimum payment deferral). Interest continues to accrue during the deferral period and is added to the principal balance
Total consumer[c]	**$ 12,283**	**2.8 %**	**92 %**	$ 28,289	6.3 %	

(a) Excludes $17.1 billion and $34.0 billion of third-party mortgage loans serviced at September 30, 2020 and June 30, 2020, respectively.
(b) Excludes risk-rated business banking and auto dealer loans held in CCB and auto operating lease assets that were still under payment deferral programs as of September 30, 2020 and June 30, 2020. Auto operating lease asset payment assistance is currently offering one month payment deferral (initially offered three month payment deferral). Deferrals do not extend the term of the lease and all deferred payments are due at the end of the lease term.
(c) Includes $3.8 billion and $5.7 billion of loans that were accounted for as TDRs prior to payment deferral as of September 30, 2020 and June 30, 2020, respectively.
(d) Represents the unpaid principal balance of retained loans which were still under payment deferral programs, divided by the total unpaid principal balance of the respective loan classes retained loans.

Of the $12.3 billion of loans still under payment deferral programs as of September 30, 2020, approximately $3.9 billion were accounted for as TDRs, either because they were accounted for as TDRs prior to payment deferral, or because they did not qualify for or the Firm did not elect the option to suspend TDR accounting guidance provided under section 4013 of the CARES Act. All or a portion of the remaining $8.4 billion of loans could become TDRs in future periods, depending on the nature and timing of further modifications or payment arrangements offered to these borrowers. If the remaining $8.4 billion of loans were considered TDRs, the Firm estimates that it would result in an increase in standardized RWA of as much as $4.1 billion.

Predominantly all borrowers were current upon enrollment in payment deferral programs and are expected to exit payment deferral programs in a current status, either because no payments are contractually due during the deferral period or because payments originally contractually due during the deferral period will be modified to be due at maturity upon exit. For those borrowers that are not modified upon exit from payment deferral programs and are unable to resume making payments in accordance with the contractual terms of their agreements, they will be placed on nonaccrual status in line with the Firm's nonaccrual policy, except for credit cards as permitted by regulatory guidance, and charged off in accordance with the Firm's charge-off policies. Refer to Note 12 for additional information on the Firm's nonaccrual and charge-off policies.

Consumer, excluding credit card

Portfolio analysis

Loan balances increased from December 31, 2019 due predominantly to PPP loan originations in Business Banking, partially offset by lower residential real estate loans, reflecting paydowns and loan sales.

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. The portfolio decreased from December 31, 2019 driven by paydowns and loan sales in Home Lending, largely offset by originations of prime mortgage loans that have been retained on the balance sheet. Retained nonaccrual loans increased from December 31, 2019 due predominantly to the inclusion of PCD loans, which prior to the adoption of CECL were considered performing PCI loans and customers that have exited COVID-19 payment deferral programs and are 90 or more days past due. Net charge-offs for the three months ended September 30, 2020 were higher when compared with the same period in the prior year as the current quarter included losses associated with the PCD portfolio, as well as loans charged down to the lower of amortized cost or fair value of the underlying collateral less costs to sell related to certain customers that have exited COVID-19 payment deferral programs and are 90 or more days past due. Net recoveries for the nine months ended September 30, 2020 were higher when compared with the same period in the prior year as the current year benefited from a recovery on a loan sale.

The carrying value of home equity lines of credit outstanding was $25.8 billion at September 30, 2020. This amount included $9.1 billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified and $8.1 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 September 30, 2020, and December 31, 2019, the carrying value of interest-only residential mortgage loans were $24.8 billion and $22.5 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. Performance of this portfolio for the three and nine months ended September 30, 2020 was in line with the performance of the broader residential mortgage portfolio for the same period.

The following table provides a summary of the Firm's residential mortgage portfolio insured and/or guaranteed by U.S. government agencies, including 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)	September 30, 2020	December 31, 2019
Current	**$ 422**	$ 1,432
30-89 days past due	**259**	704
90 or more days past due	**1,148**	1,090
Total government guaranteed loans[a]	**$ 1,829**	$ 3,226

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.

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

Refer to Note 12 for information on the geographic composition and current estimated LTVs of the Firm's residential real estate loans.

Modified residential real estate loans

The following table presents information relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty, which include both TDRs and modified loans accounted for as PCI loans prior to the adoption of CECL. The following table does not include loans with short-term or other insignificant modifications that are not considered concessions and, therefore, are not TDRs. Refer to Note 12 for further information on modifications for the three and nine months ended September 30, 2020 and 2019.

(in millions)	September 30, 2020	December 31, 2019
Retained loans[a]	**$ 15,877**	$ 5,926
PCI loans	**NA**	12,372 [d]
Nonaccrual retained loans[b][c]	**$ 3,716**	$ 2,332

(a) At September 30, 2020, and December 31, 2019, $6 million and $14 million, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., Federal Housing Administration ("FHA"), U.S. Department of Veterans Affairs ("VA"), Rural Housing Service of the U.S. Department of Agriculture ("RHS")) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. Refer to Note 14 for additional information about sales of loans in securitization transactions with Ginnie Mae.

(b) At September 30, 2020, and December 31, 2019, nonaccrual loans included $2.5 billion and $1.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. Refer to Note 12 for additional information about loans modified in a TDR that are on nonaccrual status.

(c) At September 30, 2020, nonaccrual loans included $1.2 billion of PCD loans. Prior to the adoption of CECL, nonaccrual loans excluded PCI loans as the Firm recognized interest income on each pool of PCI loans as each of the pools was performing.

(d) Amount represents the unpaid principal balance of modified PCI loans at December 31, 2019, which were moved to retained loans upon the adoption of CECL.

Auto and other: The auto and other loan portfolio predominantly consists of prime-quality scored auto and business banking loans, as well as overdrafts. The portfolio increased when compared with December 31, 2019, predominantly due to PPP loan originations of $21.9 billion in Business Banking of which $20.3 billion remained outstanding at September 30, 2020 as well as from growth in the auto portfolio from loan originations, partially offset by paydowns and charge-offs or liquidation of delinquent loans. The scored auto portfolio net charge-off rates were 0.04% and 0.41% for the three months ended September 30, 2020 and 2019, respectively, and 0.28% and 0.42% for the nine months ended September 30, 2020 and 2019, respectively. Auto charge-offs for the three months ended September 30, 2020 benefited from payment assistance programs and high vehicle collateral values.

Nonperforming assets

The following table presents information as of September 30, 2020, and December 31, 2019, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

(in millions)	September 30, 2020	December 31, 2019
Nonaccrual loans		
Residential real estate[b][c][d]	$ 6,267	$ 3,220
Auto and other	138	146
Total nonaccrual loans	6,405	3,366
Assets acquired in loan satisfactions		
Real estate owned[e]	175	229
Other	22	24
Total assets acquired in loan satisfactions	197	253
Total nonperforming assets	$ 6,602	$ 3,619

(a) At both September 30, 2020, and December 31, 2019, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $1.1 billion. Prior-period amount has been revised to conform with the current presentation, refer to footnote (b) below for additional information. At September 30, 2020, and December 31, 2019, nonperforming assets also excluded REO insured by U.S. government agencies of $10 million and $41 million, respectively. These amounts have been excluded based upon the government guarantee.
(b) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(c) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic. Includes loans to customers that have exited COVID-19 payment deferral programs and are 90 or more days past due, predominantly all of which were considered collateral-dependent and charged down to the lower of amortized cost or fair value of the underlying collateral less costs to sell.
(d) At September 30, 2020, nonaccrual loans included $1.5 billion of PCD loans. Prior to the adoption of CECL, nonaccrual loans excluded PCI loans as the Firm recognized interest income on each pool of PCI loans as each of the pools was performing.
(e) Prior-period amount has been revised to conform with the current presentation.

Nonaccrual loans

The following table presents changes in consumer, excluding credit card, nonaccrual loans for the nine months ended September 30, 2020 and 2019.

Nonaccrual loan activity[a]

Nine months ended September 30, (in millions)	2020	2019
Beginning balance	$ 3,366	$ 3,853
Additions:		
PCD loans, upon adoption of CECL	708	NA
Other additions	4,109 [c]	1,635
Total additions	4,817	1,635
Reductions:		
Principal payments and other[b]	508	878
Charge-offs	319	271
Returned to performing status	619	591
Foreclosures and other liquidations	332	292
Total reductions	1,778	2,032
Net changes	3,039	(397)
Ending balance	$ 6,405	$ 3,456

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(b) Other reductions includes loan sales.
(c) Includes loans to customers that have exited COVID-19 payment deferral programs and are 90 or more days past due, predominantly all of which were considered collateral-dependent and charged down to the lower of amortized cost or fair value of the underlying collateral less costs to sell.

Active and suspended foreclosure: Refer to Note 12 for information on loans that were in the process of active or suspended foreclosure.

Refer to Note 12 for further information about the consumer credit portfolio, including information about delinquencies, loan modifications and other credit quality indicators.

Purchased credit deteriorated ("PCD") loans

The following tables provide credit-related information for PCD loans, which were accounted for as PCI loans prior to the adoption of CECL. PCI loans are considered PCD loans under CECL and are subject to the Firm's nonaccrual and charge-off policies. PCD loans are now reported in the consumer, excluding credit card portfolio's residential real estate class. Refer to Note 1 for further information.

(in millions, except ratios)	September 30, 2020	December 31, 2019
Loan delinquency[a]		
Current	$ 16,586	$ 18,571
30-149 days past due	595	970
150 or more days past due	758	822
Total PCD loans	$ 17,939	$ 20,363
% of 30+ days past due to total retained PCD loans	7.54 %	8.80 %
Nonaccrual loans	$ 1,510	NA

(in millions, except ratios)	Three months ended September 30, 2020	Nine months ended September 30, 2020
Net charge-offs	$ 33	$ 66
Net charge-off rate	0.71 %	0.46 %

(a) At September 30, 2020, 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.

Credit card

Total credit card loans decreased from December 31, 2019 reflecting a decline in sales volume beginning in March as a result of the COVID-19 pandemic and the impact of seasonality. The September 30, 2020 30+ and 90+ day delinquency rates of 1.57% and 0.69%, respectively, decreased compared to the December 31, 2019 30+ and 90+ day delinquency rates of 1.87% and 0.95%, respectively. The delinquency rates were positively impacted by borrowers who received payment assistance and government stimulus. Net charge-offs decreased for the three months ended September 30, 2020 compared with the same period in the prior year reflecting lower charge-offs and higher recoveries, and benefited from the effect of payment assistance and government stimulus programs. Net charge-offs decreased for the nine months ended September 30, 2020 compared with the same period in the prior year reflecting higher recoveries.

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 12 for further information about this portfolio, including information about delinquencies.

Geographic and FICO composition of credit card loans

Refer to Note 12 for information on the geographic and FICO composition of the Firm's credit card loans.

Modifications of credit card loans

At September 30, 2020 the Firm had $1.4 billion of credit card loans outstanding that have been modified in TDRs, which does not include loans with short-term or other insignificant modifications that are not considered TDRs, compared to $1.5 billion at December 31, 2019. Refer to Note 12 for additional information about loan modification programs to borrowers.

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 69-73 for further information.

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

The macroeconomic environment, driven by the impacts of the COVID-19 pandemic, has resulted in broad-based credit deterioration and an increase in the allowance for credit losses. In the nine months ended September 30, 2020, the investment-grade percentage of the portfolio decreased from 74% to 71%, and criticized exposure increased $22.3 billion from $15.1 billion to $37.4 billion, primarily driven by downgrade activity in the first half of the year. The increase in criticized exposure was largely driven by downgrades in Consumer & Retail and Oil & Gas. The continuation or worsening of the effects of the COVID-19 pandemic on the macroeconomic environment could result in further impacts to credit quality metrics, including investment-grade percentages, as well as to criticized and nonperforming exposures and charge-offs.

Lending-related commitments and retained loans increased by $23.7 billion and $19.2 billion, respectively, in the nine months ended September 30, 2020, driven by increases across CB, AWM and CIB, including loans under the PPP. Outstanding loan balances under committed revolving credit facilities as of September 30, 2020 have returned to near the levels that existed before the increased drawdown activity in March as a result of the COVID-19 pandemic.

Wholesale credit portfolio

	Credit exposure		Nonperforming[e]	
(in millions)	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019
Loans retained	**$ 500,841**	$ 481,678	**$ 3,745**	$ 1,057
Loans held-for-sale	**3,805**	4,062	**200**	5
Loans at fair value[a]	**22,619**	25,139	**652**	209
Loans – reported	**527,265**	510,879	**4,597**	1,271
Derivative receivables	**76,626**	49,766	**140**	30
Receivables from customers and other[b]	**30,847**	33,706	**–**	–
Total wholesale credit-related assets	**634,738**	594,351	**4,737**	1,301
Assets acquired in loan satisfactions				
Real estate owned[c]	**NA**	NA	**123**	115
Other	**NA**	NA	**–**	19
Total assets acquired in loan satisfactions	**NA**	NA	**123**	134
Lending-related commitments[a]	**441,235**	417,510	**607**	474
Total wholesale credit portfolio	**$1,075,973**	$1,011,861	**$ 5,467**	$ 1,909
Credit derivatives used in credit portfolio management activities[c][d]	**$ (27,274)**	$ (18,530)	**$ –**	$ –
Liquid securities and other collateral held against derivatives	**(20,384)**	(16,009)	**NA**	NA

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(b) Receivables from customers and other reflect brokerage-related held-for-investment customer receivables to clients in CIB and AWM; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.
(c) Prior-period amounts have been revised to conform with the current presentation.
(d) Represents the net notional amount of protection purchased and sold through credit derivatives 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 76 and Note 5 for additional information.
(e) Loans that were modified in response to the COVID-19 pandemic continue to be risk-rated in accordance with the Firm's overall credit risk management framework. As of September 30, 2020, predominantly all of these loans were considered performing.

Wholesale assistance

In March 2020, the Firm began providing assistance to clients in response to the COVID-19 pandemic, predominantly in the form of payment deferrals and covenant modifications.

As of September 30, 2020, the Firm had approximately $6.3 billion of retained loans still under payment deferral, which has decreased approximately $10.5 billion from the second quarter, predominantly driven by $8.8 billion of loans to performing auto dealer clients where the deferral period ended on June 30, 2020. Predominantly all clients coming out of deferral are current, and the Firm has not experienced significant new payment deferral requests. The remaining deferrals are largely concentrated in Real Estate, predominantly within multifamily and retail, nearly all of which are scheduled to resume payments in the fourth quarter. The Firm continues to monitor the credit risk associated with loans subject to deferrals throughout the deferral period and on an ongoing basis after the borrowers are required to resume making regularly scheduled payments and considers expected losses of principal and accrued interest on these loans in its allowance for credit losses.

(in millions, except ratios)	**September 30, 2020**			June 30, 2020		
Industry	Loan balance	Percent of total industry loan balance[a]	IG percentage of loan balance in payment deferral	Loan balance	Percent of total industry loan balance[a]	IG percentage of loan balance in payment deferral
Real Estate	**$ 4,385**	**4 %**	**61 %**	$ 5,211	4 %	64 %
Individuals and Individual Entities	**691**	**1**	**10**	809	1	9
Consumer & Retail	**413**	**1**	**6**	690	1	4
Healthcare	**100**	**–**	**7**	300	1	16
Industrials	**91**	**–**	**5**	335	1	10
Automotive	**15**	**–**	**–**	8,827	46	72
All other industries	**579**	**–**	**70**	603	–	55
Total wholesale	**$ 6,274**	**1 %**	**51 %**	$ 16,775	3 %	61 %

(a) Represents the balance of the retained loans which were still under payment deferral, divided by the respective industry total retained loans balance.

In addition, the Firm granted assistance in the form of covenant modifications. These types of assistance, both payment deferrals and covenant modifications, are generally not reported as TDRs, either because the modifications were insignificant or they qualified for the option to suspend the application of accounting guidance for TDRs as provided under section 4013 of the CARES Act. These loans continue to be risk-rated in accordance with the Firm's overall credit risk management framework. As of September 30, 2020, predominantly all of these loans were considered performing.

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 September 30, 2020, and December 31, 2019. The Firm considers internal ratings equivalent to BBB-/Baa3 or higher as investment grade. Refer to Note 12 for further information on internal risk ratings.

	Maturity profile[f]				Ratings profile			
September 30, 2020 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	Investment-grade	Noninvestment-grade	**Total**	Total % of IG
Loans retained	**$ 154,371**	**$ 211,770**	**$ 134,700**	**$ 500,841**	**$ 364,180**	**$ 136,661**	**$ 500,841**	**73 %**
Derivative receivables				**76,626**			**76,626**	
Less: Liquid securities and other collateral held against derivatives				**(20,384)**			**(20,384)**	
Total derivative receivables, net of collateral	**12,644**	**15,455**	**28,143**	**56,242**	**35,608**	**20,634**	**56,242**	**63**
Lending-related commitments[a]	**117,008**	**307,136**	**17,091**	**441,235**	**310,803**	**130,432**	**441,235**	**70**
Subtotal	**284,023**	**534,361**	**179,934**	**998,318**	**710,591**	**287,727**	**998,318**	**71**
Loans held-for-sale and loans at fair value[a][b]				**26,424**			**26,424**	
Receivables from customers and other				**30,847**			**30,847**	
Total exposure – net of liquid securities and other collateral held against derivatives				**$1,055,589**			**$1,055,589**	
Credit derivatives used in credit portfolio management activities[c][d]	**$ (12,739)**	**$ (11,260)**	**$ (3,275)**	**$ (27,274)**	**$ (21,140)**	**$ (6,134)**	**$ (27,274)**	**78 %**

December 31, 2019 (in millions, except ratios)	Maturity profile[f]				Ratings profile			
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	Investment-grade	Noninvestment-grade	**Total**	Total % of IG
Loans retained	$ 141,620	$ 218,323	$ 121,735	$ 481,678	$ 363,444	$ 118,234	$ 481,678	75 %
Derivative receivables				49,766			49,766	
Less: Liquid securities and other collateral held against derivatives				(16,009)			(16,009)	
Total derivative receivables, net of collateral	6,561	6,960	20,236	33,757	26,966	6,791	33,757	80
Lending-related commitments[a]	86,934	317,042	13,534	417,510	296,702	120,808	417,510	71
Subtotal	235,115	542,325	155,505	932,945	687,112	245,833	932,945	74
Loans held-for-sale and loans at fair value[a][b]				29,201			29,201	
Receivables from customers and other				33,706			33,706	
Total exposure – net of liquid securities and other collateral held against derivatives				$ 995,852			$ 995,852	
Credit derivatives used in credit portfolio management activities[c][d][e]	$ (5,412)	$ (10,031)	$ (3,087)	$ (18,530)	$ (16,724)	$ (1,806)	$ (18,530)	90 %

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(b) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(c) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(d) 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.
(e) Prior-period amounts have been revised to conform with the current presentation.
(f) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on the remaining contractual maturity. Derivative contracts that are in a receivable position at September 30, 2020, 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 $37.4 billion at September 30, 2020, compared with $15.1 billion at December 31, 2019, representing approximately 3.5% and 1.5% of total wholesale credit exposure, respectively. The increase in total criticized exposure was largely driven by downgrades in Consumer & Retail and Oil & Gas due to impacts from the COVID-19 pandemic. Predominantly all of the $37.4 billion was performing and approximately half was undrawn.

Below are summaries of the Firm's exposures as of September 30, 2020, and December 31, 2019. The industry of risk category is generally based on the client or counterparty's primary business activity.

Wholesale credit exposure – industries[a]

As of or for the nine months ended September 30, 2020 (in millions)	Credit exposure[f][g]	Investment-grade[g]	Noninvestment-grade			Selected metrics			
			Noncriticized[g]	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans[h]	Net charge-offs/ (recoveries)	Credit derivative hedges[i]	Liquid securities and other collateral held against derivative receivables
Real Estate	$ 147,483	$ 115,849	$ 28,567	$ 2,500	$ 567	$ 87	$ 6	$ (2,125)	$ (3)
Individuals and Individual Entities[b]	115,469	100,855	13,618	228	768	813	–	–	(718)
Consumer & Retail	107,037	55,162	43,186	8,212	477	121	48	(296)	(4)
Industrials	68,950	38,983	27,697	1,979	291	190	73	(765)	(27)
Technology, Media & Telecommunications	64,800	35,996	23,769	4,791	244	18	43	(971)	(29)
Asset Managers	61,569	53,400	7,967	188	14	15	–	–	(5,502)
Healthcare	59,864	44,190	13,770	1,694	210	27	99	(400)	(294)
Banks & Finance Cos	53,385	37,773	14,971	586	55	54	13	(1,494)	(3,391)
Automotive	40,930	23,486	15,465	1,937	42	18	26	(603)	–
Oil & Gas	40,431	19,016	15,410	5,196	809	8	194	(376)	(1)
State & Municipal Govt[c]	37,472	36,922	542	–	8	14	–	–	(147)
Utilities	30,135	22,874	6,606	595	60	–	(7)	(402)	(20)
Transportation	17,154	7,658	6,394	2,742	360	38	40	(122)	(31)
Chemicals & Plastics	16,780	10,702	5,346	705	27	7	–	(80)	–
Central Govt	16,265	15,996	269	–	–	–	–	(8,602)	(2,574)
Metals & Mining	15,900	6,415	8,536	782	167	5	10	(144)	(12)
Insurance	13,509	10,440	3,046	20	3	4	–	(37)	(2,342)
Financial Markets Infrastructure	10,311	10,055	256	–	–	–	–	–	(11)
Securities Firms	8,092	6,426	1,644	9	13	–	12	(49)	(3,473)
All other[d]	93,166	76,747	15,334	708	377	19	(4)	(10,808)	(1,805)
Subtotal	$1,018,702	$ 728,945	$ 252,393	$ 32,872	$ 4,492	$ 1,438	$ 553	$ (27,274)	$ (20,384)
Loans held-for-sale and loans at fair value	26,424								
Receivables from customers and other	30,847								
Total[e]	$1,075,973								

(continued from previous page)

As of or for the year ended December 31, 2019 (in millions)	Credit exposure[f][g]	Investment-grade[g]	Noninvestment-grade: Noncriticized[g]	Noninvestment-grade: Criticized performing	Noninvestment-grade: Criticized nonperforming	Selected metrics: 30 days or more past due and accruing loans	Selected metrics: Net charge-offs/ (recoveries)	Selected metrics: Credit derivative hedges[i]	Selected metrics: Liquid securities and other collateral held against derivative receivables
Real Estate	$ 150,919	$ 121,625	$ 27,779	$ 1,457	$ 58	$ 104	$ 13	$ (100)	$ –
Individuals and Individual Entities[b]	105,027	93,181	11,617	192	37	388	33	–	(641)
Consumer & Retail	106,986	58,704	45,806	2,261	215	118	124	(235)	(11)
Industrials	62,483	39,434	21,673	1,157	219	172	48	(746)	(9)
Technology, Media & Telecommunications	60,033	35,878	21,066	2,953	136	27	27	(658)	(17)
Asset Managers	54,304	47,569	6,716	6	13	18	–	–	(4,785)
Healthcare	50,824	36,988	12,544	1,141	151	108	14	(405)	(145)
Banks & Finance Cos	50,786	34,941	15,031	808	6	–	–	(834)	(2,112)
Automotive	35,118	24,255	10,246	615	2	8	1	(194)	–
Oil & Gas	41,641	22,244	17,823	995	579	–	98	(429)	(10)
State & Municipal Govt[c]	30,095	29,586	509	–	–	33	7	–	(46)
Utilities	34,843	22,213	12,316	301	13	2	39	(414)	(50)
Transportation	14,497	8,734	5,336	353	74	30	8	(37)	(37)
Chemicals & Plastics	17,499	12,033	5,243	221	2	5	–	(10)	(13)
Central Govt	14,865	14,524	341	–	–	–	–	(9,018)	(1,963)
Metals & Mining	15,586	7,095	7,789	661	41	2	(1)	(33)	(6)
Insurance	12,348	9,458	2,867	19	4	3	–	(36)	(1,998)
Financial Markets Infrastructure	4,121	3,969	152	–	–	–	–	–	(6)
Securities Firms	7,381	6,010	1,344	27	–	–	–	(48)	(3,201)
All other[d]	79,598	73,453	5,722	412	11	4	4	(5,333) [j]	(959)
Subtotal	$ 948,954	$ 701,894	$ 231,920	$ 13,579	$ 1,561	$ 1,022	$ 415	$ (18,530)	$ (16,009)
Loans held-for-sale and loans at fair value	29,201								
Receivables from customers and other	33,706								
Total[e]	$1,011,861								

(a) The industry rankings presented in the table as of December 31, 2019, are based on the industry rankings of the corresponding exposures at September 30, 2020, not actual rankings of such exposures at December 31, 2019.
(b) Individuals and Individual Entities predominantly consists of Wealth Management clients within AWM and includes exposure to personal investment companies and personal and testamentary trusts.
(c) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at September 30, 2020, and December 31, 2019, noted above, the Firm held: $7.5 billion and $6.5 billion, respectively, of trading assets; $20.9 billion and $29.8 billion, respectively, of AFS securities; and $12.8 billion and $4.8 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(d) All other includes: SPEs and Private education and civic organizations, representing approximately 91% and 9%, respectively, at September 30, 2020, and 90% and 10%, respectively, at December 31, 2019.
(e) Excludes cash placed with banks of $478.4 billion and $254.0 billion, at September 30, 2020, and December 31, 2019, 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 used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other collateral held against derivative receivables.
(g) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(h) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(i) Represents the net notional amounts of protection purchased and sold through credit derivatives 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.
(j) Prior-period amount has been revised to conform with the current presentation.

Presented below is additional detail on certain of the Firm's largest industry exposures and/or certain industries which present potential heightened credit concerns.

Real Estate

Real Estate exposure was $147.5 billion as of September 30, 2020, of which $86.9 billion is multifamily lending as shown in the table below. During the nine months ended September 30, 2020, the following changes were primarily driven by impacts from the COVID-19 pandemic:

- the investment-grade portion of the Real Estate portfolio decreased from 81% to 79%
- the drawn percentage of this portfolio increased from 78% to 82%
- criticized exposure increased by $1.6 billion from $1.5 billion to $3.1 billion

	September 30, 2020				
(in millions, except ratios)	Loans and Lending-related Commitments[d]	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[e]
Multifamily[a]	$ 86,631	$ 240	$ 86,871	87 %	92 %
Office	16,363	557	16,920	78	70
Retail	10,654	213	10,867	59	70
Other Income Producing Properties[b]	10,580	391	10,971	70	68
Industrial	9,041	60	9,101	75	74
Lodging	3,207	5	3,212	23	63
Services and Non Income Producing	9,516	25	9,541	56	50
Total Real Estate Exposure[c]	**145,992**	**1,491**	**147,483**	**79**	**82**

	December 31, 2019				
(in millions, except ratios)	Loans and Lending-related Commitments[d]	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[e]
Multifamily[a]	$ 86,381	$ 58	$ 86,439	91 %	92 %
Office	15,734	231	15,965	80	70
Retail	11,347	87	11,434	83	68
Other Income Producing Properties[b]	14,372	181	14,553	48	45
Industrial	8,842	24	8,866	74	75
Lodging	3,702	19	3,721	51	38
Services and Non Income Producing	9,922	19	9,941	57	47
Total Real Estate Exposure	150,300	619	150,919	81	78

(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 multifamily, office, retail, industrial and lodging with less material exposures.
(c) Real Estate exposure is approximately 80% secured; unsecured exposure is approximately 72% investment-grade.
(d) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(e) Represents drawn exposure as a percentage of credit exposure.

Consumer & Retail

Consumer & Retail exposure was $107.0 billion as of September 30, 2020, and predominantly includes Retail, Food and Beverage, and Business and Consumer Services as shown in the table below. During the nine months ended September 30, 2020, the following changes were primarily driven by impacts from the COVID-19 pandemic:

- the investment-grade portion of the Consumer & Retail portfolio decreased from 55% to 52%
- the drawn percentage of this portfolio increased from 35% to 39%
- criticized exposure increased by $6.2 billion from $2.5 billion to $8.7 billion

(in millions, except ratios)	September 30, 2020				
	Loans and Lending-related Commitments	**Derivative Receivables**	**Credit exposure**	**% Investment-grade**	**% Drawn[d]**
Retail[a]	**$ 31,842**	**$ 1,052**	**$ 32,894**	**49 %**	**36 %**
Food and Beverage	**26,864**	**768**	**27,632**	**61**	**35**
Business and Consumer Services	**25,167**	**552**	**25,719**	**50**	**43**
Consumer Hard Goods	**12,906**	**151**	**13,057**	**58**	**38**
Leisure[b]	**7,456**	**279**	**7,735**	**22**	**50**
Total Consumer & Retail[c]	**104,235**	**2,802**	**107,037**	**52**	**39**

(in millions, except ratios)	December 31, 2019				
	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[d]
Retail[a]	$ 29,290	$ 294	$ 29,584	54 %	37 %
Food and Beverage	27,956	625	28,581	67	36
Business and Consumer Services	24,242	249	24,491	51	37
Consumer Hard Goods	13,144	109	13,253	65	35
Leisure[b]	10,930	147	11,077	21	19
Total Consumer & Retail	105,562	1,424	106,986	55	35

(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 September 30, 2020 approximately 80% of the noninvestment-grade Leisure portfolio is secured.
(c) Approximately 80% of the noninvestment-grade portfolio is secured.
(d) Represents drawn exposure as a percent of credit exposure.

Oil & Gas

Oil & Gas exposure was $40.4 billion as of September 30, 2020, including $20.2 billion of Exploration & Production and Oil field Services as shown in the table below. During the nine months ended September 30, 2020, the following changes were driven by lower oil prices and impacts from the COVID-19 pandemic:

- the investment-grade portion of the Oil & Gas portfolio decreased from 53% to 47%
- the drawn percentage of this portfolio increased from 31% to 32%
- criticized exposure increased by $4.4 billion from $1.6 billion to $6.0 billion

(in millions, except ratios)	September 30, 2020				
	Loans and Lending-related Commitments	**Derivative Receivables**	**Credit exposure**	**% Investment-grade**	**% Drawn[c]**
Exploration & Production ("E&P") and Oil field Services	**$ 19,418**	**$ 804**	**$ 20,222**	**32 %**	**41 %**
Other Oil & Gas[a]	**19,673**	**536**	**20,209**	**62**	**23**
Total Oil & Gas[b]	**39,091**	**1,340**	**40,431**	**47**	**32**

(in millions, except ratios)	December 31, 2019				
	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Exploration & Production ("E&P") and Oil field Services	$ 22,543	$ 646	$ 23,189	38 %	38 %
Other Oil & Gas[a]	18,246	206	18,452	73	23
Total Oil & Gas[b]	40,789	852	41,641	53	31

(a) Other Oil & Gas includes Integrated Oil & Gas companies, Midstream/Oil Pipeline companies and refineries.
(b) Secured lending was $13.8 billion and $15.7 billion at September 30, 2020 and December 31, 2019, respectively, approximately half of which is reserve-based lending to the Exploration & Production sub-sector; unsecured exposure is largely investment-grade.
(c) Represents drawn exposure as a percent of credit exposure.

Loans

In its wholesale businesses, the Firm provides loans to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals. Refer to Note 12 for a further discussion on loans, including information about delinquencies, loan modifications and other credit quality indicators.

The following table presents the change in the nonaccrual loan portfolio for the nine months ended September 30, 2020 and 2019. The increase was driven by downgrades across multiple industries on client credit deterioration, with the largest concentration in Real Estate, predominantly within retail and lodging.

Wholesale nonaccrual loan activity

Nine months ended September 30, (in millions)	**2020**	2019
Beginning balance	**$ 1,271**	$ 1,587
Additions[(a)]	**5,650**	2,303
Reductions:		
Paydowns and other	**1,381**	1,192
Gross charge-offs	**614**	265
Returned to performing status	**238**	100
Sales	**91**	188
Total reductions	**2,324**	1,745
Net changes	**3,326**	558
Ending balance	**$ 4,597**	$ 2,145

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the three and nine months ended September 30, 2020 and 2019. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs/(recoveries)

(in millions, except ratios)	Three months ended September 30,		Nine months ended September 30,	
	2020	2019	**2020**	2019
Loans – reported				
Average loans retained	**$ 504,449**	$ 469,942	**$ 512,137**	$ 471,332
Gross charge-offs	**150**	131	**641**	307
Gross recoveries collected	**(58)**	(16)	**(88)**	(45)
Net charge-offs/ (recoveries)	**92**	115	**553**	262
Net charge-off/ (recovery) rate	**0.07 %**	0.10 %	**0.14 %**	0.07 %

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 23 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 and AWM that are collateralized by assets maintained in the clients' brokerage accounts (e.g., cash on deposit, liquid and readily marketable debt or equity securities), as such generally no allowance for credit losses is 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 risks including credit risk and risks arising from fluctuations in interest rates, foreign exchange, equities, and commodities. 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. Refer to Note 5 for a further discussion of derivative contracts.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

(in millions)	**September 30, 2020**	December 31, 2019
Total, net of cash collateral	**76,626**	49,766
Liquid securities and other collateral held against derivative receivables[(a)]	**(20,384)**	(16,009)
Total, net of collateral	**$ 56,242**	$ 33,757

(a) Includes collateral related to derivative instruments where appropriate legal opinions have not been either sought or obtained with respect to master netting agreements.

The fair value of derivative receivables reported on the Consolidated balance sheets were $76.6 billion and $49.8 billion at September 30, 2020, and December 31, 2019, respectively, with increases in CIB resulting from market movements. Derivative receivables represent the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other Group of Seven nations ("G7") government securities) and other collateral held by the Firm aggregating $20.4 billion and $16.0 billion at September 30, 2020, and December 31, 2019, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor.

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 table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative contracts move in the Firm's favor. Refer to Note 5 for additional information on the Firm's use of collateral agreements.

The following table summarizes the ratings profile of the Firm's derivative receivables, including credit derivatives, net of collateral, at the dates indicated. The Firm considers internal ratings equivalent to BBB-/Baa3 or higher as investment grade. Refer to Note 12 for further information on internal risk ratings.

Ratings profile of derivative receivables

Internal rating equivalent	September 30, 2020		December 31, 2019	
(in millions, except ratios)	Exposure net of collateral	% of exposure net of collateral	Exposure net of collateral	% of exposure net of collateral
AAA/Aaa to AA-/Aa3	**$ 11,465**	**20 %**	$ 8,347	25 %
A+/A1 to A-/A3	**6,323**	**11**	5,471	16
BBB+/Baa1 to BBB-/Baa3	**17,819**	**32**	13,148	39
BB+/Ba1 to B-/B3	**18,681**	**33**	6,225	18
CCC+/Caa1 and below	**1,954**	**4**	566	2
Total	**$ 56,242**	**100 %**	$ 33,757	100 %

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's over-the-counter derivative contracts subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity and centrally cleared trades that are settled daily – was approximately 87% and 90% at September 30, 2020, and December 31, 2019, respectively.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user, to manage the Firm's own credit risk associated with various exposures.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and lending-related commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below.

Credit derivatives used in credit portfolio management activities

	Notional amount of protection purchased and sold[b]	
(in millions)	**September 30, 2020**	December 31, 2019
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 7,194**	$ 2,047
Derivative receivables[a]	**20,080**	16,483
Credit derivatives used in credit portfolio management activities	**$ 27,274**	$ 18,530

(a) Prior-period amount has been revised to conform with the current presentation.
(b) 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 5 of this Form 10-Q and Note 5 of JPMorgan Chase's 2019 Form 10-K for further information on credit derivatives and derivatives used in credit portfolio management activities.

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. The adoption of this guidance established a single allowance framework for all financial assets measured at amortized cost and certain off-balance sheet credit exposures. This framework requires that management's estimate reflects credit losses over the instrument's remaining expected life and considers expected future changes in macroeconomic conditions. Refer to Note 1 for further information.

The Firm's allowance for credit losses comprises:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated) and is presented separately on the balance sheet,
- the allowance for lending-related commitments, which is presented on the balance sheet in accounts payable and other liabilities, and
- the allowance for credit losses on investment securities, which covers the Firm's HTM and AFS securities and is recognized within Investment Securities on the balance sheet.

Refer to Note 13 and Note 10 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.

The allowance for credit losses increased compared with December 31, 2019, primarily reflecting the deterioration and uncertainty in the macroeconomic environment as a result of the impact of the COVID-19 pandemic, consisting of:

- a net $8.3 billion addition in consumer, predominantly in the credit card and residential real estate portfolios
- a net $6.7 billion addition in wholesale, across the LOBs impacting multiple industry sectors, and
- a net $4.3 billion addition as a result of the adoption of CECL.

Discussion of changes in the allowance during 2020

The increase in the allowance for loan losses and lending related commitments was primarily driven by an increase in the provision for credit losses, reflecting the deterioration in and uncertainty around the future macroeconomic environment as a result of the impact of the COVID-19 pandemic.

- In the first quarter of 2020, management's macroeconomic forecast included a decline in the U.S. real GDP of approximately 25% and an increase in the U.S. unemployment rate to above 10%, for the first half of 2020, followed by a solid recovery in the second half of 2020.
- In the second quarter of 2020, based on the increased uncertainty around the duration and depth of the downturn and speed of economic recovery, the Firm's central case assumptions reflected a more protracted downturn with the slower recovery of U.S. real GDP.
- In the third quarter of 2020, the Firm's central case assumptions reflected some near term improvement in economic trends, however there is elevated uncertainty around potential impacts to medium and longer term macroeconomic conditions.

In the first, second and third quarters of 2020, the Firm's central case assumptions reflected forecasted U.S. unemployment rates and cumulative changes in U.S. real GDP as follows:

	2020	2021	
	4Q	2Q	4Q
Central case assumptions			
U.S. unemployment rate(a)			
1Q 2020	6.6 %	5.5 %	4.6 %
2Q 2020	10.9	9.0	7.7
3Q 2020	9.5	8.5	7.3
U.S. real GDP - cumulative change from December 31, 2019			
1Q 2020	(5.4)	(2.3)	0.3
2Q 2020	(6.2)	(4.0)	(3.0)
3Q 2020	(5.4)	(3.7)	(2.4)

(a) Reflects quarterly average of forecasted reported U.S. unemployment rate.

As a result of elevated macroeconomic uncertainty beyond the central case, the Firm continued to place significant weighting on its adverse scenarios, which incorporate more punitive macroeconomic factors than the central case assumptions outlined above, resulting in weighted average U.S. unemployment rates, remaining above ten percent into the fourth quarter of 2021.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.

Refer to Critical Accounting Estimates Used by the Firm on pages 88-90 for further information on the allowance for credit losses and related management judgments.

Refer to Consumer Credit Portfolio on pages 62-66, Wholesale Credit Portfolio on pages 67-76 and Note 12 for additional information on the consumer and wholesale credit portfolios.

The adoption of the CECL accounting guidance resulted in a change in the accounting for PCI loans, which are considered PCD loans under CECL. In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 1 for further information.

Allowance for credit losses and related information

Nine months ended September 30, (in millions, except ratios)	2020[d] Consumer, excluding credit card	2020[d] Credit card	2020[d] Wholesale	2020[d] Total	2019 Consumer, excluding credit card	2019 Credit card	2019 Wholesale	2019 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 2,538**	**$ 5,683**	**$ 4,902**	**$ 13,123**	$ 3,434	$ 5,184	$ 4,827	$ 13,445
Cumulative effect of a change in accounting principle	**297**	**5,517**	**(1,642)**	**4,172**	NA	NA	NA	NA
Gross charge-offs	**620**	**4,104**	**641**	**5,365**	665	4,050	307	5,022
Gross recoveries collected	**(483)**	**(585)**	**(88)**	**(1,156)**	(409)	(433)	(45)	(887)
Net charge-offs	**137**	**3,519**	**553**	**4,209**	256	3,617	262	4,135
Write-offs of PCI loans[a]	**NA**	**NA**	**NA**	**NA**	132	–	–	132
Provision for loan losses	**1,803**	**10,119**	**5,802**	**17,724**	(227)	4,017	258	4,048
Other	**1**		**3**	**4**	–	(1)	10	9
Ending balance at September 30,	**$ 4,502**	**$ 17,800**	**$ 8,512**	**$ 30,814**	$ 2,819	$ 5,583	$ 4,833	$ 13,235
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 12**	**$ –**	**$ 1,179**	**$ 1,191**	$ 12	$ –	$ 1,043	$ 1,055
Cumulative effect of a change in accounting principle	**133**	**–**	**(35)**	**98**	NA	NA	NA	NA
Provision for lending-related commitments	**71**	**–**	**1,464**	**1,535**	–	–	110	110
Other	**–**	**–**	**(1)**	**(1)**	–	–	–	–
Ending balance at September 30,	**$ 216**	**$ –**	**$ 2,607**	**$ 2,823**	$ 12	$ –	$ 1,153	$ 1,165
Impairment methodology								
Asset-specific[b]	**$ 228**	**$ 652**	**$ 792**	**$ 1,672**	$ 88	$ 488	$ 399	$ 975
Portfolio-based	**4,274**	**17,148**	**7,720**	**29,142**	1,475	5,095	4,434	11,004
PCI	**NA**	**NA**	**NA**	**NA**	1,256	–	–	1,256
Total allowance for loan losses	**$ 4,502**	**$ 17,800**	**$ 8,512**	**$ 30,814**	$ 2,819	$ 5,583	$ 4,833	$ 13,235
Impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 109**	**$ 109**	$ –	$ –	$ 135	$ 135
Portfolio-based	**216**	**–**	**2,498**	**2,714**	12	–	1,018	1,030
Total allowance for lending-related commitments	**$ 216**	**$ –**	**$ 2,607**	**$ 2,823**	$ 12	$ –	$ 1,153	$ 1,165
Total allowance for credit losses	**$ 4,718**	**$ 17,800**	**$ 11,119**	**$ 33,637**	$ 2,831	$ 5,583	$ 5,986	$ 14,400
Memo:								
Retained loans, end of period	**$ 305,106**	**$ 139,590**	**$ 500,841**	**$ 945,537**	$ 295,586	$ 159,571	$ 473,730	$ 928,887
Retained loans, average	**301,535**	**148,382**	**512,137**	**962,054**	318,967	154,367	471,332	944,666
Credit ratios								
Allowance for loan losses to retained loans	**1.48 %**	**12.75 %**	**1.70 %**	**3.26 %**	0.95 %	3.50 %	1.02 %	1.42 %
Allowance for loan losses to retained nonaccrual loans[c]	**89**	**NM**	**227**	**350**	94	NM	284	282
Allowance for loan losses to retained nonaccrual loans excluding credit card	**89**	**NM**	**227**	**148**	94	NM	284	163
Net charge-off rates	**0.06**	**3.17**	**0.14**	**0.58**	0.11	3.13	0.07	0.59

(a) Prior to the adoption of CECL, write-offs of PCI loans were recorded against the allowance for loan losses when actual losses for a pool exceeded estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan was recognized when the underlying loan was removed from a pool.

(b) Includes modified PCD loans and loans that have been modified or are reasonably expected to be modified in a TDR. Also includes risk-rated loans that have been placed on nonaccrual status for the wholesale portfolio segment. The asset-specific credit card allowance for loan losses modified or reasonably expected to be modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(c) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

(d) Excludes HTM securities, which had an allowance for credit losses of $120 million and a provision for credit losses of $110 million as of and for the nine months ended September 30, 2020.

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 or 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 is predominantly invested in high-quality securities. At September 30, 2020, the Treasury and CIO investment securities portfolio, net of allowance for credit losses, was $529.2 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal risk ratings). Refer to Corporate segment results on pages 46-47 and Note 10 for further information on the investment securities portfolio and internal risk ratings. Refer to Market Risk Management on pages 80–84 for further information on the market risk inherent in the portfolio. Refer to Liquidity Risk Management on pages 55–59 for further information on related liquidity risk.

Principal investment risk

Principal investments are typically private non-traded financial instruments representing ownership or other forms of junior capital and span multiple asset classes. These investments are made by dedicated investing businesses or as part of a broader business strategy. In general, new principal investments include tax-oriented investments, as well as investments made to enhance or accelerate LOB and Corporate strategic business initiatives. The Firm's principal investments are managed by the LOBs and Corporate and are reflected within their respective financial results. The aggregate carrying values of the principal investment portfolios have not been significantly affected by recent market events as a result of the COVID-19 pandemic. However, the duration and severity of adverse macroeconomic conditions could subject certain principal investments to impairments, write-downs, or other negative impacts.

As of September 30, 2020 and December 31, 2019, the aggregate carrying values of the principal investment portfolios were $23.9 billion and $24.2 billion, respectively, which included tax-oriented investments (e.g., affordable housing and alternative energy investments) of $18.4 billion and $18.2 billion respectively, and private equity, various debt and equity instruments, and real assets of $5.5 billion and $6.0 billion, respectively.

Refer to page 118 of JPMorgan Chase's 2019 Form 10-K for a discussion of the Firm's Investment Portfolio Risk Management governance and oversight.

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 119–126 of JPMorgan Chase's 2019 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.

COVID-19 Pandemic

Market Risk Management is actively monitoring the impact of the COVID-19 pandemic on market risk exposures by leveraging existing risk measures and controls.

Models used to measure market risk are inherently imprecise and may be 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, such as those observed at the onset of the COVID-19 pandemic. For additional discussion on model uncertainty refer to Estimations and Model Risk Management on page 87.

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. This is increasingly important in periods of sustained, heightened market volatility.

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 135 of JPMorgan Chase's 2019 Form 10-K for information regarding model reviews and approvals.

Refer to page 121 of JPMorgan Chase's 2019 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 at: (http://investor.shareholder.com/jpmorganchase/basel.cfm) 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 124-126 of JPMorgan Chase's 2019 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

	Three months ended								
	September 30, 2020			June 30, 2020			September 30, 2019		
(in millions)	Avg.	Min	Max	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type									
Fixed income	**$ 93**	**$ 79**	**$124**	$129	$109	$155	$ 37	$ 31	$ 46
Foreign exchange	**13**	**7**	**18**	9	7	13	6	4	8
Equities	**26**	**22**	**31**	27	22	35	22	19	27
Commodities and other	**33**	**24**	**47**	32	21	44	8	7	9
Diversification benefit to CIB trading VaR	**(76)** [a]	**NM** [b]	**NM** [b]	(69) [a]	NM [b]	NM [b]	(34) [a]	NM [b]	NM [b]
CIB trading VaR	**89**	**73**	**115**	128	104	158	39	33	47
Credit portfolio VaR	**15**	**12**	**17**	22	18	28	5	4	7
Diversification benefit to CIB VaR	**(14)** [a]	**NM** [b]	**NM** [b]	(23) [a]	NM [b]	NM [b]	(6) [a]	NM [b]	NM [b]
CIB VaR	**90**	**74**	**116**	127	101	157	38	33	46
CCB VaR	**3**	**1**	**7**	5	2	12	6	2	11
Corporate and other LOB VaR	**16**	**15**	**19**	15	11	18	10	9	11
Diversification benefit to other VaR	**(3)** [a]	**NM** [b]	**NM** [b]	(4) [a]	NM [b]	NM [b]	(5) [a]	NM [b]	NM [b]
Other VaR	**16**	**14**	**19**	16	13	18	11	9	15
Diversification benefit to CIB and other VaR	**(16)** [a]	**NM** [b]	**NM** [b]	(13) [a]	NM [b]	NM [b]	(10) [a]	NM [b]	NM [b]
Total VaR	**$ 90**	**$ 74**	**$117**	$130	$106	$163	$ 39	$ 35	$ 46

(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) 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 $40 million for the three months ended September 30, 2020 when compared with the prior quarter. This decrease was driven by the fixed income risk type, reflecting an overall risk reduction, as well as the scope refinement described below.

Effective July 1, 2020, the Firm refined the scope of VaR to exclude certain asset-backed fair value option elected loans, and included them in other sensitivity-based measures to more effectively measure the risk from these loans. In the absence of this refinement, the average Total VaR and each of the components would have been different by the amounts reported in the following table:

(in millions)	**Amount by which reported VaR would have been different for the three months ended September 30, 2020**
CIB fixed income VaR	$ 15
CIB trading VaR	11
CIB VaR	12
Total VaR	12

Year over year results

Average total VaR increased by $51 million for the three months ended September 30, 2020 when compared with the same period in the prior year. This increase was driven by the substantial increase in volatility in the one-year historical look-back period as a result of the COVID-19 pandemic. The most significant impacts were reflected in the fixed income and commodities risk types.

Effective January 1, 2020, the Firm refined the scope of VaR to exclude positions related to the risk management of interest rate exposure from changes in the Firm's own credit spread on fair value option elected liabilities, and included these positions in other sensitivity-based measures. Additionally, effective July 1, 2020, the Firm refined the scope of VaR to exclude certain asset-backed fair value option elected loans, and included them in other sensitivity-based measures. In the absence of these refinements, the average Total VaR and each of the components would have been different by the amounts reported in the following table:

(in millions)	**Amount by which reported VaR would have been different for the three months ended September 30, 2020**
CIB fixed income VaR	$ 15
CIB trading VaR	11
CIB VaR	11
Total VaR	11

VaR backtesting

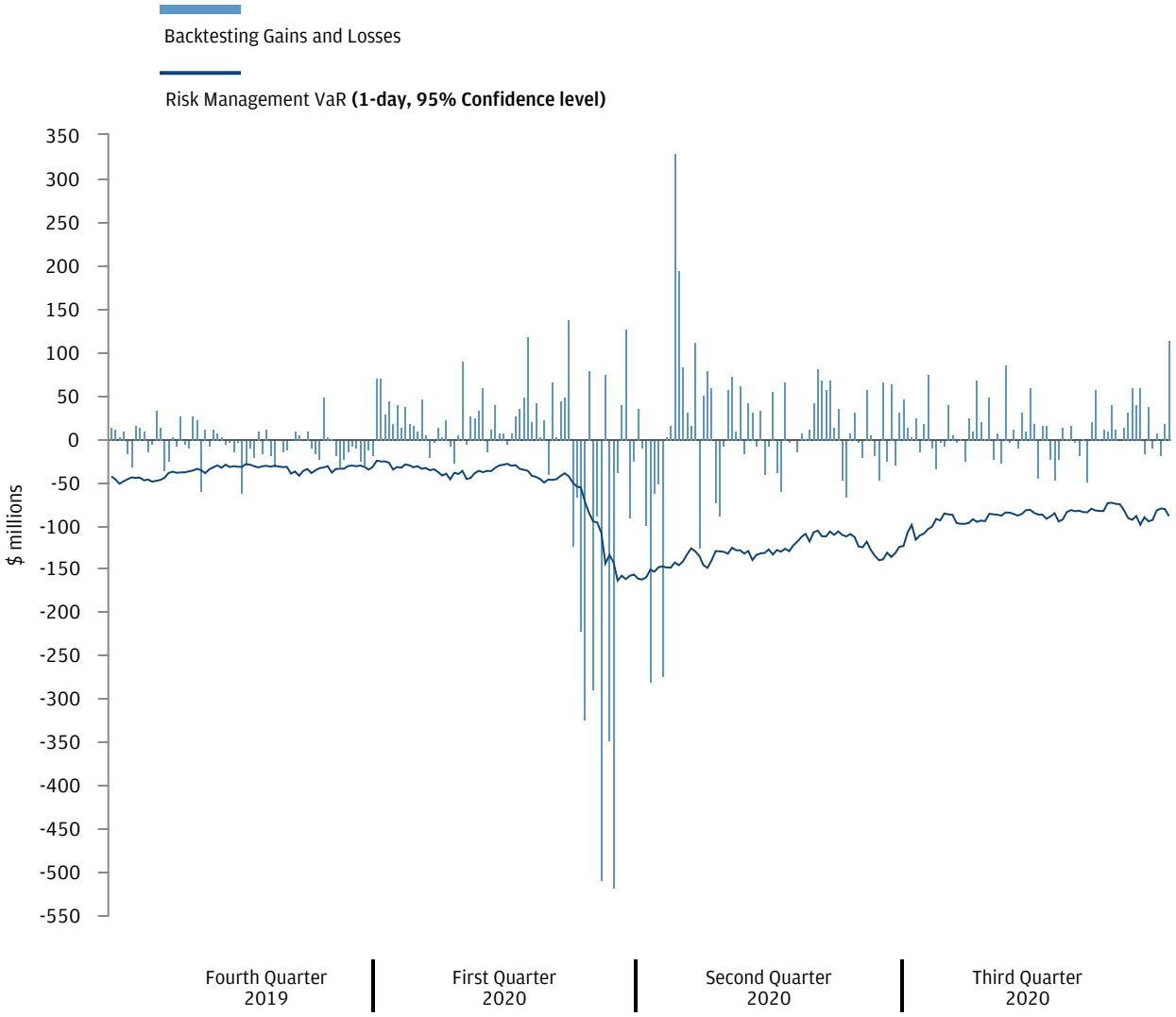
The Firm performs daily VaR model backtesting, which compares the daily Risk Management VaR results with the daily gains and losses that are utilized for VaR backtesting purposes. The gains and losses in the chart below do not reflect the Firm's revenue results as they exclude select components of total 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, certain valuation adjustments and net interest income. These excluded components of total net revenue may more than offset backtesting gains and losses on a particular day. The definition of backtesting gains and losses above is consistent with the requirements for backtesting under Basel III capital rules.

The following chart compares Firmwide daily backtesting gains and losses with the Firm's Risk Management VaR for the 12 months ended September 30, 2020. 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.

For the 12 months ended September 30, 2020, the Firm posted backtesting gains on 151 of the 260 days, and observed 13 VaR backtesting exceptions, which were predominantly driven by volatility at the onset of the COVID-19 pandemic that was materially higher than the levels realized in the historical data used for the VaR calculation. For the three months ended September 30, 2020, the Firm posted backtesting gains on 44 of the 66 days, and did not observe any VaR backtesting exceptions as the higher volatility is fully embedded in the look-back period used for the VaR calculation. Firmwide backtesting loss days can differ from the loss days for which Fixed Income Markets and Equity Markets posted losses, as disclosed in the CIB Markets revenue results, as the population of positions which compose each metric are different and due to the exclusion of select components of total net revenue in backtesting gains and losses as described above. For more information on CIB Markets revenue results, refer to page 36 .

Daily Risk Management VaR Backtesting Results

12 months ended September 30, 2020



Earnings-at-risk

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 and issuing debt as well as from the investment securities portfolio. Refer to the table on page 120 of JPMorgan Chase's 2019 Form 10-K for a summary by LOB and Corporate, identifying positions included in earnings-at-risk.

One way 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 exclude other positions in risk management VaR and other sensitivity-based measures as described on page 120 of JPMorgan Chase's 2019 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. 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 do not include assumptions about actions that could be taken by the Firm in response to any such 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.
- The pricing sensitivity of deposits, using normalized deposit betas which represent the amount by which deposit rates paid could change upon a given change in market interest rates over the cycle. The deposit rates paid in these scenarios may differ from actual deposit rates paid, particularly for retail deposits, 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. 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)	**September 30, 2020**	December 31, 2019
Parallel shift:		
+100 bps shift in rates	**$ 4.4**	$ 0.3
Steeper yield curve:		
+100 bps shift in long-term rates	**1.8**	1.2
Flatter yield curve:		
+100 bps shift in short-term rates	**2.6**	(0.9)

The change in the Firm's U.S. dollar sensitivities as of September 30, 2020 compared to December 31, 2019 reflected updates to the Firm's baseline for lower short-term and long-term rates as well as the impact of changes in the Firm's balance sheet.

The Firm's sensitivity to rates is primarily a result of assets repricing at a faster pace than deposits.

Based upon current and implied market rates as of September 30, 2020, scenarios reflecting lower rates could result in negative interest rates. The U.S. has never experienced an interest rate environment where the Federal Reserve has a negative interest rate policy. While the impact of negative interest rates on the Firm's earnings-at-risk would vary by scenario, a parallel shift downward of up to 100bps would negatively impact net interest income. In a negative interest rate environment, the modeling assumptions used for certain assets and liabilities require additional management judgment and therefore, the actual outcomes may differ from these assumptions.

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

(in billions)	**September 30, 2020**	December 31, 2019
Parallel shift:		
+100 bps shift in rates	**$ 0.8**	$ 0.5
Flatter yield curve:		
+100 bps shift in short-term rates	**0.7**	0.5

The results of the non-U.S. dollar interest rate scenario involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels were not material to the Firm's earnings-at-risk at September 30, 2020 and December 31, 2019.

Other sensitivity-based measures

The Firm quantifies the market risk of certain debt and equity and funding activities 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 table Predominant business activities that give rise to market risk on page 120 of JPMorgan Chase's 2019 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 September 30, 2020 and December 31, 2019, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future changes in these sensitivities.

Gain/(loss) (in millions) **Activity**	**Description**	**Sensitivity measure**	**September 30, 2020**	December 31, 2019
Debt and equity[a]				
Asset Management activities	Consists of seed capital and related hedges; fund co-investments[b]; and certain deferred compensation and related hedges[c]	10% decline in market value	**$ (46)**	$ (68)
Other debt and equity	Consists of certain asset-backed fair value option elected loans, privately held equity and other investments held at fair value[b]	10% decline in market value	**(894)**	(867) [e]
Funding activities				
Non-USD LTD cross-currency basis	Represents the basis risk on derivatives used to hedge the foreign exchange risk on the non-USD LTD[d]	1 basis point parallel tightening of cross currency basis	**(16)**	(17)
Non-USD LTD hedges foreign currency ("FX") exposure	Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges[d]	10% depreciation of currency	**11**	15
Derivatives – funding spread risk	Impact of changes in the spread related to derivatives FVA[b]	1 basis point parallel increase in spread	**(6)**	(5)
Fair value option elected liabilities – funding spread risk	Impact of changes in the spread related to fair value option elected liabilities DVA[d]	1 basis point parallel increase in spread	**33**	29
Fair value option elected liabilities – interest rate sensitivity	Interest rate sensitivity on fair value option liabilities resulting from a change in the Firm's own credit spread[d]	1 basis point parallel increase in spread	**1**	(2)
	Interest rate sensitivity related to risk management of changes in the Firm's own credit spread on fair value option liabilities[b]	1 basis point parallel increase in spread	**(1)**	2

(a) Excludes equity securities without readily determinable fair values that are measured under the measurement alternative. Refer to Note 2 for additional information.
(b) Impact recognized through net revenue.
(c) In the second quarter of 2020, the Firm refined the approach for risk management of certain deferred compensation, which is recognized through noninterest expense. As a result, certain deferred compensation and related hedges are now included in other sensitivity-based measures.
(d) Impact recognized through OCI.
(e) Prior-period amount has been revised to conform with the current presentation. In the absence of the scope refinement, Other debt and equity would have been $(213) million and $(192) million for the periods ending September 30, 2020 and December 31, 2019, respectively. Refer to Total VaR on page 81 for additional information.

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 127–128 of JPMorgan Chase's 2019 Form 10-K for a further discussion of the Firm's country risk management.

COVID-19 Pandemic

Country Risk Management continues to monitor the impact of the COVID-19 pandemic on countries to which the Firm has exposure, leveraging tailored analysis and existing stress testing, exposure reporting and controls.

Risk Reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of September 30, 2020 and their comparative exposures as of December 31, 2019. The selection of countries represents the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to client activity and market flows.

The overall increase in top 20 exposures was predominantly driven by client activity and demand for liquidity, relative to the period ending December 31, 2019. This resulted in an increase in cash placements primarily with the central banks of Germany, the United Kingdom and Australia.

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

(in billions)	September 30, 2020				December 31, 2019[e]
	Lending and deposits[b]	Trading and investing[c]	Other[d]	Total exposure	Total exposure
Germany	**$ 83.7**	**$ 3.5**	**$ 0.5**	**$ 87.7**	$ 51.6
United Kingdom	**45.2**	**10.1**	**1.7**	**57.0**	42.4
Japan	**35.7**	**8.8**	**0.3**	**44.8**	43.8
France	**13.4**	**6.5**	**1.1**	**21.0**	18.1
China	**9.7**	**9.0**	**1.4**	**20.1**	19.2
Australia	**10.0**	**6.0**	**0.4**	**16.4**	11.7
Switzerland	**11.8**	**0.5**	**3.8**	**16.1**	18.3
Canada	**11.8**	**0.9**	**0.1**	**12.8**	13.2
Luxembourg	**10.8**	**0.9**	**–**	**11.7**	12.9
Netherlands	**5.4**	**0.2**	**5.7**	**11.3**	9.0
Brazil	**4.3**	**6.4**	**–**	**10.7**	7.2
India	**4.5**	**5.1**	**1.1**	**10.7**	11.3
Italy	**5.0**	**5.1**	**0.3**	**10.4**	6.8
Singapore	**4.9**	**2.2**	**1.1**	**8.2**	6.8
South Korea	**3.8**	**3.4**	**0.4**	**7.6**	6.4
Spain	**3.2**	**3.0**	**0.1**	**6.3**	5.8
Saudi Arabia	**4.9**	**0.7**	**–**	**5.6**	5.2
Hong Kong SAR	**3.0**	**1.7**	**0.6**	**5.3**	5.1
Mexico	**4.3**	**0.5**	**–**	**4.8**	4.7
Belgium	**2.6**	**1.8**	**0.1**	**4.5**	3.2

(a) Country exposures presented in the table reflect 89% and 88% of total firmwide non-U.S. exposure, where exposure is attributed to a specific country, at September 30, 2020, and December 31, 2019, respectively.
(b) Lending and deposits includes loans and accrued interest receivable, lending related commitments (net of eligible collateral and the allowance for credit losses), deposits with banks (including central banks), acceptances, other monetary assets, and issued letters of credit net of participations. Excludes intra-day and operating exposures, such as those from settlement and clearing activities.
(c) 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.
(d) Predominantly includes physical commodity inventory.
(e) The country rankings presented in the table as of December 31, 2019, are based on the country rankings of the corresponding exposures at September 30, 2020, not actual rankings of such exposures at December 31, 2019.

Operational risk is the risk associated with an adverse outcome resulting from inadequate or failed internal processes or systems; human factors; or external events impacting the Firm's processes or systems; it includes compliance, conduct, legal, and estimations and model risk. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, cybersecurity attacks, inappropriate employee behavior, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their agreements. Operational Risk Management attempts to manage operational risk at appropriate levels in light of the Firm's financial position, the characteristics of its businesses, and the markets and regulatory environments in which it operates. Refer to Operational Risk Management on pages 129-131 of JPMorgan Chase's 2019 Form 10-K for a discussion of the Firm's Operational Risk Management.

Subcategories and examples of operational risks

Operational risk can manifest itself in various ways. Operational risk subcategories such as Compliance risk, Conduct risk, Legal risk, and Estimations and Model risk as well as other operational risks, can lead to losses which are captured through the Firm's operational risk measurement processes. Refer to Compliance Risk Management on page 132, Conduct Risk Management on page 133, Legal Risk Management on page 134 and Estimations and Model Risk Management on page 135 of JPMorgan Chase's 2019 Form 10-K for more information. Details on other select examples of operational risks are provided below.

Business and Technology Resiliency Risk

Business disruptions can occur due to forces beyond the Firm's control such as severe weather, power or telecommunications loss, accidents, failure of a third party to provide expected services, cyberattack, flooding, transit strikes, terrorism, health emergencies, the spread of infectious diseases or pandemics. The Firmwide resiliency program is intended to enable the Firm to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption, while prioritizing the health and safety of employees and customers. The program includes governance, awareness training, and testing of recovery strategies, as well as strategic and tactical initiatives to identify, assess, and manage business interruption and public safety risks. The strength and proficiency of the Firmwide resiliency program has played an integral role in maintaining the Firm's business operations during and after various events.

COVID-19 Pandemic

The Firm's Technology and Cybersecurity operations continue to monitor the Firm's systems 24 hours a day, seven days a week including responding to threat activity using COVID-19 themes in phishing and other social engineering campaigns.

The Technology function is actively supporting the Firm's response to the impacts of the COVID-19 pandemic, including the Firm's expanded use of remote collaboration tools and platforms. Technology diligently monitors the operational performance of the Firm's infrastructure to support increased market volumes as a result of the COVID-19 pandemic.

ESTIMATIONS AND MODEL RISK MANAGEMENT

Estimations and Model risk, a subcategory of operational risk, is the potential for adverse consequences from decisions based on incorrect or misused estimation outputs.

The Firm uses models and other analytical and judgment based estimations across various businesses and functions. The estimation methods are of varying levels of sophistication and are used for many purposes, such as the valuation of positions, measurement of risk, sizing the allowance for credit losses, assessing regulatory capital requirements, conducting stress testing, and making business decisions.

While models are inherently imprecise, the degree of imprecision or uncertainty can be heightened by the market or economic environment. This is particularly true when the current and forecasted environment is significantly different from the historical macroeconomic environments upon which the models were calibrated, as the Firm has experienced during the COVID-19 pandemic. This uncertainty may necessitate a greater degree of judgment and analytics to inform adjustments to model outputs than in typical periods.

Refer to Critical Accounting Estimates Used by the Firm on pages 88–90 and Note 2 of this Form 10-Q, and Estimations and Model Risk Management section on page 135 of JPMorgan Chase's 2019 Form 10-K for a summary of model-based valuations and other valuation techniques.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

The Firm's allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of the Firm's financial assets measured at amortized cost and certain off-balance sheet lending-related commitments. The allowance for credit losses comprises:

- The allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated),
- The allowance for lending-related commitments, and
- The allowance for credit losses on investment securities, which covers the Firm's HTM and AFS securities.

The allowance for credit losses involves significant judgment on a number of matters including development and weighting of macroeconomic forecasts, incorporation of historical loss experience, assessment of risk characteristics, assignment of risk ratings, valuation of collateral, and the determination of remaining expected life. Refer to Note 10 and Note 13 for further information on these judgments as well as the Firm's policies and methodologies used to determine the Firm's allowance for credit losses.

One of the most significant judgments involved in estimating the Firm's allowance for credit losses relates to the macroeconomic forecasts used to estimate credit losses over the eight-quarter forecast period within the Firm's methodology. The eight-quarter forecast incorporates hundreds of macroeconomic variables ("MEVs") that are relevant for exposures across the Firm, with modeled credit losses being driven primarily by a subset of less than twenty variables. The specific variables that have the greatest effect on the modeled losses of each portfolio vary by portfolio and geography.

- Key MEVs for the consumer portfolio include U.S. unemployment, house price index ("HPI") and U.S. real gross domestic product ("GDP").
- Key MEVs for the wholesale portfolio include U.S. real GDP, U.S. unemployment, U.S. equity prices, 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.

The COVID-19 pandemic has resulted in a weak labor market and weak overall economic conditions that will continue to affect borrowers across the Firm's consumer and wholesale lending portfolios. Significant judgment is required to estimate the severity and duration of the current economic downturn, as well as its potential impact on borrower defaults and loss severities. In particular, macroeconomic conditions and forecasts regarding the duration and severity of the economic downturn caused by the COVID-19 pandemic have been rapidly changing and remain highly uncertain. It is difficult to predict exactly how borrower behavior will be impacted by these changes in economic conditions. The effectiveness of government support, customer assistance and enhanced unemployment benefits should act as mitigants to credit losses, but the extent of the mitigation impact remains uncertain.

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 described on page 77 and in Note 13, the Firm's relative adverse scenario assumes a significantly elevated U.S. unemployment rate through the first half of 2021, averaging 3.0% higher over the eight-quarter forecast, with a peak difference of approximately 4.3% in the first quarter of 2021; lower U.S. real GDP with a slower recovery, remaining nearly 3% lower at the end of the eight-quarter forecast, with a peak difference of nearly 6.8% in the

fourth quarter of 2020; and an 11.5% further deterioration in the national HPI with a trough in the first quarter of 2022.

This analysis is not intended to estimate expected future changes in the allowance for credit losses, for a number of reasons, including:

- the Firm has placed significant weight on its adverse scenarios in estimating its allowance for credit losses as of September 30, 2020, and accordingly, the existing allowance already reflects credit losses beyond those estimated under the central scenario
- 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
- the COVID-19 pandemic has stressed many MEVs at a speed and to degrees not seen in recent history, adding significantly higher degrees of uncertainty around modeled credit loss estimations which use scenarios outside of historical experience
- significant changes in the expected severity and duration of the economic downturn caused by the COVID-19 pandemic, the effects of government support and customer assistance, and the speed of the subsequent recovery could significantly affect the Firm's estimate of expected credit losses irrespective of the estimated sensitivities described below.

To demonstrate the sensitivity of credit loss estimates to macroeconomic forecasts as of September 30, 2020, the Firm compared the modeled estimates under its relative adverse scenario to its central scenario. Without considering the additional weight the Firm has placed on its adverse scenarios or any other offsetting or correlated effects in other qualitative components of the Firm's allowance for credit losses for these lending exposures, the difference between these two scenarios would result in the following:

- An increase of approximately $1 billion for residential real estate loans and lending-related commitments
- An increase of approximately $5 billion for credit card loans
- An increase of approximately $4 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 September 30, 2020.

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 valuation hierarchy. Refer to Note 2 for further information.

September 30, 2020 (in billions, except ratios)	Total assets at fair value	Total level 3 assets
Federal funds sold and securities purchased under resale agreements	$ 284.8	$ –
Securities borrowed	44.5	–
Trading assets:		
Trading-debt and equity instruments	$ 429.2	$ 3.0
Derivative receivables[(a)]	76.6	8.0
Total trading assets	505.8	11.0
AFS securities	389.6	–
Loans	38.2	1.8
MSRs	3.0	3.0
Other	342.7	0.6
Total assets measured at fair value on a recurring basis	1,279.3	16.4
Total assets measured at fair value on a nonrecurring basis	3.5	1.7
Total assets measured at fair value	$ 1,282.8	$ 18.1
Total Firm assets	$ 3,246.1	
Level 3 assets at fair value as a percentage of total Firm assets[(a)]		0.6 %
Level 3 assets at fair value as a percentage of total Firm assets at fair value[(a)]		1.4%

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $8.0 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 valuation 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 technique to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. Refer to Note 2 for a further discussion of the valuation of level 3 instruments, including unobservable inputs used.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. In periods of heightened market volatility and uncertainty judgments are further affected by the wider variation of reasonable valuation estimates, particularly for positions that are less liquid. Refer to Note 2 for a further discussion of valuation adjustments applied by the Firm.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. Refer to Note 2 for a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments.

Goodwill impairment

Management applies significant judgment when testing goodwill for impairment. The goodwill associated with each business combination is allocated to the related reporting units for goodwill impairment testing. Refer to Goodwill impairment on page 137 of JPMorgan Chase's 2019 Form 10-K for a description of the significant valuation judgments associated with goodwill impairment.

Refer to Note 15 for additional information on goodwill, including the goodwill impairment assessment as of September 30, 2020.

Credit card rewards liability

The credit card rewards liability was $7.6 billion and $6.4 billion at September 30, 2020 and December 31, 2019, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets. Refer to pages 137-138 of JPMorgan Chase's 2019 Form 10-K for a description of the significant assumptions and judgments associated with the Firm's credit card rewards liability.

Income taxes

Refer to Income taxes on page 138 of JPMorgan Chase's 2019 Form 10-K for a description of the significant assumptions, judgments and interpretations associated with the accounting for income taxes.

Litigation reserves

Refer to Note 25 of this Form 10-Q, and Note 30 of JPMorgan Chase's 2019 Form 10-K for a description of the significant estimates and judgments associated with establishing litigation reserves.

Financial Accounting Standards Board ("FASB") Standards Adopted since January 1, 2020

Standard	Summary of guidance	Effects on financial statements
Financial Instruments - Credit Losses ("CECL") *Issued June 2016*	• Establishes a single allowance framework for all financial assets measured at amortized cost and certain off-balance sheet credit exposures. This framework requires that management's estimate reflects credit losses over the instrument's remaining expected life and considers expected future changes in macroeconomic conditions. • Eliminates existing guidance for PCI loans, and requires recognition of the nonaccretable difference as an increase to the allowance for expected credit losses on financial assets purchased with more than insignificant credit deterioration since origination, with a corresponding increase in the amortized cost of the related loans. • Requires inclusion of expected recoveries, limited to the cumulative amount of prior write-offs, when estimating the allowance for credit losses for in scope financial assets (including collateral-dependent assets). • Amends existing impairment guidance for AFS securities to incorporate an allowance, which will allow for reversals of credit impairments in the event that the credit of an issuer improves. • Requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption.	• Adopted January 1, 2020. • Refer to Note 1 for further information.
Goodwill *Issued January 2017*	• Requires recognition of an impairment loss when the estimated fair value of a reporting unit falls below its carrying value. • Eliminates the requirement that an impairment loss be recognized only if the estimated implied fair value of the goodwill is below its carrying value.	• Adopted January 1, 2020. • No impact upon adoption as the guidance is to be applied prospectively. • Refer to Note 15 for further information.
Reference Rate Reform *Issued March 2020*	• 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. • Provides an election to account for certain contract amendments related to reference rate reform as modifications rather than extinguishments without the requirement to assess the significance of the amendments. • Allows for changes in critical terms of a hedge accounting relationship without automatic termination of that relationship. Provides various practical expedients and elections designed to allow hedge accounting to continue uninterrupted during the transition period. • Provides a one-time election to transfer securities out of the held-to-maturity classification if certain criteria are met.	• Issued and effective March 12, 2020. • The Firm elected to prospectively apply certain of the practical expedients related to contract modifications and hedge accounting relationships beginning in the third quarter of 2020. While these elections did not have a material impact to the Consolidated Financial Statements, they ease the administrative burden of accounting for contracts impacted by reference rate reform.

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:

- Economic, financial, reputational and other impacts of the COVID-19 pandemic;
- Local, regional and global business, economic and political conditions and geopolitical events;
- Changes in laws 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 income tax laws and regulations;
- 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, including approval of its capital plans by banking regulators;
- 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 and 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 (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Acceptance of the Firm's new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expenses;
- Competitive pressures;
- Changes in the credit quality of the Firm's clients, customers and counterparties;
- Adequacy of the Firm's risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies, including the introduction of new accounting standards;
- 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, pandemics or outbreaks of hostilities, or the effects of climate change, 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 II, Item 1A: Risk Factors in this form 10-Q and Part I, Item 1A: Risk Factors in JPMorgan Chase's 2019 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 Form 10-Ks, Quarterly Reports on Form 10-Qs, or Current Reports on Form 8-K.

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

(in millions, except per share data)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Revenue				
Investment banking fees	**$ 2,187**	$ 1,967	**$ 6,903**	$ 5,658
Principal transactions	**4,142**	3,449	**14,700**	11,239
Lending- and deposit-related fees[(a)]	**1,647**	1,671	**4,784**	4,854
Asset management, administration and commissions[(a)]	**4,470**	4,306	**13,276**	12,607
Investment securities gains	**473**	78	**732**	135
Mortgage fees and related income	**1,087**	887	**2,324**	1,562
Card income[(b)]	**1,169**	1,233	**3,138**	3,741
Other income	**959**	1,472	**3,157**	4,239
Noninterest revenue	**16,134**	15,063	**49,014**	44,035
Interest income	**14,700**	21,121	**49,973**	64,113
Interest expense	**1,687**	6,893	**8,668**	21,034
Net interest income	**13,013**	14,228	**41,305**	43,079
Total net revenue	**29,147**	29,291	**90,319**	87,114
Provision for credit losses	**611**	1,514	**19,369**	4,158
Noninterest expense				
Compensation expense	**8,630**	8,583	**27,034**	26,067
Occupancy expense	**1,142**	1,110	**3,288**	3,238
Technology, communications and equipment expense	**2,564**	2,494	**7,732**	7,236
Professional and outside services	**2,178**	2,056	**6,205**	6,307
Marketing[(b)]	**470**	895	**1,751**	2,504
Other expense	**1,891**	1,234	**4,598**	3,624
Total noninterest expense	**16,875**	16,372	**50,608**	48,976
Income before income tax expense	**11,661**	11,405	**20,342**	33,980
Income tax expense	**2,218**	2,325	**3,347**	6,069
Net income	**$ 9,443**	$ 9,080	**$ 16,995**	$ 27,911
Net income applicable to common stockholders	**$ 9,015**	$ 8,606	**$ 15,712**	$ 26,551
Net income per common share data				
Basic earnings per share	**$ 2.93**	$ 2.69	**$ 5.10**	$ 8.17
Diluted earnings per share	**2.92**	2.68	**5.09**	8.15
Weighted-average basic shares	**3,077.8**	3,198.5	**3,083.3**	3,248.7
Weighted-average diluted shares	**3,082.8**	3,207.2	**3,088.1**	3,258.0

(a) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.
(b) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.

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 September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Net income	**$ 9,443**	$ 9,080	**$ 16,995**	$ 27,911
Other comprehensive income/(loss), after-tax				
Unrealized gains/(losses) on investment securities	**514**	479	**4,377**	2,986
Translation adjustments, net of hedges	**127**	(165)	**(61)**	(90)
Fair value hedges	**(69)**	(1)	**35**	87
Cash flow hedges	**(70)**	195	**2,629**	430
Defined benefit pension and OPEB plans	**(12)**	46	**14**	123
DVA on fair value option elected liabilities	**(339)**	132	**377**	(229)
Total other comprehensive income/(loss), after-tax	**151**	686	**7,371**	3,307
Comprehensive income	**$ 9,594**	$ 9,766	**$ 24,366**	$ 31,218

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)	September 30, 2020	December 31, 2019
Assets		
Cash and due from banks	**$ 20,816**	$ 21,704
Deposits with banks	**466,706**	241,927
Federal funds sold and securities purchased under resale agreements (included **$284,763** and $14,561 at fair value)	**319,849**	249,157
Securities borrowed (included **$44,493** and $6,237 at fair value)	**142,441**	139,758
Trading assets (included assets pledged of **$152,341** and $111,522)[a]	**505,822**	369,687
Available-for-sale securities (amortized cost of **$382,099** and $345,306; included assets pledged of **$34,285** and $10,325)	**389,583**	350,699
Held-to-maturity securities (net of allowance for credit losses of **$120**)	**141,553**	47,540
Investment securities, net of allowance for credit losses	**531,136**	398,239
Loans (included **$38,220** and $44,955 at fair value)[a]	**989,740**	997,620
Allowance for loan losses	**(30,814)**	(13,123)
Loans, net of allowance for loan losses	**958,926**	984,497
Accrued interest and accounts receivable	**76,945**	72,861
Premises and equipment	**26,672**	25,813
Goodwill, MSRs and other intangible assets	**51,594**	53,341
Other assets (included **$14,088** and $12,676 at fair value and assets pledged of **$3,227** and $3,349)[a]	**145,169**	130,395
Total assets[b]	**$ 3,246,076**	$ 2,687,379
Liabilities		
Deposits (included **$19,314** and $28,589 at fair value)	**$ 2,001,416**	$ 1,562,431
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$180,904** and $549 at fair value)	**236,440**	183,675
Short-term borrowings (included **$19,029** and $5,920 at fair value)	**41,992**	40,920
Trading liabilities	**162,493**	119,277
Accounts payable and other liabilities (included **$3,297** and $3,728 at fair value)	**234,256**	210,407
Beneficial interests issued by consolidated VIEs (included **$39** and $36 at fair value)	**19,191**	17,841
Long-term debt (included **$72,986** and $75,745 at fair value)	**279,175**	291,498
Total liabilities[b]	**2,974,963**	2,426,049
Commitments and contingencies (refer to Notes 23, 24 and 25)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares; issued **3,006,250** and 2,699,250 shares)	**30,063**	26,993
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**88,289**	88,522
Retained earnings	**228,014**	223,211
Accumulated other comprehensive income/(loss)	**8,940**	1,569
Shares held in restricted stock units ("RSU") Trust, at cost (**236,476** and 472,953 shares)	**(11)**	(21)
Treasury stock, at cost (**1,056,730,832** and 1,020,912,567 shares)	**(88,287)**	(83,049)
Total stockholders' equity	**271,113**	261,330
Total liabilities and stockholders' equity	**$ 3,246,076**	$ 2,687,379

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. Refer to Note 1 for further information.

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

(b) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at September 30, 2020, and December 31, 2019. 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 14 for a further discussion.

(in millions)	September 30, 2020	December 31, 2019
Assets		
Trading assets	**$ 2,467**	$ 2,633
Loans	**36,974**	42,931
All other assets	**744**	881
Total assets	**$ 40,185**	$ 46,445
Liabilities		
Beneficial interests issued by consolidated VIEs	**$ 19,191**	$ 17,841
All other liabilities	**236**	447
Total liabilities	**$ 19,427**	$ 18,288

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)

	Three months ended September 30,		Nine months ended September 30,	
(in millions, except per share data)	**2020**	2019	**2020**	2019
Preferred stock				
Balance at the beginning of the period	**$ 30,063**	$ 26,993	**$ 26,993**	$ 26,068
Issuance	**–**	2,250	**4,500**	4,100
Redemption	**–**	(880)	**(1,430)**	(1,805)
Balance at September 30	**30,063**	28,363	**30,063**	28,363
Common stock				
Balance at the beginning and end of the period	**4,105**	4,105	**4,105**	4,105
Additional paid-in capital				
Balance at the beginning of the period	**88,125**	88,359	**88,522**	89,162
Shares issued and commitments to issue common stock for employee shared-based compensation awards, and related tax effects	**215**	156	**(177)**	(604)
Other	**(51)**	(3)	**(56)**	(46)
Balance at September 30	**88,289**	88,512	**88,289**	88,512
Retained earnings				
Balance at the beginning of the period	**221,732**	212,093	**223,211**	199,202
Cumulative effect of changes in accounting principle	**–**	–	**(2,650)**	62
Net income	**9,443**	9,080	**16,995**	27,911
Dividends declared:				
Preferred stock	**(381)**	(423)	**(1,203)**	(1,201)
Common stock (**$0.90** and $0.90 per share and **$2.70** and $2.50 per share, respectively)	**(2,780)**	(2,862)	**(8,339)**	(8,086)
Balance at September 30	**228,014**	217,888	**228,014**	217,888
Accumulated other comprehensive income/(loss)				
Balance at the beginning of the period	**8,789**	1,114	**1,569**	(1,507)
Other comprehensive income/(loss), after-tax	**151**	686	**7,371**	3,307
Balance at September 30	**8,940**	1,800	**8,940**	1,800
Shares held in RSU Trust, at cost				
Balance at the beginning of the period	**(11)**	(21)	**(21)**	(21)
Liquidation of RSU Trust	**–**	–	**10**	–
Balance at September 30	**(11)**	(21)	**(11)**	(21)
Treasury stock, at cost				
Balance at the beginning of the period	**(88,337)**	(69,428)	**(83,049)**	(60,494)
Repurchase	**–**	(6,949)	**(6,397)**	(17,250)
Reissuance	**50**	78	**1,159**	1,445
Balance at September 30	**(88,287)**	(76,299)	**(88,287)**	(76,299)
Total stockholders' equity	**$ 271,113**	$ 264,348	**$ 271,113**	$ 264,348

Effective January 1, 2020, the Firm adopted the CECL 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)	Nine months ended September 30, 2020	2019
Operating activities		
Net income	**$ 16,995**	$ 27,911
Adjustments to reconcile net income to net cash used in operating activities:		
Provision for credit losses	**19,369**	4,158
Depreciation and amortization	**6,487**	6,229
Deferred tax (benefit)/expense	**(5,436)**	(440)
Other	**1,245**	1,645
Originations and purchases of loans held-for-sale[(a)]	**(112,142)**	(119,583)
Proceeds from sales, securitizations and paydowns of loans held-for-sale[(a)]	**120,786**	122,208
Net change in:		
Trading assets[(a)]	**(145,124)**	(92,041)
Securities borrowed	**(2,509)**	(26,162)
Accrued interest and accounts receivable	**(4,398)**	(16,089)
Other assets[(a)]	**(28,548)**	(21,023)
Trading liabilities	**63,516**	12,774
Accounts payable and other liabilities	**16,608**	19,661
Other operating adjustments[(a)]	**1,293**	2,033
Net cash (used in) operating activities	**(51,858)**	(78,719)
Investing activities		
Net change in:		
Federal funds sold and securities purchased under resale agreements	**(70,597)**	64,207
Held-to-maturity securities:		
Proceeds from paydowns and maturities	**11,498**	2,239
Purchases	**(5,528)**	(11,682)
Available-for-sale securities:		
Proceeds from paydowns and maturities	**43,709**	41,378
Proceeds from sales	**110,354**	43,460
Purchases	**(281,147)**	(200,262)
Proceeds from sales and securitizations of loans held-for-investment	**18,509**	52,739
Other changes in loans, net[(a)]	**(21,606)**	(24,297)
All other investing activities, net	**(3,398)**	(4,283)
Net cash (used in) investing activities	**(198,206)**	(36,501)
Financing activities		
Net change in:		
Deposits	**452,454**	77,147
Federal funds purchased and securities loaned or sold under repurchase agreements	**52,745**	65,428
Short-term borrowings	**1,945**	(20,577)
Beneficial interests issued by consolidated VIEs	**2,838**	5,017
Proceeds from long-term borrowings	**64,243**	45,155
Payments of long-term borrowings	**(90,481)**	(51,936)
Proceeds from issuance of preferred stock	**4,500**	4,100
Redemption of preferred stock	**(1,430)**	(1,805)
Treasury stock repurchased	**(6,517)**	(17,250)
Dividends paid	**(9,551)**	(9,056)
All other financing activities, net	**(59)**	(217)
Net cash provided by financing activities	**470,687**	96,006
Effect of exchange rate changes on cash and due from banks and deposits with banks	**3,268**	(2,982)
Net increase/(decrease) in cash and due from banks and deposits with banks	**223,891**	(22,196)
Cash and due from banks and deposits with banks at the beginning of the period	**263,631**	278,793
Cash and due from banks and deposits with banks at the end of the period	**$ 487,522**	$ 256,597
Cash interest paid	**$ 11,576**	$ 20,790
Cash income taxes paid, net	**6,124**	3,478

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

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 global financial services firm and one of the largest banking institutions 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 26 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 2019 Form 10-K.

Certain amounts reported in prior periods have been reclassified 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 2019 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 when the specified conditions are met. Refer to Note 1 of JPMorgan Chase's 2019 Form 10-K for further information on offsetting assets and liabilities.

Accounting standard adopted January 1, 2020

Financial Instruments – Credit Losses ("CECL")

The adoption of this guidance established a single allowance framework for all financial assets measured at amortized cost and certain off-balance sheet credit exposures. This framework requires that management's estimate reflects credit losses over the instrument's remaining expected life and considers expected future changes in macroeconomic conditions. Refer to Note 13 for further information.

The following table presents the impacts to the allowance for credit losses and retained earnings upon adoption of this guidance on January 1, 2020:

(in billions)	December 31, 2019	CECL adoption impact	January 1, 2020
Allowance for credit losses			
Consumer, excluding credit card[(a)]	$ 2.6	$ 0.4	$ 3.0
Credit card	5.7	5.5	11.2
Wholesale[(a)]	6.0	(1.6)	4.4
Firmwide	$ 14.3	$ 4.3	$ 18.6
Retained earnings			
Firmwide allowance increase		$ 4.3	
Balance sheet reclassification[(b)]		(0.8)	
Total pre-tax impact		3.5	
Tax effect		(0.8)	
Decrease to retained earnings		$ 2.7	

(a) In conjunction with the adoption of CECL, the Firm reclassified risk-rated business banking and auto dealer loans and lending-related commitments held in CCB from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Accordingly, $0.6 billion of the allowance for credit losses at December 31, 2019 and $(0.2) billion of the CECL adoption impact were reclassified.

(b) Represents the recognition of the nonaccretable difference on purchased credit deteriorated loans and the Firm's election to recognize the reserve for uncollectible accrued interest on credit card loans in the allowance, both of which resulted in a corresponding increase to loans.

Securities Financing Agreements

As permitted by the guidance, the Firm elected the fair value option for certain securities financing agreements. The difference between their carrying amount and fair value was immaterial and was recorded as part of the Firm's cumulative-effect adjustment. Refer to Note 11 for further information.

Investment securities

Upon adoption, HTM securities are presented net of an allowance for credit losses. The guidance also amended the previous other-than-temporary impairment ("OTTI") model for AFS securities to incorporate an allowance. Refer to Note 10 for further information.

Credit quality disclosures

As a result of the adoption of this guidance, the Firm expanded credit quality disclosures for financial assets measured at amortized cost particularly within the retained loan portfolios. Refer to Note 12 for further information.

PCD loans

The adoption resulted in a change in the accounting for PCI loans, which are considered purchased credit deteriorated ("PCD") loans under CECL. Upon adoption, the Firm recognized the nonaccretable difference on PCD loans in the allowance, which resulted in a corresponding increase to loans. PCD loans are subject to the Firm's nonaccrual and charge-off policies and are now reported in the consumer, excluding credit card portfolio's residential real estate loan class. Refer to Note 12 for further information.

Changes in credit portfolio segments and classes

In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. The Firm also revised its loan classes. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 12 for further information.

Accrued interest receivables

As permitted by the guidance, the Firm elected to continue classifying accrued interest on loans, including accrued but unbilled interest on credit card loans, and investment securities in accrued interest and accounts receivables on the Consolidated balance sheets. For credit card loans, accrued interest once billed is then recognized in the loan balances, with the related allowance recorded in the allowance for credit losses. Changes in the allowance for credit losses on accrued interest on credit card loans are recognized in the provision for credit losses and charge-offs are recognized by reversing interest income. For other loans and securities, the Firm generally does not recognize an allowance for credit losses on accrued interest receivables, consistent with its policy to write them off no later than 90 days past due by reversing interest income.

Capital transition provisions

As disclosed in the Firm's 2019 Form 10-K, the Firm initially elected to phase-in the January 1, 2020 ("day 1") CECL adoption impact to retained earnings of $2.7 billion to CET1 capital, at 25% per year in each of 2020 to 2023. As part of their response to the impact of the COVID-19 pandemic, on March 31, 2020, the federal banking agencies issued an interim final rule (issued as final on August 26, 2020) that provided the option to delay the effects of CECL on regulatory capital for two years, followed by a three-year transition period ("CECL capital transition provisions"). Refer to Note 22 for further information.

Note 2 – Fair value measurement

Refer to Note 2 of JPMorgan Chase's 2019 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 September 30, 2020, and December 31, 2019, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
September 30, 2020 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments[g]	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 284,763	$ –	$ –	$ 284,763
Securities borrowed	–	44,493	–	–	44,493
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	–	73,116	507	–	73,623
Residential - nonagency	–	2,459	25	–	2,484
Commercial - nonagency	–	1,270	2	–	1,272
Total mortgage-backed securities	–	76,845	534	–	77,379
U.S. Treasury, GSEs and government agencies[a]	94,565	12,020	–	–	106,585
Obligations of U.S. states and municipalities	–	7,485	8	–	7,493
Certificates of deposit, bankers' acceptances and commercial paper	–	2,020	–	–	2,020
Non-U.S. government debt securities	32,221	40,926	165	–	73,312
Corporate debt securities	–	21,545	649	–	22,194
Loans[b]	–	5,548	730	–	6,278
Asset-backed securities	–	2,416	33	–	2,449
Total debt instruments	126,786	168,805	2,119	–	297,710
Equity securities	106,856	242	186	–	107,284
Physical commodities[c]	5,511	4,307	–	–	9,818
Other	–	13,679	653	–	14,332
Total debt and equity instruments[d]	239,153	187,033	2,958	–	429,144
Derivative receivables:					
Interest rate	1,569	394,734	2,176	(361,421)	37,058
Credit	–	14,381	763	(13,751)	1,393
Foreign exchange	180	154,535	773	(144,060)	11,428
Equity	–	69,452	4,083	(54,599)	18,936
Commodity	–	22,048	208	(14,445)	7,811
Total derivative receivables	1,749	655,150	8,003	(588,276)	76,626
Total trading assets[e]	240,902	842,183	10,961	(588,276)	505,770
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	5	99,589	–	–	99,594
Residential - nonagency	–	11,423	–	–	11,423
Commercial - nonagency	–	2,936	–	–	2,936
Total mortgage-backed securities	5	113,948	–	–	113,953
U.S. Treasury and government agencies	216,579	–	–	–	216,579
Obligations of U.S. states and municipalities	–	20,883	–	–	20,883
Certificates of deposit	–	–	–	–	–
Non-U.S. government debt securities	11,905	9,132	–	–	21,037
Corporate debt securities	–	271	–	–	271
Asset-backed securities:					
Collateralized loan obligations	–	10,202	–	–	10,202
Other	–	6,658	–	–	6,658
Total available-for-sale securities	228,489	161,094	–	–	389,583
Loans [b][f]	–	36,414	1,806	–	38,220
Mortgage servicing rights	–	–	3,016	–	3,016
Other assets[b][e]	7,676	5,145	658	–	13,479
Total assets measured at fair value on a recurring basis	$ 477,067	$ 1,374,092	$ 16,441	$ (588,276)	$ 1,279,324
Deposits	$ –	$ 16,258	$ 3,056	$ –	$ 19,314
Federal funds purchased and securities loaned or sold under repurchase agreements	–	180,904	–	–	180,904
Short-term borrowings	–	16,421	2,608	–	19,029
Trading liabilities:					
Debt and equity instruments[d]	85,147	19,631	57	–	104,835
Derivative payables:					
Interest rate	1,352	355,857	2,148	(346,886)	12,471
Credit	–	15,605	812	(14,175)	2,242
Foreign exchange	180	163,589	1,449	(149,705)	15,513
Equity	–	66,746	7,186	(54,576)	19,356
Commodity	–	22,019	829	(14,772)	8,076
Total derivative payables	1,532	623,816	12,424	(580,114)	57,658
Total trading liabilities	86,679	643,447	12,481	(580,114)	162,493
Accounts payable and other liabilities	2,945	308	44	–	3,297
Beneficial interests issued by consolidated VIEs	–	39	–	–	39
Long-term debt	–	50,770	22,216	–	72,986
Total liabilities measured at fair value on a recurring basis	$ 89,624	$ 908,147	$ 40,405	$ (580,114)	$ 458,062

December 31, 2019 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments[g]	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 14,561	$ –	$ –	$ 14,561
Securities borrowed	–	6,237	–	–	6,237
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	–	44,510	797	–	45,307
Residential – nonagency	–	1,977	23	–	2,000
Commercial – nonagency	–	1,486	4	–	1,490
Total mortgage-backed securities	–	47,973	824	–	48,797
U.S. Treasury, GSEs and government agencies[a]	78,289	10,295	–	–	88,584
Obligations of U.S. states and municipalities	–	6,468	10	–	6,478
Certificates of deposit, bankers' acceptances and commercial paper	–	252	–	–	252
Non-U.S. government debt securities	26,600	27,169	155	–	53,924
Corporate debt securities	–	17,956	558	–	18,514
Loans[b]	–	6,340	673	–	7,013
Asset-backed securities	–	2,593	37	–	2,630
Total debt instruments	104,889	119,046	2,257	–	226,192
Equity securities	71,890	244	196	–	72,330
Physical commodities[c]	3,638	3,579	–	–	7,217
Other	–	13,896	232	–	14,128
Total debt and equity instruments[d]	180,417	136,765	2,685	–	319,867
Derivative receivables:					
Interest rate	721	311,173	1,400	(285,873)	27,421
Credit	–	14,252	624	(14,175)	701
Foreign exchange	117	137,938	432	(129,482)	9,005
Equity	–	43,642	2,085	(39,250)	6,477
Commodity	–	17,058	184	(11,080)	6,162
Total derivative receivables	838	524,063	4,725	(479,860)	49,766
Total trading assets[e]	181,255	660,828	7,410	(479,860)	369,633
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. GSEs and government agencies[a]	–	110,117	–	–	110,117
Residential – nonagency	–	12,989	1	–	12,990
Commercial – nonagency	–	5,188	–	–	5,188
Total mortgage-backed securities	–	128,294	1	–	128,295
U.S. Treasury and government agencies	139,436	–	–	–	139,436
Obligations of U.S. states and municipalities	–	29,810	–	–	29,810
Certificates of deposit	–	77	–	–	77
Non-U.S. government debt securities	12,966	8,821	–	–	21,787
Corporate debt securities	–	845	–	–	845
Asset-backed securities:					
Collateralized loan obligations	–	24,991	–	–	24,991
Other	–	5,458	–	–	5,458
Total available-for-sale securities	152,402	198,296	1	–	350,699
Loans[b][f]	–	44,439	516	–	44,955
Mortgage servicing rights	–	–	4,699	–	4,699
Other assets[b][e]	7,305	3,824	917	–	12,046
Total assets measured at fair value on a recurring basis	$ 340,962	$ 928,185	$ 13,543	$ (479,860)	$ 802,830
Deposits	$ –	$ 25,229	$ 3,360	$ –	$ 28,589
Federal funds purchased and securities loaned or sold under repurchase agreements	–	549	–	–	549
Short-term borrowings	–	4,246	1,674	–	5,920
Trading liabilities:					
Debt and equity instruments[d]	59,047	16,481	41	–	75,569
Derivative payables:					
Interest rate	795	276,746	1,732	(270,670)	8,603
Credit	–	14,358	763	(13,469)	1,652
Foreign exchange	109	143,960	1,039	(131,950)	13,158
Equity	–	47,261	5,480	(40,204)	12,537
Commodity	–	19,685	200	(12,127)	7,758
Total derivative payables	904	502,010	9,214	(468,420)	43,708
Total trading liabilities	59,951	518,491	9,255	(468,420)	119,277
Accounts payable and other liabilities	3,231	452	45	–	3,728
Beneficial interests issued by consolidated VIEs	–	36	–	–	36
Long-term debt	–	52,406	23,339	–	75,745
Total liabilities measured at fair value on a recurring basis	$ 63,182	$ 601,409	$ 37,673	$ (468,420)	$ 233,844

(a) At September 30, 2020, and December 31, 2019, included total U.S. GSE obligations of $109.5 billion and $104.5 billion, respectively, which were mortgage-related.

(b) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

(c) Physical commodities inventories are generally accounted for at the lower of cost or net realizable value. "Net realizable value" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, net realizable value approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when net realizable value is below cost), the carrying value of physical commodities

approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. Refer to Note 5 for a further discussion of the Firm's hedge accounting relationships. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

(e) 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 September 30, 2020, and December 31, 2019, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $661 million and $684 million, respectively. Included in these balances at September 30, 2020, and December 31, 2019, were trading assets of $52 million and $54 million, respectively, and other assets of $609 million and $630 million, respectively.

(f) At September 30, 2020, and December 31, 2019, included within loans were $15.6 billion and $19.8 billion, respectively, of residential first-lien mortgages, and $5.2 billion and $8.2 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 $8.6 billion and $13.6 billion, respectively.

(g) 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 2019 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]

September 30, 2020							
Product/Instrument	**Fair value** (in millions)	**Principal valuation technique**	**Unobservable inputs[g]**	**Range of input values**			**Average[i]**
Residential mortgage-backed securities and loans[b]	$ 1,249	Discounted cash flows	Yield	(2)%	–	18%	5%
			Prepayment speed	0%	–	45%	10%
			Conditional default rate	0%	–	30%	13%
			Loss severity	0%	–	107%	9%
Commercial mortgage-backed securities and loans[c]	451	Market comparables	Price	$0	–	$100	$83
Obligations of U.S. states and municipalities	8	Market comparables	Price	$81	–	$100	$97
Corporate debt securities	649	Market comparables	Price	$3	–	$130	$73
Loans[d]	1,370	Market comparables	Price	$2	–	$108	$76
Asset-backed securities	33	Market comparables	Price	$1	–	$95	$61
Net interest rate derivatives	(6)	Option pricing	Interest rate volatility	8bps	–	517bps	115bps
			Interest rate spread volatility	11bps	–	23bps	15bps
			Interest rate correlation	(65)%	–	95%	43%
			IR-FX correlation	(35)%	–	50%	0%
	34	Discounted cash flows	Prepayment speed	3%	–	30%	10%
Net credit derivatives	(87)	Discounted cash flows	Credit correlation	32%	–	64%	47%
			Credit spread	6bps	–	1,360 bps	459bps
			Recovery rate	0%	–	70%	46%
			Conditional default rate	2%	–	92%	32%
			Loss severity		100%		100%
	38	Market comparables	Price	$0	–	$115	$71
Net foreign exchange derivatives	(527)	Option pricing	IR-FX correlation	(50)%	–	65%	19%
	(149)	Discounted cash flows	Prepayment speed		9%		9%
Net equity derivatives	(3,103)	Option pricing	Forward equity price[h]	67%	–	105%	99%
			Equity volatility	3%	–	119%	35%
			Equity correlation	45%	–	100%	83%
			Equity-FX correlation	(77)%	–	55%	(23)%
			Equity-IR correlation	20%	–	35%	26%
Net commodity derivatives	(621)	Option pricing	Forward industrial metal price	$1,551 / MT	–	$2,049 / MT	$1,920 / MT
			Forward power price	$14 / MWH	–	$65 / MWH	$23 / MWH
			Commodity volatility	5%	–	94%	10%
			Commodity correlation	(45)%	–	95%	34%
MSRs	3,016	Discounted cash flows	Refer to Note 15				
Other assets	623	Discounted cash flows	Credit spread		45bps		45bps
			Yield	4%		30%	7%
	688	Market comparables	Price	$29	–	$122	$39
Long-term debt, short-term borrowings, and deposits[e]	27,880	Option pricing	Interest rate volatility	8bps	–	517bps	115bps
			Interest rate correlation	(65)%	–	95%	43%
			IR-FX correlation	(35)%	–	50%	0%
			Equity correlation	45%	–	100%	83%
			Equity-FX correlation	(77)%	–	55%	(23)%
			Equity-IR correlation	20%	–	35%	26%
Other level 3 assets and liabilities, net[f]	250						

(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 $507 million, nonagency securities of $25 million and non-trading loans of $717 million.
(c) Comprises nonagency securities of $2 million, trading loans of $44 million and non-trading loans of $405 million.
(d) Comprises trading loans of $686 million and non-trading loans of $684 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 level 3 assets and liabilities that 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 2019 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 and nine months ended September 30, 2020 and 2019. 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.

Three months ended September 30, 2020 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2020
	Fair value at July 1, 2020	Total realized/ unrealized gains/(losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2020	
Assets:[a]									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	$ 469	$ (4)	$ 110	$ (28)	$ (40)	$ –	$ –	$ 507	$ (2)
Residential – nonagency	23	–	8	(2)	(1)	–	(3)	25	–
Commercial – nonagency	2	–	–	–	–	–	–	2	–
Total mortgage-backed securities	494	(4)	118	(30)	(41)	–	(3)	534	(2)
Obligations of U.S. states and municipalities	8	–	–	–	–	–	–	8	–
Non-U.S. government debt securities	167	6	25	(23)	(2)	–	(8)	165	6
Corporate debt securities	946	45	114	(33)	(225)	4	(202)	649	45
Loans[b]	905	22	240	(173)	(21)	69	(312)	730	8
Asset-backed securities	39	3	5	(21)	(2)	9	–	33	–
Total debt instruments	2,559	72	502	(280)	(291)	82	(525)	2,119	57
Equity securities	191	24	13	(104)	–	104	(42)	186	29
Other	379	75	203	(4)	(2)	2	–	653	77
Total trading assets – debt and equity instruments	3,129	171 [d]	718	(388)	(293)	188	(567)	2,958	163 [d]
Net derivative receivables:[c]									
Interest rate	(104)	657	15	(30)	(647)	35	102	28	323
Credit	(137)	(62)	22	(16)	154	(12)	2	(49)	(21)
Foreign exchange	(595)	(57)	7	(7)	(34)	7	3	(676)	(90)
Equity	(2,036)	(1,437)	323	(384)	29	33	369	(3,103)	(1,051)
Commodity	(297)	15	11	(79)	36	(302)	(5)	(621)	39
Total net derivative receivables	(3,169)	(884) [d]	378	(516)	(462)	(239)	471	(4,421)	(800) [d]
Available-for-sale securities:									
Mortgage-backed securities	–	–	–	–	–	–	–	–	–
Total available-for-sale securities	–	–	–	–	–	–	–	–	–
Loans[b]	1,874	(44) [d]	197	(44)	(324)	316	(169)	1,806	(44) [d]
Mortgage servicing rights	3,080	34 [e]	221	(104)	(215)	–	–	3,016	34 [e]
Other assets[b]	701	(21) [d]	5	–	(27)	–	–	658	32 [d]

Three months ended September 30, 2020 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2020
	Fair value at July 1, 2020	Total realized/ unrealized (gains)/losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2020	
Liabilities:[a]										
Deposits	$ 3,217	$ 43 [d][f]	$ –	$ –	$ 170	$ (110)	$ –	$ (264)	$ 3,056	$ 87 [d][f]
Short-term borrowings	2,305	(47) [d][f]	–	–	1,421	(1,093)	25	(3)	2,608	(47) [d][f]
Trading liabilities – debt and equity instruments	59	(2) [d]	(5)	5	–	1	3	(4)	57	(3) [d]
Accounts payable and other liabilities	91	3 [d]	(62)	4	–	–	8	–	44	3 [d]
Beneficial interests issued by consolidated VIEs	–	–	–	–	–	–	–	–	–	–
Long-term debt	22,728	766 [d][f]	–	–	1,225	(2,493)	78	(88)	22,216	646 [d][f]

Three months ended September 30, 2019 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2019
	Fair value at July 1, 2019	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2019	
Assets:[a]									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	$ 617	$ (71)	$ 424	$(104)	$ (45)	$ –	$ (10)	$ 811	$ (70)
Residential – nonagency	42	–	2	(3)	–	–	(17)	24	(1)
Commercial – nonagency	9	–	3	(5)	–	–	(2)	5	–
Total mortgage-backed securities	668	(71)	429	(112)	(45)	–	(29)	840	(71)
Obligations of U.S. states and municipalities	680	(2)	27	(77)	(1)	–	–	627	(2)
Non-U.S. government debt securities	190	(1)	40	(74)	–	3	(12)	146	(1)
Corporate debt securities	562	45	56	(167)	–	17	(29)	484	3
Loans[b]	797	(48)	115	(74)	(24)	118	(94)	790	(55)
Asset-backed securities	33	–	11	(2)	(2)	3	(5)	38	(2)
Total debt instruments	2,930	(77)	678	(506)	(72)	141	(169)	2,925	(128)
Equity securities	147	(14)	10	(10)	–	46	(9)	170	(16)
Other	311	18	35	(15)	(15)	–	(2)	332	23
Total trading assets – debt and equity instruments	3,388	(73) [d]	723	(531)	(87)	187	(180)	3,427	(121) [d]
Net derivative receivables:[c]									
Interest rate	(544)	88	39	(15)	53	10	50	(319)	(15)
Credit	(232)	(65)	3	(3)	(23)	3	–	(317)	(68)
Foreign exchange	(193)	(653)	2	(1)	(1)	6	(1)	(841)	(657)
Equity	(2,560)	(382)	174	(118)	(377)	(203)	(2)	(3,468)	(362)
Commodity	(908)	8	22	(69)	6	18	876	(47)	40
Total net derivative receivables	(4,437)	(1,004) [d]	240	(206)	(342)	(166)	923	(4,992)	(1,062) [d]
Available-for-sale securities:									
Mortgage-backed securities	–	–	1	–	–	–	–	1	–
Total available-for-sale securities	–	–	1	–	–	–	–	1	–
Loans[b]	775	1 [d]	26	(8)	(84)	93	(43)	760	6 [d]
Mortgage servicing rights	5,093	(447) [e]	388	(359)	(256)	–	–	4,419	(447) [e]
Other assets[b]	1,072	(53) [d]	30	(72)	(34)	–	–	943	(53) [d]

Three months ended September 30, 2019 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/losses related to financial instruments held at September 30, 2019
	Fair value at July 1, 2019	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2019	
Liabilities:[a]										
Deposits	$ 4,066	$ –	$ –	$ –	$ 153	$ (188)	$ 12	$ (407)	$3,636	$ 16 [d][f]
Short-term borrowings	2,052	24 [d][f]	–	–	949	(1,040)	17	(1)	2,001	28 [d][f]
Trading liabilities – debt and equity instruments	45	–	(5)	25	–	1	2	–	68	–
Accounts payable and other liabilities	92	(6) [d]	(71)	4	–	–	–	–	19	(2) [d]
Beneficial interests issued by consolidated VIEs	–	–	–	–	–	–	–	–	–	–
Long-term debt	21,863	187 [d][f]	–	–	2,230	(1,758)	49	(222)	22,349	89 [d][f]

Nine months ended September 30, 2020 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2020
	Fair value at Jan 1, 2020	Total realized/ unrealized gains/(losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2020	
Assets:[a]									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	$ 797	$ (153)	$ 134	$ (149)	$ (122)	$ –	$ –	$ 507	$ (140)
Residential – nonagency	23	(1)	12	(4)	(2)	–	(3)	25	2
Commercial – nonagency	4	–	1	–	(1)	1	(3)	2	4
Total mortgage-backed securities	824	(154)	147	(153)	(125)	1	(6)	534	(134)
Obligations of U.S. states and municipalities	10	–	–	(1)	(1)	–	–	8	–
Non-U.S. government debt securities	155	10	164	(148)	(7)	–	(9)	165	7
Corporate debt securities	558	(10)	475	(131)	(234)	296	(305)	649	13
Loans[b]	673	(72)	829	(400)	(130)	676	(846)	730	(35)
Asset-backed securities	37	(4)	42	(36)	(5)	9	(10)	33	(1)
Total debt instruments	2,257	(230)	1,657	(869)	(502)	982	(1,176)	2,119	(150)
Equity securities	196	(79)	37	(109)	–	259	(118)	186	(40)
Other	232	239	213	(9)	(23)	4	(3)	653	263
Total trading assets – debt and equity instruments	2,685	(70) [d]	1,907	(987)	(525)	1,245	(1,297)	2,958	73 [d]
Net derivative receivables:[c]									
Interest rate	(332)	2,052	102	(97)	(1,510)	(317)	130	28	290
Credit	(139)	–	70	(150)	137	59	(26)	(49)	24
Foreign exchange	(607)	(214)	46	(16)	75	15	25	(676)	(181)
Equity	(3,395)	564	912	(1,473)	558	(524)	255	(3,103)	1,342
Commodity	(16)	(248)	22	(107)	54	(306)	(20)	(621)	363
Total net derivative receivables	(4,489)	2,154 [d]	1,152	(1,843)	(686)	(1,073)	364	(4,421)	1,838 [d]
Available-for-sale securities:									
Mortgage-backed securities	1	–	–	–	(1)	–	–	–	–
Total available-for-sale securities	1	–	–	–	(1)	–	–	–	–
Loans[b]	516	(195) [d]	450	(77)	(678)	2,312	(522)	1,806	(147) [d]
Mortgage servicing rights	4,699	(1,459) [e]	663	(177)	(710)	–	–	3,016	(1,459) [e]
Other assets[b]	917	(56) [d]	66	(28)	(281)	40	–	658	4 [d]

Nine months ended September 30, 2020 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2020
	Fair value at Jan 1, 2020	Total realized/ unrealized (gains)/losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2020	
Liabilities:[a]										
Deposits	$ 3,360	$ 88 [d][f]	$ –	$ –	$ 636	$ (538)	$ 265	$ (755)	$ 3,056	$ 137 [d][f]
Short-term borrowings	1,674	(294) [d][f]	–	–	3,961	(2,769)	77	(41)	2,608	(27) [d][f]
Trading liabilities – debt and equity instruments	41	1 [d]	(81)	12	–	(4)	96	(8)	57	–
Accounts payable and other liabilities	45	(1) [d]	(85)	37	–	–	48	–	44	1 [d]
Beneficial interests issued by consolidated VIEs	–	–	–	–	–	–	–	–	–	–
Long-term debt	23,339	(639) [d][f]	–	–	7,432	(7,851)	1,056	(1,121)	22,216	(507) [d][f]

Nine months ended September 30, 2019 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/(losses) related to financial instruments held at September 30, 2019
	Fair value at Jan 1, 2019	Total realized/ unrealized gains/(losses)	Purchases[g]	Sales	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2019	
Assets:[a]									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. GSEs and government agencies	$ 549	$ (111)	$ 747	$ (272)	$ (83)	$ 1	$ (20)	$ 811	$ (116)
Residential – nonagency	64	25	83	(86)	(20)	15	(57)	24	(1)
Commercial – nonagency	11	2	19	(24)	(14)	15	(4)	5	1
Total mortgage-backed securities	624	(84)	849	(382)	(117)	31	(81)	840	(116)
Obligations of U.S. states and municipalities	689	12	85	(152)	(7)	–	–	627	13
Non-U.S. government debt securities	155	(2)	228	(231)	–	14	(18)	146	3
Corporate debt securities	334	74	340	(236)	(53)	96	(71)	484	15
Loans[b]	738	28	362	(379)	(80)	358	(237)	790	16
Asset-backed securities	127	–	30	(81)	(39)	23	(22)	38	(3)
Total debt instruments	2,667	28	1,894	(1,461)	(296)	522	(429)	2,925	(72)
Equity securities	232	(28)	33	(92)	(22)	142	(95)	170	(21)
Other	301	42	50	(16)	(41)	1	(5)	332	55
Total trading assets – debt and equity instruments	3,200	42 [d]	1,977	(1,569)	(359)	665	(529)	3,427	(38) [d]
Net derivative receivables:[c]									
Interest rate	(38)	(575)	86	(102)	174	22	114	(319)	(694)
Credit	(107)	(209)	16	(5)	(13)	7	(6)	(317)	(169)
Foreign exchange	(297)	(840)	13	(18)	294	(19)	26	(841)	(815)
Equity	(2,225)	328	335	(573)	(1,062)	(418)	147	(3,468)	(1,193)
Commodity	(1,129)	370	32	(240)	51	2	867	(47)	634
Total net derivative receivables	(3,796)	(926) [d]	482	(938)	(556)	(406)	1,148	(4,992)	(2,237) [d]
Available-for-sale securities:									
Mortgage-backed securities	1	–	1	–	(1)	–	–	1	–
Total available-for-sale securities	1	–	1	–	(1)	–	–	1	–
Loans[b]	856	41 [d]	224	(36)	(364)	151	(112)	760	25 [d]
Mortgage servicing rights	6,130	(1,572) [e]	1,250	(687)	(702)	–	–	4,419	(1,572) [e]
Other assets[b]	1,161	(122) [d]	193	(161)	(122)	1	(7)	943	(142) [d]

Nine months ended September 30, 2019 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/losses related to financial instruments held at September 30, 2019
	Fair value at Jan 1, 2019	Total realized/ unrealized (gains)/losses	Purchases	Sales	Issuances	Settlements[h]	Transfers into level 3[i]	Transfers (out of) level 3[i]	Fair value at September 30, 2019	
Liabilities:[a]										
Deposits	$4,169	$ 241 [d][f]	$ –	$ –	$ 580	$ (504)	$ 12	$ (862)	$3,636	$ 250 [d][f]
Short-term borrowings	1,523	142 [d][f]	–	–	2,637	(2,265)	85	(121)	2,001	74 [d][f]
Trading liabilities – debt and equity instruments	50	–	(12)	41	–	1	9	(21)	68	(1) [d]
Accounts payable and other liabilities	10	(7) [d]	(79)	94	–	–	1	–	19	4 [d]
Beneficial interests issued by consolidated VIEs	1	(1) [d]	–	–	–	–	–	–	–	–
Long-term debt	19,418	1,915 [d][f]	–	–	6,929	(5,675)	522	(760)	22,349	2,010 [d][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 1% and 2% at September 30, 2020 and December 31, 2019, respectively. Level 3 liabilities at fair value as a percentage of total Firm liabilities at fair value (including liabilities measured at fair value on a nonrecurring basis) were 9% and 16%, at September 30, 2020 and December 31, 2019, respectively.

(b) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.

(c) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
(d) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans and lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(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 and nine months ended September 30, 2020 and 2019, respectively. Unrealized (gains)/losses are reported in OCI, and they were $120 million and $(62) million for the three months ended September 30, 2020 and 2019, respectively and $(78) million and $108 million for the nine months ended September 30, 2020 and 2019, 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.
(i) All transfers into and/or out of level 3 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.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets at fair value, including assets measured at fair value on a nonrecurring basis, were 0.6% of total Firm assets at September 30, 2020. The following describes significant changes to level 3 assets since December 31, 2019, 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 112 for further information on changes impacting items measured at fair value on a nonrecurring basis.

Three and nine months ended September 30, 2020

Level 3 assets were $16.4 billion at September 30, 2020, reflecting a decrease of $980 million from June 30, 2020 with no movements that were significant and an increase of $2.9 billion from December 31, 2019.

The increase for the nine months ended September 30, 2020 was driven by:

- $2.0 billion increase in gross equity derivative receivables due to gains and purchases net of settlements.
- $1.3 billion increase in non-trading loans due to net transfers.

largely offset by

- $1.7 billion decrease in MSRs due to losses.

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 September 30, 2020, there were no significant transfers from level 2 into level 3.

For the nine months ended September 30, 2020, significant transfers from level 2 into level 3 included the following:

- $2.2 billion of gross equity derivative receivables and $2.7 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.
- $2.3 billion of non-trading loans, driven by a decrease in observability.
- $1.1 billion of long-term debt driven by a decrease in observability and an increase in the significance of unobservable inputs for certain structured notes.

For the three months ended September 30, 2020, significant transfers from level 3 into level 2 included the following:

- $965 million of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.

For the nine months ended September 30, 2020, significant transfers from level 3 into level 2 included the following:

- $1.7 billion of gross equity derivative receivables and $1.9 billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.
- $1.1 billion of long-term debt driven by an increase in observability and a decrease in the significance of unobservable inputs for certain structured notes.

For the three and nine months ended September 30, 2019, there were no significant transfers from level 2 into level 3.

For the three and nine months ended September 30, 2019, significant transfers from level 3 to level 2 included $906 million and $927 million, respectively of gross commodities derivative payables as a result of an increase in observability.

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 105-111 for further information on these instruments.

Three months ended September 30, 2020

- $744 million of net losses on assets, driven by market movements in net equity derivative receivables.
- $763 million of net losses on liabilities, driven by market movements in long-term debt.

Three months ended September 30, 2019

- $1.6 billion of net losses on assets, predominantly driven by net derivative receivables due to market movements and MSRs largely reflecting faster prepayment speeds on lower rates. Refer to Note 15 for information on MSRs.
- $205 million of net losses on liabilities, none of which were significant.

Nine months ended September 30, 2020

- $374 million of net gains on assets, driven by gains in net interest rate derivative receivables due to market movements largely offset by losses in MSRs reflecting faster prepayment speeds on lower rates. Refer to Note 15 for additional information on MSRs.
- $845 million of net gains on liabilities, predominantly driven by market movements in long-term debt.

Nine months ended September 30, 2019

- $2.5 billion of net losses on assets, driven by net derivative receivables due to market movements and MSRs reflecting faster prepayment speeds on lower rates. Refer to Note 15 for additional information on MSRs.
- $2.3 billion of net losses on liabilities, predominantly driven by market movements in long-term debt.

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.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Credit and funding adjustments:				
Derivatives CVA	**$ 144**	$ 55	**$ (574)**	$ 71
Derivatives FVA	**109**	(83)	**(236)**	(20)

Refer to Note 2 of JPMorgan Chase's 2019 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 September 30, 2020 and 2019, respectively, for which nonrecurring fair value adjustments were recorded during the nine months ended September 30, 2020 and 2019, respectively, by major product category and fair value hierarchy.

	Fair value hierarchy			
September 30, 2020 (in millions)	Level 1	Level 2	Level 3	Total fair value
Loans	**$ –**	**$ 1,714** [c]	**$ 788** [d]	**$ 2,502**
Other assets[a]	**–**	**11**	**945**	**956**
Total assets measured at fair value on a nonrecurring basis	**$ –**	**$ 1,725**	**$ 1,733**	**$ 3,458**
Accounts payable and other liabilities[b]	**–**	**–**	**3**	**3**
Total liabilities measured at fair value on a nonrecurring basis	**$ –**	**$ –**	**$ 3**	**$ 3**

	Fair value hierarchy			
September 30, 2019 (in millions)	Level 1	Level 2	Level 3	Total fair value
Loans	$ –	$ 5,338 [c]	$ 246	$ 5,584
Other assets	–	18	789 [e]	807
Total assets measured at fair value on a nonrecurring basis	$ –	$ 5,356	$ 1,035	$ 6,391

(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 $945 million in level 3 assets measured at fair value on a nonrecurring basis as of September 30, 2020, $377 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) Represents at September 30, 2020 the net markdowns associated with $556 million of held-for-sale positions related to unfunded commitments in the bridge financing portfolio. There were no liabilities measured at fair value on a nonrecurring basis at September 30, 2019.
(c) Primarily includes certain mortgage loans that were reclassified to held-for-sale.
(d) Of the $788 million in level 3 assets measured at fair value on a nonrecurring basis as of September 30, 2020, $471 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 14% to 46% with a weighted average of 30%.
(e) Prior-period amounts have been revised to conform with the current presentation.

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 and nine months ended September 30, 2020 and 2019, related to assets and liabilities held at those dates.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Loans[a]	**$ (35)**	$(142)	**$(318)**	$(232)
Other assets[b]	**(363)**	37 [d]	**(539)**	137 [d]
Accounts payable and other liabilities	**92** [c]	–	**(3)** [c]	–
Total nonrecurring fair value gains/(losses)	**$(306)**	$(105)	**$(860)**	$ (95)

(a) Includes the impact of certain mortgage loans that were reclassified to held-for-sale.
(b) Included $2 million and $48 million for the three months ended September 30, 2020 and 2019, respectively and $(155) million and $146 million for the nine months ended September 30, 2020 and 2019, respectively, of net (losses)/gains as a result of the measurement alternative.
(c) Represents marks on held-for-sale positions related to unfunded commitments in the bridge financing portfolio.
(d) Prior-period amounts have been revised to conform with the current presentation.

Refer to Note 12 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, 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 still held as of September 30, 2020 and 2019, 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 September 30		Nine months ended September 30	
	2020	2019	**2020**	2019
Other assets				
Carrying value[a]	**$ 2,329**	$ 2,771	**$ 2,329**	$ 2,771
Upward carrying value changes[b]	**36**	48 [d]	**49**	183 [d]
Downward carrying value changes/impairment[c]	**(34)**	–	**(204)**	(37)

(a) The carrying value as of December 31, 2019 was $2.4 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 September 30, 2020 were $590 million.
(c) The cumulative downward carrying value changes/impairment between January 1, 2018 and September 30, 2020 were $(334) million.
(d) Prior-period amounts have been revised to conform with the current presentation.

Included in other assets above is the Firm's interest in approximately 40 million Visa Class B shares, recorded at a nominal carrying value. These shares are subject to certain transfer restrictions currently and will be convertible into Visa Class A shares upon final resolution of certain litigation matters involving Visa. The conversion rate of Visa Class B shares into Visa Class A shares is 1.6228 at September 30, 2020, and may be adjusted by Visa depending on developments related to the litigation matters.

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 September 30, 2020, and December 31, 2019, 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.

	September 30, 2020					December 31, 2019				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 20.8**	**$ 20.8**	**$ –**	**$ –**	**$ 20.8**	$ 21.7	$ 21.7	$ –	$ –	$ 21.7
Deposits with banks	**466.7**	**466.7**	**–**	**–**	**466.7**	241.9	241.9	–	–	241.9
Accrued interest and accounts receivable	**76.0**	**–**	**75.9**	**0.1**	**76.0**	71.3	–	71.2	0.1	71.3
Federal funds sold and securities purchased under resale agreements	**35.1**	**–**	**35.1**	**–**	**35.1**	234.6	–	234.6	–	234.6
Securities borrowed	**97.9**	**–**	**97.9**	**–**	**97.9**	133.5	–	133.5	–	133.5
Investment securities, held-to-maturity	**141.6**	**0.1**	**144.9**	**–**	**145.0**	47.5	0.1	48.8	–	48.9
Loans, net of allowance for loan losses[(a)]	**920.7**	**–**	**211.7**	**737.0**	**948.7**	939.5	–	214.1	734.9	949.0
Other	**77.0**	**–**	**75.8**	**1.4**	**77.2**	61.3	–	60.6	0.8	61.4
Financial liabilities										
Deposits	**$ 1,982.1**	**$ –**	**$ 1,982.2**	**$ –**	**$ 1,982.2**	$ 1,533.8	$ –	$ 1,534.1	$ –	$ 1,534.1
Federal funds purchased and securities loaned or sold under repurchase agreements	**55.5**	**–**	**55.5**	**–**	**55.5**	183.1	–	183.1	–	183.1
Short-term borrowings	**23.0**	**–**	**23.0**	**–**	**23.0**	35.0	–	35.0	–	35.0
Accounts payable and other liabilities	**189.5**	**–**	**185.4**	**3.8**	**189.2**	164.0	0.1	160.0	3.5	163.6
Beneficial interests issued by consolidated VIEs	**19.2**	**–**	**19.2**	**–**	**19.2**	17.8	–	17.9	–	17.9
Long-term debt	**206.2**	**–**	**205.5**	**3.2**	**208.7**	215.5	–	218.3	3.5	221.8

(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.

	September 30, 2020					December 31, 2019				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[(a) (b)]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 2.6**	**$ –**	**$ –**	**$ 2.4**	**$ 2.4**	$ 1.2	$ –	$ –	$ 1.9	$ 1.9

(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 and net markdowns associated with held-for-sale positions related to unfunded commitments in the bridge financing portfolio.

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 156 of JPMorgan Chase's 2019 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 as an alternative measurement 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, which are predominantly financial instruments that contain embedded derivatives, that are issued 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 and nine months ended September 30, 2020 and 2019, 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.

	Three months ended September 30,					
	2020			2019		
(in millions)	Principal transactions	All other income	Total changes in fair value recorded [f]	Principal transactions	All other income	Total changes in fair value recorded [f]
Federal funds sold and securities purchased under resale agreements	**$ (148)**	**$ –**	**$ (148)**	$ (23)	$ –	$ (23)
Securities borrowed	**5**	**–**	**5**	99	–	99
Trading assets:						
Debt and equity instruments, excluding loans	**879**	**–**	**879**	546	–	546
Loans reported as trading assets:						
Changes in instrument-specific credit risk[a]	**216**	**–**	**216**	(40)	–	(40)
Other changes in fair value[a]	**–**	**–**	**–**	–	–	–
Loans:						
Changes in instrument-specific credit risk[a]	**112**	**(13)** [d]	**99**	144	(4) [d]	140
Other changes in fair value[a]	**93**	**928** [d]	**1,021**	76	320 [d]	396
Other assets[a]	**(28)**	**(7)** [e]	**(35)**	(5)	–	(5)
Deposits[b]	**(147)**	**–**	**(147)**	(397)	–	(397)
Federal funds purchased and securities loaned or sold under repurchase agreements	**58**	**–**	**58**	2	–	2
Short-term borrowings[b]	**(54)**	**–**	**(54)**	173	–	173
Trading liabilities	**1**	**–**	**1**	–	–	–
Other liabilities	**(8)**	**–**	**(8)**	1	–	1
Long-term debt[b][c]	**(530)**	**(4)** [d]	**(534)**	(614)	–	(614)

(in millions)	Nine months ended September 30, 2020 Principal transactions	2020 All other income	2020 Total changes in fair value recorded [f]	2019 Principal transactions	2019 All other income	2019 Total changes in fair value recorded [f]
Federal funds sold and securities purchased under resale agreements	**$ 96**	**$ –**	**$ 96**	$ 10	$ –	$ 10
Securities borrowed	**173**	**–**	**173**	179	–	179
Trading assets:						
Debt and equity instruments, excluding loans	**(350)**	**(1)** [d]	**(351)**	2,104	–	2,104
Loans reported as trading assets:						
Changes in instrument-specific credit risk[a]	**(39)**	**–**	**(39)**	150	–	150
Other changes in fair value[a]	**1**	**–**	**1**	(1)	–	(1)
Loans:						
Changes in instrument-specific credit risk[a]	**143**	**2** [d]	**145**	386	1 [d]	387
Other changes in fair value[a]	**357**	**2,423** [d]	**2,780**	285	885 [d]	1,170
Other assets[a]	**74**	**1** [e]	**75**	(2)	3 [e]	1
Deposits[b]	**(612)**	**–**	**(612)**	(1,589)	–	(1,589)
Federal funds purchased and securities loaned or sold under repurchase agreements	**(20)**	**–**	**(20)**	(18)	–	(18)
Short-term borrowings[b]	**1,035**	**–**	**1,035**	(601)	–	(601)
Trading liabilities	**1**	**–**	**1**	5	–	5
Other liabilities	**(54)**	**–**	**(54)**	(7)	–	(7)
Long-term debt[b][c]	**70**	**(1)** [d]	**69**	(5,220)	–	(5,220)

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.
(b) 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 $1 million and $20 million for the three and nine months ended September 30, 2020, respectively. The amounts were not material for the three and nine months ended September 30, 2019.
(c) 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.
(d) Reported in mortgage fees and related income.
(e) Reported in other income.
(f) Changes in fair value exclude contractual interest, which is included in interest income and interest expense for all instruments other than hybrid financial instruments. Refer to Note 7 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 September 30, 2020, and December 31, 2019, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	September 30, 2020			December 31, 2019		
(in millions)	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding
Loans						
Nonaccrual loans						
Loans reported as trading assets[a]	**$ 2,917**	**$ 434**	**$ (2,483)**	$ 2,563	$ 234	$ (2,329)
Loans[a]	**2,289**	**2,008**	**(281)**	964	696	(268)
Subtotal	**5,206**	**2,442**	**(2,764)**	3,527	930	(2,597)
90 or more days past due and government guaranteed[b]						
Loans reported as trading assets	**–**	**–**	**–**	–	–	–
Loans	**310**	**297**	**(13)**	**138**	**129**	(9)
Subtotal	**310**	**297**	**(13)**	138	129	(9)
All other performing loans[c]						
Loans reported as trading assets[a]	**7,654**	**5,844**	**(1,810)**	8,288	6,779	(1,509)
Loans[a]	**35,493**	**35,915**	**422**	43,955	44,130	175
Subtotal	**43,147**	**41,759**	**(1,388)**	**52,243**	**50,909**	**(1,334)**
Total loans	**$ 48,663**	**$ 44,498**	**$ (4,165)**	$ 55,908	$ 51,968	$ (3,940)
Long-term debt						
Principal-protected debt	**$ 40,141** [e]	**$ 39,536**	**$ (605)**	$ 40,124 [e]	$ 39,246	$ (878)
Nonprincipal-protected debt[d]	**NA**	**33,450**	**NA**	NA	36,499	NA
Total long-term debt	**NA**	**$ 72,986**	**NA**	NA	$ 75,745	NA
Long-term beneficial interests						
Nonprincipal-protected debt[d]	**NA**	**$ 39**	**NA**	NA	$ 36	NA
Total long-term beneficial interests	**NA**	**$ 39**	**NA**	NA	$ 36	NA

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.
(b) These balances are excluded from nonaccrual loans as the loans are insured and/or guaranteed by U.S. government agencies.
(c) There were no performing loans that were ninety days or more past due as of September 30, 2020, and December 31, 2019, respectively.
(d) Remaining contractual principal is not applicable to nonprincipal-protected structured notes and long-term beneficial interests. Unlike principal-protected structured notes and long-term beneficial interests, for which the Firm is obligated to return a stated amount of principal at maturity, nonprincipal-protected structured notes and long-term beneficial interests do not obligate the Firm to return a stated amount of principal at maturity, but for structured notes to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal-protected notes.
(e) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At September 30, 2020, and December 31, 2019, the contractual amount of lending-related commitments for which the fair value option was elected was $13.2 billion and $8.6 billion, respectively, with a corresponding fair value of $(115) million and $(120) million, respectively. Refer to Note 28 of JPMorgan Chase's 2019 Form 10-K, and Note 23 of this Form 10-Q for further information regarding off-balance sheet lending-related financial instruments. Prior-period amounts have been revised to conform with the current presentation.

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.

	September 30, 2020				December 31, 2019			
(in millions)	Long-term debt	Short-term borrowings	Deposits	Total	Long-term debt	Short-term borrowings	Deposits	Total
Risk exposure								
Interest rate	**$ 36,598**	**$ 59**	**$ 7,646**	**$ 44,303**	$ 35,470	$ 34	$ 16,692	$ 52,196
Credit	**5,302**	**1,052**	**–**	**6,354**	5,715	875	–	6,590
Foreign exchange	**3,645**	**134**	**–**	**3,779**	3,862	48	5	3,915
Equity	**26,414**	**5,902**	**7,094**	**39,410**	29,294	4,852	8,177	42,323
Commodity	**363**	**26**	**2,274**	**2,663**	472	32	1,454	1,958
Total structured notes	**$ 72,322**	**$ 7,173**	**$ 17,014**	**$ 96,509**	$ 74,813	$ 5,841	$ 26,328	$106,982

Note 4 – Credit risk concentrations

Concentrations of credit risk arise when a number of clients, counterparties or customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain additional collateral when deemed necessary and permitted under the Firm's agreements. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are managed primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. Refer to Note 12 for additional information on the geographic composition of the Firm's consumer loan portfolios. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual client or counterparty basis.

The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, collateral and other risk-reduction techniques. Refer to Note 12 for additional information on loans.

The Firm does not believe that its exposure to any particular loan product or industry segment (e.g., real estate), or its exposure to residential real estate loans with high LTV ratios, results in a significant concentration of credit risk.

Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of September 30, 2020, and December 31, 2019. The wholesale industry of risk category is generally based on the client or counterparty's primary business activity.

In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 1 for further information.

	September 30, 2020				December 31, 2019			
		On-balance sheet				On-balance sheet		
(in millions)	Credit exposure[h][i]	Loans[i]	Derivatives	Off-balance sheet[i][k]	Credit exposure[h][i]	Loans[i]	Derivatives	Off-balance sheet[i][k]
Consumer, excluding credit card	**$ 368,523**	**$ 322,098** [j]	**$ –**	**$ 46,425**	$ 357,986	$ 317,817	$ –	$ 40,169
Credit card[a]	**803,237**	**140,377**	**–**	**662,860**	819,644	168,924	–	650,720
Total consumer-related[a]	**1,171,760**	**462,475**	**–**	**709,285**	1,177,630	486,741	–	690,889
Wholesale-related[b]								
Real Estate	**147,483**	**120,241**	**1,491**	**25,751**	150,919	117,709	619	32,591
Individuals and Individual Entities[c]	**115,469**	**102,315**	**1,744**	**11,410**	105,027	94,616	694	9,717
Consumer & Retail	**107,037**	**41,461**	**2,802**	**62,774**	106,986	36,985	1,424	68,577
Industrials	**68,950**	**23,247**	**1,570**	**44,133**	62,483	22,063	878	39,542
Technology, Media & Telecommunications	**64,800**	**15,054**	**3,294**	**46,452**	60,033	15,322	2,766	41,945
Asset Managers	**61,569**	**26,167**	**8,758**	**26,644**	54,304	24,008	7,160	23,136
Healthcare	**59,864**	**20,617**	**3,430**	**35,817**	50,824	17,607	2,078	31,139
Banks & Finance Cos	**53,385**	**28,953**	**7,206**	**17,226**	50,786	31,191	5,165	14,430
Automotive	**40,930**	**16,819**	**3,453**	**20,658**	35,118	18,844	368	15,906
Oil & Gas	**40,431**	**12,920**	**1,340**	**26,171**	41,641	13,101	852	27,688
State & Municipal Govt[d]	**37,472**	**17,245**	**2,435**	**17,792**	30,095	13,271	2,000	14,824
Utilities	**30,135**	**5,213**	**3,104**	**21,818**	34,843	5,157	2,573	27,113
Transportation	**17,154**	**7,689**	**1,713**	**7,752**	14,497	5,253	715	8,529
Chemicals & Plastics	**16,780**	**4,577**	**755**	**11,448**	17,499	4,864	459	12,176
Central Govt	**16,265**	**3,016**	**11,693**	**1,556**	14,865	2,840	10,477	1,548
Metals & Mining	**15,900**	**4,959**	**739**	**10,202**	15,586	5,364	402	9,820
Insurance	**13,509**	**1,215**	**2,741**	**9,553**	12,348	1,356	2,282	8,710
Financial Markets Infrastructure	**10,311**	**177**	**6,376**	**3,758**	4,121	13	2,482	1,626
Securities Firms	**8,092**	**599**	**4,865**	**2,628**	7,381	757	4,507	2,117
All other[e]	**93,166**	**48,357**	**7,117**	**37,692**	79,598	51,357	1,865	26,376
Subtotal	**1,018,702**	**500,841**	**76,626**	**441,235**	948,954	481,678	49,766	417,510
Loans held-for-sale and loans at fair value	**26,424**	**26,424**	**–**	**–**	29,201	29,201	–	–
Receivables from customers and other[f]	**30,847**	**–**	**–**	**–**	33,706	–	–	–
Total wholesale-related	**1,075,973**	**527,265**	**76,626**	**441,235**	1,011,861	510,879	49,766	417,510
Total exposure[g][h]	**$2,247,733**	**$ 989,740**	**$ 76,626**	**$1,150,520**	$2,189,491	$ 997,620	$ 49,766	$1,108,399

(a) Also includes commercial card lending-related commitments primarily in CB and CIB.
(b) The industry rankings presented in the table as of December 31, 2019, are based on the industry rankings of the corresponding exposures at September 30, 2020, not actual rankings of such exposures at December 31, 2019.
(c) Individuals and Individual Entities predominantly consists of Wealth Management clients within AWM and includes exposure to personal investment companies and personal and testamentary trusts.
(d) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at September 30, 2020, and December 31, 2019, noted above, the Firm held: $7.5 billion and $6.5 billion, respectively, of trading assets; $20.9 billion and $29.8 billion, respectively, of AFS securities; and $12.8 billion and $4.8 billion, respectively, of HTM securities, issued by U.S. state and municipal governments. Refer to Note 2 and Note 10 for further information.
(e) All other includes: SPEs and Private education and civic organizations, representing approximately 91% and 9%, respectively, at September 30, 2020, and 90% and 10%, respectively, at December 31, 2019. Refer to Note 14 for more information on exposures to SPEs.
(f) Receivables from customers reflect held-for-investment margin loans to brokerage clients in CIB and AWM that are collateralized by assets maintained in the clients' brokerage accounts (e.g., cash on deposit, liquid and readily marketable debt or equity securities), as such generally no allowance for credit losses is 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.
(g) Excludes cash placed with banks of $478.4 billion and $254.0 billion, at September 30, 2020, and December 31, 2019, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.
(h) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other collateral held against derivative receivables.
(i) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(j) At September 30, 2020, included $20.3 billion of loans in Business Banking under the PPP. PPP loans are guaranteed by the SBA. Other than in certain limited circumstances, the Firm typically does not recognize charge-offs, classify as nonaccrual nor record an allowance for loan losses on these loans.
(k) Represents lending-related financial instruments.

Note 5 – 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 2019 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	127-128
• Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	129
• Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	127-128
• Foreign exchange	Hedge foreign currency-denominated forecasted revenue and expense	Cash flow hedge	Corporate	129
• Foreign exchange	Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	130
• Commodity	Hedge commodity inventory	Fair value hedge	CIB	127-128
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	130
• Credit	Manage the credit risk associated with wholesale lending exposures	Specified risk management	CIB	130
• Interest rate and foreign exchange	Manage the risk associated with certain other specified assets and liabilities	Specified risk management	Corporate	130
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	130
• Various	Other derivatives	Market-making and other	CIB, AWM, Corporate	130

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of September 30, 2020, and December 31, 2019.

(in billions)	Notional amounts[b]	
	September 30, 2020	December 31, 2019
Interest rate contracts		
Swaps	**$ 22,746**	$ 21,228
Futures and forwards	**4,086**	3,152
Written options	**3,512**	3,938
Purchased options	**3,875**	4,361
Total interest rate contracts	**34,219**	32,679
Credit derivatives[a]	**1,450**	1,242
Foreign exchange contracts		
Cross-currency swaps	**3,852**	3,604
Spot, futures and forwards	**7,304**	5,577
Written options	**810**	700
Purchased options	**815**	718
Total foreign exchange contracts	**12,781**	10,599
Equity contracts		
Swaps	**416**	406
Futures and forwards	**130**	142
Written options	**752**	646
Purchased options	**714**	611
Total equity contracts	**2,012**	1,805
Commodity contracts		
Swaps	**134**	147
Spot, futures and forwards	**219**	211
Written options	**138**	135
Purchased options	**125**	124
Total commodity contracts	**616**	617
Total derivative notional amounts	**$ 51,078**	$ 46,942

(a) Refer to the Credit derivatives discussion on page 131 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 September 30, 2020, and December 31, 2019, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[(a)]

	Gross derivative receivables				Gross derivative payables			
September 30, 2020 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	**$ 397,677**	**$ 802**	**$ 398,479**	**$ 37,058**	**$ 359,357**	**$ –**	**$ 359,357**	**$ 12,471**
Credit	**15,144**	**–**	**15,144**	**1,393**	**16,417**	**–**	**16,417**	**2,242**
Foreign exchange	**155,016**	**472**	**155,488**	**11,428**	**164,434**	**784**	**165,218**	**15,513**
Equity	**73,535**	**–**	**73,535**	**18,936**	**73,932**	**–**	**73,932**	**19,356**
Commodity	**21,633**	**623**	**22,256**	**7,811**	**21,831**	**1,017**	**22,848**	**8,076**
Total fair value of trading assets and liabilities	**$ 663,005**	**$ 1,897**	**$ 664,902**	**$ 76,626**	**$ 635,971**	**$ 1,801**	**$ 637,772**	**$ 57,658**

	Gross derivative receivables				Gross derivative payables			
December 31, 2019 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	$ 312,451	$ 843	$ 313,294	$ 27,421	$ 279,272	$ 1	$ 279,273	$ 8,603
Credit	14,876	–	14,876	701	15,121	–	15,121	1,652
Foreign exchange	138,179	308	138,487	9,005	144,125	983	145,108	13,158
Equity	45,727	–	45,727	6,477	52,741	–	52,741	12,537
Commodity	16,914	328	17,242	6,162	19,736	149	19,885	7,758
Total fair value of trading assets and liabilities	$ 528,147	$ 1,479	$ 529,626	$ 49,766	$ 510,995	$ 1,133	$ 512,128	$ 43,708

(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 September 30, 2020, and December 31, 2019, 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 non-cash financial instruments (generally U.S. government and agency securities and other G7 government securities) and 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;
- 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.

	September 30, 2020			December 31, 2019		
(in millions)	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")	**$ 376,615**	**$ (345,771)**	**$ 30,844**	$ 299,205	$ (276,255)	$ 22,950
OTC-cleared	**15,121**	**(14,984)**	**137**	9,442	(9,360)	82
Exchange-traded[a]	**673**	**(666)**	**7**	347	(258)	89
Total interest rate contracts	**392,409**	**(361,421)**	**30,988**	308,994	(285,873)	23,121
Credit contracts:						
OTC	**10,710**	**(9,913)**	**797**	10,743	(10,317)	426
OTC-cleared	**3,856**	**(3,838)**	**18**	3,864	(3,858)	6
Total credit contracts	**14,566**	**(13,751)**	**815**	14,607	(14,175)	432
Foreign exchange contracts:						
OTC	**151,749**	**(143,538)**	**8,211**	136,252	(129,324)	6,928
OTC-cleared	**538**	**(521)**	**17**	185	(152)	33
Exchange-traded[a]	**17**	**(1)**	**16**	10	(6)	4
Total foreign exchange contracts	**152,304**	**(144,060)**	**8,244**	136,447	(129,482)	6,965
Equity contracts:						
OTC	**31,974**	**(25,914)**	**6,060**	23,106	(20,820)	2,286
Exchange-traded[a]	**33,230**	**(28,685)**	**4,545**	19,654	(18,430)	1,224
Total equity contracts	**65,204**	**(54,599)**	**10,605**	42,760	(39,250)	3,510
Commodity contracts:						
OTC	**11,812**	**(8,395)**	**3,417**	7,093	(5,149)	1,944
OTC-cleared	**22**	**(22)**	**–**	28	(28)	–
Exchange-traded[a]	**6,317**	**(6,028)**	**289**	6,154	(5,903)	251
Total commodity contracts	**18,151**	**(14,445)**	**3,706**	13,275	(11,080)	2,195
Derivative receivables with appropriate legal opinion	**642,634**	**(588,276)**	**54,358** [d]	516,083	(479,860)	36,223 [d]
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**22,268**		**22,268**	13,543		13,543
Total derivative receivables recognized on the Consolidated balance sheets	**$ 664,902**		**$ 76,626**	$ 529,626		$ 49,766
Collateral not nettable on the Consolidated balance sheets[b][c]			**(17,742)**			(14,226)
Net amounts			**$ 58,884**			$ 35,540

(in millions)	September 30, 2020 Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	December 31, 2019 Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 340,775**	**$ (330,136)**	**$ 10,639**	$ 267,311	$ (260,229)	$ 7,082
OTC-cleared	**16,396**	**(16,172)**	**224**	10,217	(10,138)	79
Exchange-traded[(a)]	**584**	**(578)**	**6**	365	(303)	62
Total interest rate contracts	**357,755**	**(346,886)**	**10,869**	277,893	(270,670)	7,223
Credit contracts:						
OTC	**11,855**	**(10,369)**	**1,486**	11,570	(10,080)	1,490
OTC-cleared	**3,815**	**(3,806)**	**9**	3,390	(3,389)	1
Total credit contracts	**15,670**	**(14,175)**	**1,495**	14,960	(13,469)	1,491
Foreign exchange contracts:						
OTC	**161,052**	**(149,114)**	**11,938**	142,360	(131,792)	10,568
OTC-cleared	**596**	**(587)**	**9**	186	(152)	34
Exchange-traded[(a)]	**17**	**(4)**	**13**	12	(6)	6
Total foreign exchange contracts	**161,665**	**(149,705)**	**11,960**	142,558	(131,950)	10,608
Equity contracts:						
OTC	**31,055**	**(25,921)**	**5,134**	27,594	(21,778)	5,816
Exchange-traded[(a)]	**32,508**	**(28,655)**	**3,853**	20,216	(18,426)	1,790
Total equity contracts	**63,563**	**(54,576)**	**8,987**	47,810	(40,204)	7,606
Commodity contracts:						
OTC	**11,868**	**(8,590)**	**3,278**	8,714	(6,235)	2,479
OTC-cleared	**39**	**(39)**	**–**	30	(30)	–
Exchange-traded[(a)]	**6,201**	**(6,143)**	**58**	6,012	(5,862)	150
Total commodity contracts	**18,108**	**(14,772)**	**3,336**	14,756	(12,127)	2,629
Derivative payables with appropriate legal opinion	**616,761**	**(580,114)**	**36,647** [(d)]	497,977	(468,420)	29,557 [(d)]
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**21,011**		**21,011**	14,151		14,151
Total derivative payables recognized on the Consolidated balance sheets	**$ 637,772**		**$ 57,658**	$ 512,128		$ 43,708
Collateral not nettable on the Consolidated balance sheets[(b)(c)]			**(11,359)**			(7,896)
Net amounts			**$ 46,299**			$ 35,812

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

(b) Represents liquid security collateral as well as 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 $80.1 billion and $65.9 billion at September 30, 2020, and December 31, 2019, respectively. Net derivatives payable included cash collateral netted of $71.9 billion and $54.4 billion at September 30, 2020, and December 31, 2019, 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 2019 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 September 30, 2020, and December 31, 2019.

OTC and OTC-cleared derivative payables containing downgrade triggers

(in millions)	**September 30, 2020**	December 31, 2019
Aggregate fair value of net derivative payables	**$ 25,629**	$ 14,819
Collateral posted	**24,299**	13,329

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 September 30, 2020, and December 31, 2019, 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 threshold rating 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 payments 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

	September 30, 2020		December 31, 2019	
(in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 163**	**$ 1,273**	$ 189	$ 1,467
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**158**	**1,977**	104	1,398

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

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

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 11, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding was not material at September 30, 2020 and December 31, 2019.

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 and nine months ended September 30, 2020 and 2019, respectively. The Firm includes gains/(losses) on the hedging derivative in the same line item in the Consolidated statements of income as the related hedged item.

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Three months ended September 30, 2020 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	**$ (464)**	**$ 743**	**$ 279**	**$ –**	**$ 309**	**$ –**
Foreign exchange[c]	**307**	**(280)**	**27**	**(79)**	**27**	**(91)**
Commodity[d]	**(569)**	**593**	**24**	**–**	**14**	**–**
Total	**$ (726)**	**$ 1,056**	**$ 330**	**$ (79)**	**$ 350**	**$ (91)**

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Three months ended September 30, 2019 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	$ 1,770	$ (1,550)	$ 220	$ –	$ 228	$ –
Foreign exchange[c]	(167)	293	126	(224)	126	(1)
Commodity[d]	278	(232)	46	–	49	–
Total	$ 1,881	$ (1,489)	$ 392	$ (224)	$ 403	$ (1)

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Nine months ended September 30, 2020 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	**$ 4,087**	**$ (3,333)**	**$ 754**	**$ –**	**$ 728**	**$ –**
Foreign exchange[c]	**579**	**(430)**	**149**	**(379)**	**149**	**45**
Commodity[d]	**(771)**	**882**	**111**	**–**	**107**	**–**
Total	**$ 3,895**	**$ (2,881)**	**$ 1,014**	**$ (379)**	**$ 984**	**$ 45**

	Gains/(losses) recorded in income			Income statement impact of excluded components[e]		OCI impact
Nine months ended September 30, 2019 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[f]
Contract type						
Interest rate[a][b]	$ 4,996	$ (4,399)	$ 597	$ –	$ 596	$ –
Foreign exchange[c]	(31)	401	370	(675)	370	114
Commodity[d]	(164)	237	73	–	67	–
Total	$ 4,801	$ (3,761)	$ 1,040	$ (675)	$ 1,033	$ 114

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

(b) Excludes the amortization expense associated with the inception hedge accounting adjustment applied to the hedged item. This expense is recorded in net interest income and substantially offsets the income statement impact of the excluded components. Also 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 September 30, 2020 and December 31, 2019, 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.

			Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:		
September 30, 2020 (in millions)	Carrying amount of the hedged items[a][b]		Active hedging relationships	Discontinued hedging relationships[d][e]	Total
Assets					
Investment securities - AFS	**$ 136,335**	[c]	**$ 5,171**	**$ 800**	**$ 5,971**
Liabilities					
Long-term debt	**$ 173,402**		**$ 5,324**	**$ 11,790**	**$ 17,114**
Beneficial interests issued by consolidated VIEs	**746**		**–**	**(3)**	**(3)**

			Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:		
December 31, 2019 (in millions)	Carrying amount of the hedged items[a][b]		Active hedging relationships	Discontinued hedging relationships[d][e]	Total
Assets					
Investment securities - AFS	$ 125,860	[c]	$ 2,110	$ 278	$ 2,388
Liabilities					
Long-term debt	$ 157,545		$ 6,719	$ 161	$ 6,880
Beneficial interests issued by consolidated VIEs	2,365		–	(8)	(8)

(a) Excludes physical commodities with a carrying value of $9.5 billion and $6.5 billion at September 30, 2020 and December 31, 2019, 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 September 30, 2020 and December 31, 2019, the carrying amount excluded for AFS securities is $14.4 billion and $14.9 billion, respectively, and for long-term debt is $6.4 billion and $2.8 billion, respectively.

(c) Carrying amount represents the amortized cost.

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

(e) Positive amounts related to assets represent cumulative fair value hedge basis adjustments that will reduce 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.

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 and nine months ended September 30, 2020 and 2019, respectively. The Firm includes the gain/(loss) on the hedging derivative in the same line item in the Consolidated statements of income as the change in cash flows on the related hedged item.

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Three months ended September 30, 2020 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[(a)]	**$ 214**	**$ 8**	**$ (206)**
Foreign exchange[(b)]	**13**	**126**	**113**
Total	**$ 227**	**$ 134**	**$ (93)**

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Three months ended September 30, 2019 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[(a)]	$ (16)	$ 290	$ 306
Foreign exchange[(b)]	(21)	(68)	(47)
Total	$ (37)	$ 222	$ 259

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Nine months ended September 30, 2020 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[(a)]	**$ 332**	**$ 3,881**	**$ 3,549**
Foreign exchange[(b)]	**(4)**	**(94)**	**(90)**
Total	**$ 328**	**$ 3,787**	**$ 3,459**

	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
Nine months ended September 30, 2019 (in millions)	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[(a)]	$ (12)	$ 501	$ 513
Foreign exchange[(b)]	(90)	(37)	53
Total	$ (102)	$ 464	$ 566

(a) Primarily consists of hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. 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 and nine months ended September 30, 2020 and 2019.

Over the next 12 months, the Firm expects that approximately $709 million (after-tax) of net gains recorded in AOCI at September 30, 2020, 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 nine 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 and nine months ended September 30, 2020 and 2019.

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
	2020		2019	
Three months ended September 30, (in millions)	Amounts recorded in income[a][b]	Amounts recorded in OCI	Amounts recorded in income[a][b]	Amounts recorded in OCI
Foreign exchange derivatives	**$ (37)**	**$ (868)**	$ 17	$ 866

	Gains/(losses) recorded in income and other comprehensive income/(loss)			
	2020		2019	
Nine months ended September 30, (in millions)	Amounts recorded in income[a][b]	Amounts recorded in OCI	Amounts recorded in income[a][b]	Amounts recorded in OCI
Foreign exchange derivatives	**$ (108)**	**$ 308**	$ 65	$ 705

(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 nine months ended September 30, 2020, the Firm reclassified pre-tax (losses) of $(8) million to other income related to the liquidation of certain legal entities and the amount was not material for the three months ended September 30, 2020. During the nine months ended September 30, 2019, the Firm reclassified net pre-tax gains of $5 million to other income related to the liquidation of certain legal entities. Refer to Note 20 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.

	Derivatives gains/(losses) recorded in income			
	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Contract type				
Interest rate[a]	**$ 597**	$ 769	**$ 2,533**	$ 1,718
Credit[b]	**(19)**	(21)	**(58)**	(33)
Foreign exchange[c]	**18**	40	**96**	15
Total	**$ 596**	$ 788	**$ 2,571**	$ 1,700

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in mortgage commitments, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to derivatives used to mitigate foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

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

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from its market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. Refer to Note 6 for information on principal transactions revenue.

Credit derivatives

Refer to Note 5 of JPMorgan Chase's 2019 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 September 30, 2020 and December 31, 2019. 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

	Maximum payout/Notional amount			
September 30, 2020 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (655,517)**	**$ 671,373**	**$ 15,856**	**$ 3,847**
Other credit derivatives[a]	**(45,964)**	**63,025**	**17,061**	**10,197**
Total credit derivatives	**(701,481)**	**734,398**	**32,917**	**14,044**
Credit-related notes	**–**	**–**	**–**	**9,452**
Total	**$ (701,481)**	**$ 734,398**	**$ 32,917**	**$ 23,496**

	Maximum payout/Notional amount			
December 31, 2019 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (562,338)	$ 571,892	$ 9,554	$ 3,936
Other credit derivatives[a]	(50,395) [e]	46,541 [e]	(3,854)	7,364
Total credit derivatives	(612,733)	618,433	5,700	11,300
Credit-related notes	–	–	–	9,606
Total	$ (612,733)	$ 618,433	$ 5,700	$ 20,906

(a) Other credit derivatives predominantly consist of credit swap options and total return swaps.
(b) 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.
(c) 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.
(d) 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.
(e) Prior-period amounts have been revised to conform with the current presentation.

The following tables summarize the notional amounts by the ratings, maturity profile, and total fair value, of credit derivatives and credit-related notes as of September 30, 2020, and December 31, 2019, 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 and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

September 30, 2020 (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	**$ (102,910)**	**$ (334,763)**	**$ (87,060)**	**$ (524,733)**	**$ 4,837**	**$ (1,757)**	**$ 3,080**
Noninvestment-grade	**(37,438)**	**(112,679)**	**(26,631)**	**(176,748)**	**3,332**	**(4,325)**	**(993)**
Total	**$ (140,348)**	**$ (447,442)**	**$ (113,691)**	**$ (701,481)**	**$ 8,169**	**$ (6,082)**	**$ 2,087**

December 31, 2019 (in millions)	<1 year[c]	1–5 years	>5 years	Total notional amount	Fair value of receivables[b][c]	Fair value of payables[b][c]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (119,788)	$ (311,407)	$ (42,129)	$ (473,324)	$ 6,168	$ (901)	$ 5,267
Noninvestment-grade	(41,799)	(87,769)	(9,841)	(139,409)	4,287	(2,817)	1,470
Total	$ (161,587)	$ (399,176)	$ (51,970)	$ (612,733)	$ 10,455	$ (3,718)	$ 6,737

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

Note 6 – Noninterest revenue and noninterest expense

Noninterest revenue

Refer to Note 6 of JPMorgan Chase's 2019 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 September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Underwriting				
Equity	**$ 736**	$ 517	**$ 2,037**	$ 1,293
Debt	**1,019**	955	**3,342**	2,720
Total underwriting	**1,755**	1,472	**5,379**	4,013
Advisory	**432**	495	**1,524**	1,645
Total investment banking fees	**$ 2,187**	$ 1,967	**$ 6,903**	$ 5,658

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 cash deployment activities in Treasury and CIO. Refer to Note 7 for further information on interest income and interest expense.

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

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Trading revenue by instrument type				
Interest rate[a]	**$ 287**	$ 866 [d]	**$ 2,258**	$ 2,128 [d]
Credit[b]	**950** [c]	309 [d]	**2,201** [c]	1,402 [d]
Foreign exchange	**714**	876 [d]	**3,606**	2,501 [d]
Equity	**1,410**	1,007 [d]	**4,816**	4,282 [d]
Commodity	**747**	372 [d]	**1,775**	984 [d]
Total trading revenue	**4,108**	3,430	**14,656**	11,297
Private equity gains/(losses)	**34**	19	**44**	(58)
Principal transactions	**$ 4,142**	$3,449	**$14,700**	$11,239

(a) Includes the impact of changes in funding valuation adjustments on derivatives.
(b) Includes the impact of changes in credit valuation adjustments on derivatives, net of the associated hedging activities.
(c) Includes marks on held-for-sale positions, including unfunded commitments, in the bridge financing portfolio.
(d) Prior-period amounts were revised to conform with the current presentation.

Lending- and deposit-related fees

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

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Lending-related fees	**$ 337**	$ 286	**$ 916**	$ 861
Deposit-related fees[a]	**1,310**	1,385	**3,868**	3,993
Total lending- and deposit-related fees	**$ 1,647**	$ 1,671	**$ 4,784**	$ 4,854

(a) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.

Asset management, administration and commissions

The following table presents the components of asset management, administration and commissions.

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Asset management fees				
Investment management fees[a]	**$ 2,937**	$ 2,738	**$ 8,439**	$ 8,013
All other asset management fees[b]	**85**	82	**253**	229
Total asset management fees	**3,022**	2,820	**8,692**	8,242
Total administration fees[c]	**561**	567	**1,661**	1,646
Commissions and other fees				
Brokerage commissions[d]	**645**	634	**2,224**	1,861
All other commissions and fees[e]	**242**	285	**699**	858
Total commissions and fees	**887**	919	**2,923**	2,719
Total asset management, administration and commissions	**$ 4,470**	$ 4,306	**$13,276**	$12,607

(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.
(c) Predominantly includes fees for custody, securities lending, funds services and securities clearance.
(d) Represents commissions earned when the Firm acts as a broker, by facilitating its clients' purchases and sales of securities and other financial instruments.
(e) In the first quarter of 2020, the Firm reclassified certain fees from asset management, administration and commissions to lending- and deposit-related fees. Prior-period amounts have been revised to conform with the current presentation.

Card income

The following table presents the components of card income:

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Interchange and merchant processing income	**$ 4,757**	$ 5,127	**$13,479**	$15,032
Rewards costs and partner payments[a]	**(3,497)**	(3,719)	**(9,895)**	(10,697)
Other card income[b]	**(91)**	(175)	**(446)**	(594)
Total card income	**$ 1,169**	$ 1,233	**$ 3,138**	$ 3,741

(a) In the second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.
(b) Predominantly represents the amortization of account origination costs and annual fees.

Refer to Note 15 Goodwill and MSRs for information on mortgage fees and related income.

Refer to Note 17 for information on operating lease income included within other income.

Noninterest expense

Other expense

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

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Legal expense/(benefit)	**$ 524**	$ 10	**$ 839**	$ (2)
FDIC-related expense	**186**	114	**503**	378

Note 7 – Interest income and Interest expense

Refer to Note 7 of JPMorgan Chase's 2019 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 September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Interest income				
Loans[a][b]	**$10,215**	$12,977	**$33,409**	$39,269
Taxable securities	**1,816**	2,132	**6,203**	5,712
Non-taxable securities[c]	**294**	318	**901**	1,021
Total investment securities[a]	**2,110**	2,450	**7,104**	6,733
Trading assets - debt instruments[b]	**1,850**	2,216	**5,980**	7,123
Federal funds sold and securities purchased under resale	**401**	1,542	**2,097**	4,865
Securities borrowed[d]	**(128)**	434	**(151)**	1,298
Deposits with banks	**69**	898	**708**	3,200
All other interest-earning assets[b][e]	**183**	604	**826**	1,625
Total interest income	**14,700**	21,121	**49,973**	64,113
Interest expense				
Interest-bearing deposits	**245**	2,409	**2,169**	7,010
Federal funds purchased and securities loaned or sold under repurchase agreements	**105**	1,241	**1,023**	3,577
Short-term borrowings[f]	**60**	261	**335**	1,051
Trading liabilities – debt and all other interest-bearing liabilities[d][g]	**(51)**	660	**278**	2,141
Long-term debt	**1,293**	2,188	**4,679**	6,796
Beneficial interest issued by consolidated VIEs	**35**	134	**184**	459
Total interest expense	**1,687**	6,893	**8,668**	21,034
Net interest income	**13,013**	14,228	**41,305**	43,079
Provision for credit losses	**611**	1,514	**19,369**	4,158
Net interest income after provision for credit losses	**$12,402**	$12,714	**$21,936**	$38,921

(a) Includes the amortization/accretion of unearned income (e.g., purchase premiums/discounts, net deferred fees/costs, etc.).
(b) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.
(c) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(d) Negative interest income is related to the impact of current interest rates combined with the fees paid on client-driven securities borrowed balances. The negative interest expense related to prime brokerage customer payables is recognized in interest expense and reported within trading liabilities - debt and all other interest-bearing liabilities.
(e) Includes interest earned on prime 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.
(f) Includes commercial paper.
(g) Other interest-bearing liabilities includes interest expense on prime brokerage-related customer payables.

Note 8 – Pension and other postretirement employee benefit plans

Refer to Note 8 of JPMorgan Chase's 2019 Form 10-K for a discussion of JPMorgan Chase's pension and OPEB plans.

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

	Three months ended September 30,				Nine months ended September 30,			
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019
(in millions)	Pension plans		OPEB plans		Pension plans		OPEB plans	
Components of net periodic benefit cost								
Benefits earned during the period	**$ 9**	$ 88	**$ –**	$ –	**$ 25**	$ 266	**$ –**	$ –
Interest cost on benefit obligations	**120**	148	**5**	6	**360**	447	**15**	18
Expected return on plan assets	**(192)**	(227)	**(28)**	(28)	**(575)**	(686)	**(83)**	(84)
Amortization:								
Net (gain)/loss	**4**	42	**–**	–	**11**	125	**–**	–
Prior service (credit)/cost	**–**	–	**–**	–	**2**	2	**–**	–
Net periodic defined benefit (credit)/cost	**(59)**	51	**(23)**	(22)	**(177)**	154	**(68)**	(66)
Other defined benefit pension plans[a]	**8**	7	**NA**	NA	**27**	20	**NA**	NA
Total defined benefit plans	**(51)**	58	**(23)**	(22)	**(150)**	174	**(68)**	(66)
Total defined contribution plans	**340**	255	**NA**	NA	**960**	718	**NA**	NA
Total pension and OPEB cost included in noninterest expense	**$ 289**	$ 313	**$ (23)**	$ (22)	**$ 810**	$ 892	**$ (68)**	$ (66)

(a) Includes various defined benefit pension plans which are individually immaterial.

The following table presents the fair values of plan assets for the U.S. defined benefit pension and OPEB plans and for the material non-U.S. defined benefit pension plans.

(in billions)	**September 30, 2020**	December 31, 2019
Fair value of plan assets		
Defined benefit pension plans	**$ 21.1**	$ 20.4
OPEB plans	**3.1**	3.0

There are no expected contributions to the U.S. defined benefit pension plan for 2020.

Note 9 – Employee share-based incentives

Refer to Note 9 of JPMorgan Chase's 2019 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.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Cost of prior grants of RSUs, performance share units ("PSUs") and employee stock options that are amortized over their applicable vesting periods	**$ 249**	$ 265	**$ 859**	$ 882
Accrual of estimated costs of share-based awards to be granted in future periods including those to full-career eligible employees	**272**	294	**1,108**	900
Total noncash compensation expense related to employee share-based incentive plans	**$ 521**	$ 559	**$ 1,967**	$ 1,782

In the first quarter of 2020, in connection with its annual incentive grant for the 2019 performance year, the Firm granted 15 million RSUs and 496 thousand PSUs with weighted-average grant date fair values of $135.64 per RSU and $135.30 per PSU.

Note 10 – Investment securities

Investment securities consist of debt securities that are classified as AFS or HTM. Debt securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities. Refer to Note 10 of JPMorgan Chase's 2019 Form 10-K for additional information regarding the investment securities portfolio.

Effective January 1, 2020, the Firm adopted the CECL accounting guidance, which also amended the AFS securities impairment guidance. Refer to Note 1 for further information.

During the nine months ended September 30, 2020, the Firm transferred $100.5 billion of investment securities, consisting of $74.4 billion in the third quarter of 2020 and $26.1 billion in the first quarter of 2020, from AFS to HTM for capital management purposes. AOCI included pretax unrealized gains of $2.9 billion and $1.0 billion on the securities at the dates of transfer for the quarters ended September 30, 2020, and March 31, 2020, respectively.

Unrealized gains or losses at the date of transfer of these securities continue to be reported in AOCI and are amortized into interest income on a level-yield basis over the remaining life of the securities. This amortization will offset the effect on interest income of the amortization of the premium or discount resulting from the transfer recorded at fair value.

Transfers of securities from AFS to HTM are non-cash transactions and are recorded at fair value.

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

	September 30, 2020				December 31, 2019			
(in millions)	Amortized cost[e]	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost[e]	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
Mortgage-backed securities:								
U.S. GSEs and government agencies[a]	**$ 96,865**	**$ 2,807**	**$ 78**	**$ 99,594**	$ 107,811	$ 2,395	$ 89	$ 110,117
Residential:								
U.S.	**6,954**	**296**	**4**	**7,246**	10,223	233	6	10,450
Non-U.S.	**4,134**	**54**	**11**	**4,177**	2,477	64	1	2,540
Commercial	**2,923**	**62**	**49**	**2,936**	5,137	64	13	5,188
Total mortgage-backed securities	**110,876**	**3,219**	**142**	**113,953**	125,648	2,756	109	128,295
U.S. Treasury and government agencies	**213,887**	**2,820**	**128**	**216,579**	139,162	449	175	139,436
Obligations of U.S. states and municipalities	**19,518**	**1,370**	**5**	**20,883**	27,693	2,118	1	29,810
Certificates of deposit	**–**	**–**	**–**	**–**	77	–	–	77
Non-U.S. government debt securities	**20,695**	**353**	**11**	**21,037**	21,427	377	17	21,787
Corporate debt securities	**270**	**4**	**3**	**271**	823	22	–	845
Asset-backed securities:								
Collateralized loan obligations	**10,253**	**19**	**70**	**10,202**	25,038	9	56	24,991
Other	**6,600**	**90**	**32**	**6,658**	5,438	40	20	5,458
Total available-for-sale securities[b]	**382,099**	**7,875**	**391**	**389,583**	345,306	5,771	378	350,699
Held-to-maturity securities[c]								
Mortgage-backed securities:								
U.S. GSEs and government agencies[a]	**100,364**	**2,992**	**85**	**103,271**	36,523	1,165	62	37,626
U.S. Residential	**4,791**	**5**	**2**	**4,794**	–	–	–	–
Commercial	**2,583**	**44**	**2**	**2,681**	–	–	–	–
Total mortgage-backed securities	**107,738**	**3,041**	**89**	**110,746**	36,523	1,165	62	37,626
U.S. Treasury and government agencies	**51**	**2**	**–**	**53**	51	–	1	50
Obligations of U.S. states and municipalities	**12,828**	**413**	**60**	**13,245**	4,797	299	–	5,096
Asset-backed securities:								
Collateralized loan obligations	**20,936**	**34**	**18**	**20,952**	6,169	–	–	6,169
Total held-to-maturity securities, net of allowance for credit losses[d]	**141,553**	**3,490**	**167**	**144,996**	47,540	1,464	63	48,941
Total investment securities, net of allowance for credit losses[d]	**$ 523,652**	**$ 11,365**	**$ 558**	**$ 534,579**	$ 392,846	$ 7,235	$ 441	$ 399,640

(a) Includes AFS U.S. GSE obligations with fair values of $55.6 billion and $78.5 billion, and HTM U.S. GSE obligations with amortized cost of $82.4 billion and $31.6 billion, at September 30, 2020, and December 31, 2019, respectively. As of September 30, 2020, mortgage-backed securities issued by Fannie Mae and Freddie Mac each exceeded 10% of JPMorgan Chase's total stockholders' equity; the amortized cost and fair value of such securities were $92.9 billion and $96.5 billion, and $43.0 billion and $44.3 billion, respectively.

(b) There was no allowance for credit losses on AFS securities at September 30, 2020.

(c) The Firm purchased $514 million and $5.5 billion of HTM securities for the three and nine months ended September 30, 2020, respectively, and $10.9 billion and $11.7 billion for the three and nine months ended September 30, 2019, respectively.

(d) HTM securities measured at amortized cost are reported net of allowance for credit losses of $120 million at September 30, 2020.

(e) Excludes $2.0 billion and $1.9 billion of accrued interest receivables at September 30, 2020 and December 31, 2019, respectively. The Firm did not reverse through interest income any accrued interest receivables for the three and nine months ended September 30, 2020 and 2019.

At September 30, 2020, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal risk ratings). Risk ratings are used to identify the credit quality of securities and differentiate risk within the portfolio. The Firm's internal risk ratings generally align with the qualitative characteristics (e.g., borrower capacity to meet financial commitments and vulnerability to changes in the economic environment) defined by S&P and Moody's, however the quantitative characteristics (e.g., probability of default ("PD") and loss given default ("LGD")) may differ as they reflect internal historical experiences and assumptions. Risk ratings are assigned at acquisition, are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary over the life of the investment for updated information affecting the issuer's ability to fulfill its obligations.

AFS securities impairment

The following tables present the fair value and gross unrealized losses by aging category for AFS securities at September 30, 2020 and December 31, 2019. The tables exclude U.S. Treasury and government agency securities and U.S. GSE and government agency MBS with unrealized losses of $206 million and $264 million, at September 30, 2020 and December 31, 2019, 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			
September 30, 2020 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale securities						
Mortgage-backed securities:						
Residential:						
U.S.	**$ 446**	**$ 3**	**$ 119**	**$ 1**	**$ 565**	**$ 4**
Non-U.S.	**2,678**	**9**	**243**	**2**	**2,921**	**11**
Commercial	**1,069**	**23**	**178**	**26**	**1,247**	**49**
Total mortgage-backed securities	**4,193**	**35**	**540**	**29**	**4,733**	**64**
Obligations of U.S. states and municipalities	**233**	**5**	**–**	**–**	**233**	**5**
Certificates of deposit	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S. government debt securities	**3,510**	**7**	**922**	**4**	**4,432**	**11**
Corporate debt securities	**94**	**3**	**–**	**–**	**94**	**3**
Asset-backed securities:						
Collateralized loan obligations	**6,656**	**48**	**2,393**	**22**	**9,049**	**70**
Other	**549**	**5**	**734**	**27**	**1,283**	**32**
Total available-for-sale securities with gross unrealized losses	**$ 15,235**	**$ 103**	**$ 4,589**	**$ 82**	**$ 19,824**	**$ 185**

	Available-for-sale securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2019 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale securities						
Mortgage-backed securities:						
Residential:						
U.S.	$ 1,072	$ 3	$ 423	$ 3	$ 1,495	$ 6
Non-U.S.	13	–	420	1	433	1
Commercial	1,287	12	199	1	1,486	13
Total mortgage-backed securities	2,372	15	1,042	5	3,414	20
Obligations of U.S. states and municipalities	186	1	–	–	186	1
Certificates of deposit	77	–	–	–	77	–
Non-U.S. government debt securities	3,970	13	1,406	4	5,376	17
Corporate debt securities	–	–	–	–	–	–
Asset-backed securities:						
Collateralized loan obligations	10,364	11	7,756	45	18,120	56
Other	1,639	9	753	11	2,392	20
Total available-for-sale securities with gross unrealized losses	$ 18,608	$ 49	$ 10,957	$ 65	$ 29,565	$ 114

As a result of the adoption of the amended AFS securities impairment guidance, an allowance for credit losses on AFS securities is required for impaired securities if a credit loss exists.

AFS securities are considered impaired if the fair value is less than the amortized cost (excluding accrued interest receivable).

The Firm recognizes impairment losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost. In these circumstances the impairment loss recognized in earnings is equal to the full difference between the amortized cost (excluding accrued interest receivable and net of allowance if applicable) and the fair value of the securities.

For impaired debt securities that the Firm has the intent and ability to hold, the securities are evaluated to determine if a credit loss exists. If it is determined that a credit loss exists, that loss is recognized as an allowance for credit losses through the provision for credit losses in the Consolidated Statements of Income, limited by the amount of impairment. Any impairment not due to credit losses is recorded in OCI.

Factors considered in evaluating credit losses include adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; and payment structure of the security.

When assessing securities issued in a securitization for credit losses, the Firm estimates cash flows considering relevant market and economic data, underlying loan-level data, and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists.

For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm evaluates impairment for credit losses when there is an adverse change in expected cash flows.

Allowance for credit losses

Based on its assessment, the Firm did not recognize an allowance for credit losses on impaired AFS securities as of January 1, 2020 or September 30, 2020.

HTM securities – credit risk

The adoption of the CECL accounting guidance requires management to estimate expected credit losses on HTM securities over the remaining expected life and recognize this estimate as an allowance for credit losses. As a result of the adoption of this guidance, the Firm recognized an allowance for credit losses on HTM obligations of U.S. states and municipalities of $10 million as a cumulative-effect adjustment to retained earnings as of January 1, 2020.

Credit quality indicator

The primary credit quality indicator for HTM securities is the risk rating assigned to each security. At September 30, 2020, all HTM securities were rated investment grade and were current and accruing, with approximately 93% rated AAA.

Allowance for credit losses

The allowance for credit losses on HTM obligations of U.S. states and municipalities and commercial mortgage-backed securities is calculated by applying statistical credit loss factors (estimated PD and LGD) to the amortized cost (excluding accrued interest receivable). The credit loss factors are derived using a weighted average of five internally developed eight-quarter macroeconomic scenarios, followed by a single year straight-line interpolation to revert to long run historical information for periods beyond the forecast period. Refer to Note 13 for further information on the eight-quarter macroeconomic forecast.

The allowance for credit losses on HTM collateralized loan obligations and U.S. residential mortgage-backed securities is calculated as the difference between the amortized cost (excluding accrued interest receivable) and the present value of the cash flows expected to be collected, discounted at the security's effective interest rate. These cash flow estimates are developed based on expectations of underlying collateral performance derived using the eight-quarter macroeconomic forecast and the single year straight-line interpolation, as well as considering the structural features of the security.

The application of different inputs and assumptions into the calculation of the allowance for credit losses is subject to significant management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for credit losses on HTM securities.

The allowance for credit losses on HTM securities was $120 million as of September 30, 2020, reflecting $97 million and $110 million recognized in the provision for credit losses for the three and nine months ended September 30, 2020, respectively.

Selected impacts of investment securities on the Consolidated statements of income

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Realized gains	**$ 1,123**	$ 78	**$ 2,842**	$ 454
Realized losses	**(648)**	–	**(2,108)**	(319)
Intent to sell[(a)]	**(2)**	–	**(2)**	–
Net investment securities gains	**$ 473**	$ 78	**$ 732**	$ 135
Provision for credit losses	**$ 97**	NA	**110**	NA

(a) Represents losses recognized in earnings on investment securities the Firm intends to sell.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at September 30, 2020, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity September 30, 2020 (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[b]	Total
Available-for-sale securities					
Mortgage-backed securities					
Amortized cost	$ –	$ 433	$ 7,834	$ 102,609	$ 110,876
Fair value	–	449	8,149	105,355	113,953
Average yield[a]	3.74 %	2.28 %	1.66 %	2.93 %	2.84 %
U.S. Treasury and government agencies					
Amortized cost	$ 38,577	$ 119,641	$ 44,776	$ 10,893	$ 213,887
Fair value	38,629	121,118	46,023	10,809	216,579
Average yield[a]	0.37 %	0.66 %	0.85 %	0.48 %	0.64 %
Obligations of U.S. states and municipalities					
Amortized cost	$ 61	$ 187	$ 923	$ 18,347	$ 19,518
Fair value	62	196	980	19,645	20,883
Average yield[a]	3.68 %	4.62 %	4.91 %	4.83 %	4.83 %
Non-U.S. government debt securities					
Amortized cost	$ 7,945	$ 7,691	$ 5,059	$ –	$ 20,695
Fair value	7,966	7,900	5,171	–	21,037
Average yield[a]	1.22 %	1.77 %	0.79 %	– %	1.32 %
Corporate debt securities					
Amortized cost	$ 21	$ 129	$ 120	$ –	$ 270
Fair value	21	128	122	–	271
Average yield[a]	2.70 %	2.29 %	2.30 %	– %	2.33 %
Asset-backed securities					
Amortized cost	$ 77	$ 3,088	$ 6,162	$ 7,526	$ 16,853
Fair value	77	3,115	6,141	7,527	16,860
Average yield[a]	0.52 %	2.18 %	1.40 %	1.49 %	1.58 %
Total available-for-sale securities					
Amortized cost	$ 46,681	$ 131,169	$ 64,874	$ 139,375	$ 382,099
Fair value	46,755	132,906	66,586	143,336	389,583
Average yield[a]	0.52 %	0.77 %	1.06 %	2.91 %	1.57 %
Held-to-maturity securities					
Mortgage-backed securities					
Amortized cost	$ –	$ –	$ 11,183	$ 96,611	$ 107,794
Fair value	–	–	11,999	98,747	110,746
Average yield[a]	– %	– %	2.42 %	2.98 %	2.92 %
U.S. Treasury and government agencies					
Amortized cost	$ –	$ 51	$ –	$ –	$ 51
Fair value	–	53	–	–	53
Average yield[a]	– %	1.47 %	– %	– %	1.47 %
Obligations of U.S. states and municipalities					
Amortized cost	$ –	$ 54	$ 481	$ 12,357	$ 12,892
Fair value	–	55	506	12,684	13,245
Average yield[a]	– %	3.25 %	3.49 %	3.60 %	3.59 %
Asset-backed securities					
Amortized cost	$ –	$ –	$ 10,970	$ 9,966	$ 20,936
Fair value	–	–	10,977	9,975	20,952
Average yield[a]	– %	– %	1.46 %	1.37 %	1.42 %
Total held-to-maturity securities					
Amortized cost	$ –	$ 105	$ 22,634	$ 118,934	$ 141,673
Fair value	–	108	23,482	121,406	144,996
Average yield[a]	– %	2.39 %	1.97 %	2.91 %	2.76 %

(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. 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) 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 4 years for agency residential MBS, 3 years for agency residential collateralized mortgage obligations and 3 years for nonagency residential collateralized mortgage obligations.

Note 11 – Securities financing activities

JPMorgan Chase enters into resale, repurchase, securities borrowed and securities loaned agreements (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short sales, accommodate customers' financing needs, settle other securities obligations and to deploy the Firm's excess cash.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Where appropriate under applicable accounting guidance, securities financing agreements with the same counterparty are reported on a net basis. Refer to Note 1 for further discussion of the offsetting of assets and liabilities. Fees received and paid in connection with securities financing agreements are recorded over the life of the agreement in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. Refer to Note 3 for further information regarding the fair value option. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

Securities financing agreements not elected under the fair value option are measured at amortized cost. As a result of the Firm's credit risk mitigation practices described below, the Firm did not hold any allowance for credit losses with respect to resale and securities borrowed arrangements as of September 30, 2020 and December 31, 2019.

Credit risk mitigation practices

Securities financing agreements expose the Firm primarily to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and U.S. GSEs and government agencies MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale and securities borrowed agreements, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase and securities loaned agreements, credit risk exposure arises to the extent that the value of underlying securities advanced exceeds the value of the initial cash principal received, and any collateral amounts exchanged.

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale and securities borrowed agreements. Refer to Note 24 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 September 30, 2020 and December 31, 2019. 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.

	September 30, 2020				
(in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets[b]	Net amounts[c]
Assets					
Securities purchased under resale agreements	**$ 653,504**	**$ (333,655)**	**$ 319,849**	**$ (297,189)**	**$ 22,660**
Securities borrowed	**169,400**	**(26,959)**	**142,441**	**(97,418)**	**45,023**
Liabilities					
Securities sold under repurchase agreements	**$ 561,489**	**$ (333,655)**	**$ 227,834**	**$ (210,378)**	**$ 17,456**
Securities loaned and other[a]	**36,307**	**(26,959)**	**9,348**	**(8,884)**	**464**

	December 31, 2019				
(in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets	Amounts not nettable on the Consolidated balance sheets[b]	Net amounts[c]
Assets					
Securities purchased under resale agreements	$ 628,609	$ (379,463)	$ 249,146	$ (233,818)	$ 15,328
Securities borrowed	166,718	(26,960)	139,758	(104,990)	34,768
Liabilities					
Securities sold under repurchase agreements	$ 555,172	$ (379,463)	$ 175,709	$ (151,566)	$ 24,143
Securities loaned and other[a]	36,649	(26,960)	9,689	(9,654)	35

(a) Includes securities-for-securities lending agreements of $3.3 billion and $3.7 billion at September 30, 2020 and December 31, 2019, respectively, accounted for at fair value, where the Firm is acting as lender. In the Consolidated balance sheets, 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.

(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 September 30, 2020 and December 31, 2019, included $15.4 billion and $11.0 billion, respectively, of securities purchased under resale agreements; $41.8 billion and $31.9 billion, respectively, of securities borrowed; $16.3 billion and $22.7 billion, respectively, of securities sold under repurchase agreements; and $36 million and $7 million, respectively, of securities loaned and other.

The tables below present as of September 30, 2020, and December 31, 2019 the types of financial assets pledged in securities financing agreements and the remaining contractual maturity of the securities financing agreements.

	Gross liability balance			
	September 30, 2020		December 31, 2019	
(in millions)	Securities sold under repurchase agreements	Securities loaned and other	Securities sold under repurchase agreements	Securities loaned and other
Mortgage-backed securities				
U.S. GSEs and government agencies	**$ 62,739**	**$ –**	$ 34,119	$ –
Residential - nonagency	**588**	**–**	1,239	–
Commercial - nonagency	**846**	**–**	1,612	–
U.S. Treasury, GSEs and government agencies	**299,978**	**155**	334,398	29
Obligations of U.S. states and municipalities	**1,372**	**2**	1,181	–
Non-U.S. government debt	**157,840**	**2,104**	145,548	1,528
Corporate debt securities	**20,415**	**1,847**	13,826	1,580
Asset-backed securities	**1,348**	**–**	1,794	–
Equity securities	**16,363**	**32,199**	21,455	33,512
Total	**$ 561,489**	**$ 36,307**	$ 555,172	$ 36,649

	Remaining contractual maturity of the agreements				
September 30, 2020 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	**$ 234,766**	**$ 215,363**	**$ 41,042**	**$ 70,318**	**$ 561,489**
Total securities loaned and other	**34,354**	**9**	**628**	**1,316**	**36,307**

	Remaining contractual maturity of the agreements				
December 31, 2019 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 225,134	$ 195,816 [(a)]	$ 56,020 [(a)]	$ 78,202 [(a)]	$ 555,172
Total securities loaned and other	32,028	1,706	937	1,978	36,649

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

Transfers not qualifying for sale accounting

At September 30, 2020, and December 31, 2019, the Firm held $526 million and $743 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 12 – Loans

Loan accounting framework

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

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

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. Refer to Note 1 for further information.

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment

Originated or purchased loans held-for-investment are recorded at the principal amount outstanding, net of the following: charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees.

Interest income

Interest income on performing loans held-for-investment is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the contractual life of the loan as an adjustment of yield.

The Firm classifies accrued interest on loans, including accrued but unbilled interest on credit card loans, in accrued interest and accounts receivables on the Consolidated balance sheets. For credit card loans, accrued interest once billed is then recognized in the loan balances, with the related allowance recorded in the allowance for credit losses. Changes in the allowance for credit losses on accrued interest on credit card loans are recognized in the provision for credit losses and charge-offs are recognized by reversing interest income. For other loans, the Firm generally does not recognize an allowance for credit losses on accrued interest receivables, consistent with its policy to write them off no later than 90 days past due by reversing interest income.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full.

Allowance for loan losses

The allowance for loan losses represents the estimated expected credit losses in the held-for-investment loan portfolio at the balance sheet date and is recognized on the balance sheet as a contra asset, which brings the amortized cost to the net carrying value. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. Refer to Note 13 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less estimated costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the FFIEC. Residential real estate loans, unmodified credit card loans and scored business banking loans are generally charged off no later than 180 days past due. Scored auto and modified credit card loans are charged off no later than 120 days past due.

Certain consumer loans are charged off or charged down to their net realizable value earlier than the FFIEC charge-off standards in certain circumstances as follows:

- Loans modified in a TDR that are determined to be collateral-dependent.

- Loans to borrowers who have experienced an event that suggests a loss is either known or highly certain are subject to accelerated charge-off standards (e.g., residential real estate and auto loans are charged off or charged down within 60 days of receiving notification of a bankruptcy filing).
- Auto loans upon repossession of the automobile.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on the government-guaranteed portion of loans.

Wholesale loans are charged off when it is highly certain that a loss has been realized. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is generally estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm utilizes a broker's price opinion, appraisal and/or an automated valuation model of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every twelve months, or more frequently depending on various market factors. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), the Firm generally obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Loans held-for-sale are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees or costs and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Because these loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans. However, loans held-for-sale are subject to the nonaccrual policies described above.

Loans at fair value

Loans for which the fair value option has been elected are measured at fair value, with changes in fair value recorded in noninterest revenue.

Interest income on these loans is accrued and recognized based on the contractual rate of interest. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans. However, loans at fair value are subject to the nonaccrual policies described above.

Refer to Note 3 for further information on the Firm's elections of fair value accounting under the fair value option. Refer to Note 2 and Note 3 for further information on loans carried at fair value and classified as trading assets.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at amortized cost on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. Refer to Note 13 for a further discussion of the methodologies used in establishing the Firm's allowance for loan losses.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss and avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment delays, principal forgiveness, or the acceptance of equity or other assets in lieu of payments. Such modifications are accounted for and reported as TDRs. Loans with short-term and other insignificant modifications that are not considered concessions are not TDRs.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (i) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (ii) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, LTV ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Loans modified in TDRs are generally measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR generally remains subject to the asset-specific component of the allowance throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status. Refer to Note 13 for further discussion of the methodology used to estimate the Firm's asset-specific allowance.

The Firm has granted various forms of assistance to customers and clients impacted by the COVID-19 pandemic, including payment deferrals and covenant modifications. The majority of the Firm's COVID-19 related loan modifications have not been considered TDRs as:

- they represent short-term or other insignificant modifications, whether under the Firm's regular loan modification assessments or as permitted by regulatory guidance, or
- the Firm has elected to apply the option to suspend the application of accounting guidance for TDRs as provided under section 4013 of the CARES Act.

To the extent that certain modifications do not meet any of the above criteria, the Firm accounts for them as TDRs.

As permitted by regulatory guidance, the Firm does not place loans with deferrals granted due to COVID-19 on nonaccrual status where such loans are not otherwise reportable as nonaccrual. The Firm considers expected losses of principal and accrued interest associated with all COVID-19 related loan modifications in its allowance for credit losses.

Assistance provided in response to the COVID-19 pandemic could delay the recognition of delinquencies, nonaccrual status, and net charge-offs for those customers who would have otherwise moved into past due or nonaccrual status.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less estimated costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

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

In conjunction with the adoption of CECL, the Firm revised its loan classes. Prior-period amounts have been revised to conform with the current presentation:

- The consumer, excluding credit card portfolio segment's residential mortgage and home equity loans and lending-related commitments have been combined into a residential real estate class.
- Upon adoption of CECL, the Firm elected to discontinue the pool-level accounting for PCI loans and to account for these loans on an individual loan basis. PCI loans are considered PCD loans under CECL and are subject to the Firm's nonaccrual and charge-off policies. PCD loans are now reported in the consumer, excluding credit card portfolio segment's residential real estate class.
- Risk-rated business banking and auto dealer loans and lending-related commitments held in CCB were reclassified from the consumer, excluding credit card portfolio segment, to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. The remaining scored auto and business banking loans and lending-related commitments have been combined into an auto and other class.
- The wholesale portfolio segment's classes, previously based on the borrower's primary business activity, have been revised to align with the loan classifications as defined by the bank regulatory agencies, based on the loan's collateral, purpose, and type of borrower.

Consumer, excluding credit card	Credit card	Wholesale[c]
• Residential real estate[a] • Auto and other[b]	• Credit card loans	• Secured by real estate • Commercial and industrial • Other[d]

(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 business banking and auto dealer loans held in CCB for which the wholesale methodology is applied when determining the allowance for loan losses.
(d) 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 Wealth Management clients within AWM). Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for more information on SPEs.

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

September 30, 2020 (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total[b]
Retained	**$ 305,106**	**$ 139,590**	**$ 500,841**	**$ 945,537** [c]
Held-for-sale	**1,391**	**787**	**3,805**	**5,983**
At fair value[a]	**15,601**	**–**	**22,619**	**38,220**
Total	**$ 322,098**	**$ 140,377**	**$ 527,265**	**$ 989,740**

December 31, 2019 (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total[b]
Retained	$ 294,999	$ 168,924	$ 481,678	$ 945,601 [c]
Held-for-sale	3,002	–	4,062	7,064
At fair value[a]	19,816	–	25,139	44,955
Total	$ 317,817	$ 168,924	$ 510,879	$ 997,620

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans. Prior-period amounts have been revised to conform with the current presentation.
(b) Excludes $2.8 billion and $2.9 billion of accrued interest receivables at September 30, 2020, and December 31, 2019, respectively. The Firm wrote off accrued interest receivables of $34 million and $15 million for the three months ended September 30, 2020 and 2019, respectively, and $82 million and $38 million for the nine months ended September 30, 2020 and 2019, respectively.
(c) 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 September 30, 2020, and December 31, 2019.

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.

	2020				2019			
Three months ended September 30, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 1,780** [b][c]	**$ –**	**$ 309**	**$ 2,089**	$ 259 [b][c]	$ –	$ 453	$ 712
Sales	**–**	**–**	**4,578**	**4,578**	14,965	–	5,564	20,529
Retained loans reclassified to held-for-sale[a]	**995**	**787**	**403**	**2,185**	3,889	–	359	4,248

	2020				2019			
Nine months ended September 30, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 3,180** [b][c]	**$ –**	**$ 937**	**$ 4,117**	$ 1,044 [b][c]	$ –	$ 1,041	$ 2,085
Sales	**348**	**–**	**13,579**	**13,927**	30,474	–	16,414	46,888
Retained loans reclassified to held-for-sale[a]	**1,822**	**787**	**1,154**	**3,763**	8,950	–	1,784	10,734

(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 and nine months ended September 30, 2020 and 2019. 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 sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $3.1 billion and $4.7 billion for the three months ended September 30, 2020 and 2019, respectively, and $10.5 billion and $12.2 billion for the nine months ended September 30, 2020 and 2019, respectively.

Gains and losses on sales of loans

Net gains/(losses) on sales of loans and lending-related commitments (including adjustments to record loans and lending-related commitments held-for-sale at the lower of cost or fair value) recognized in noninterest revenue were $113 million and $(75) million for the three and nine months ended September 30, 2020, respectively, of which $24 million and $(76) million, respectively, were related to loans. Net gains on sales of loans were $254 million and $433 million for the three and nine months ended September 30, 2019, respectively. 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)	**September 30, 2020**	December 31, 2019
Residential real estate	**$ 229,751**	$ 243,317
Auto and other[(a)]	**75,355**	51,682
Total retained loans	**$ 305,106**	$ 294,999

(a) At September 30, 2020, included $20.3 billion of loans in Business Banking under the PPP.

Delinquency rates are the primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear whether the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV ratios can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (less than 660) is considered to be of higher risk than a loan to a borrower with a higher FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto and business banking loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.

Residential real estate

The following table provides information on delinquency, which is the primary credit quality indicator for retained residential real estate loans.

	September 30, 2020									December 31, 2019
	Term loans by origination year						Revolving loans			
(in millions, except ratios)	2020	2019	2018	2017	2016	Prior to 2016	Within the revolving period	Converted to term loans	Total	Total
Loan delinquency[(a)(b)]										
Current	**$ 40,303**	**$ 35,666**	**$ 15,973**	**$ 23,425**	**$ 31,870**	**$ 54,731**	**$ 7,942**	**$ 16,553**	**$ 226,463**	$ 239,979
30–149 days past due	**11**	**46**	**39**	**59**	**102**	**949**	**12**	**285**	**1,503**	1,910
150 or more days past due	**10**	**38**	**53**	**68**	**58**	**1,198**	**14**	**346**	**1,785**	1,428
Total retained loans	**$ 40,324**	**$ 35,750**	**$ 16,065**	**$ 23,552**	**$ 32,030**	**$ 56,878**	**$ 7,968**	**$ 17,184**	**$ 229,751**	$ 243,317
% of 30+ days past due to total retained loans[(c)]	**0.05 %**	**0.23 %**	**0.57 %**	**0.54 %**	**0.50 %**	**3.67 %**	**0.33 %**	**3.67 %**	**1.40 %**	1.35 %

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $10 million and $17 million; 30–149 days past due included $29 million and $20 million; and 150 or more days past due included $31 million and $26 million at September 30, 2020, and December 31, 2019, respectively.

(b) At September 30, 2020, 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) At September 30, 2020, and December 31, 2019, residential real estate loans excluded mortgage loans insured by U.S. government agencies of $60 million and $46 million, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

Approximately 34% 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)		September 30, 2020		December 31, 2019
Nonaccrual loans[(a)(b)(c)(d)(e)]	$	4,909	$	2,780
90 or more days past due and government guaranteed[(f)]		55		38
Current estimated LTV ratios[(g)(h)]				
Greater than 125% and refreshed FICO scores:				
Equal to or greater than 660	$	26	$	31
Less than 660		26		38
101% to 125% and refreshed FICO scores:				
Equal to or greater than 660		123		134
Less than 660		100		132
80% to 100% and refreshed FICO scores:				
Equal to or greater than 660		6,180		5,953
Less than 660		659		764
Less than 80% and refreshed FICO scores:				
Equal to or greater than 660		208,422		219,469
Less than 660		12,266		14,681
No FICO/LTV available		1,879		2,052
U.S. government-guaranteed		70		63
Total retained loans	$	229,751	$	243,317
Weighted average LTV ratio[(g)(i)]		56 %		55 %
Weighted average FICO[(h)(i)]		763		758
Geographic region[(j)]				
California	$	75,807	$	82,147
New York		32,014		31,996
Texas		13,901		14,474
Florida		13,827		13,668
Illinois		13,800		15,587
Colorado		8,307		8,447
Washington		8,163		8,990
New Jersey		7,395		7,752
Massachusetts		5,857		6,210
Connecticut		4,962		4,954
All other[(k)]		45,718		49,092
Total retained loans	$	229,751	$	243,317

(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 TDRs, regardless of their delinquency status. At September 30, 2020, approximately 8% of Chapter 7 residential real estate loans were 30 days or more past due, respectively.

(b) At September 30, 2020, nonaccrual loans included $1.5 billion of PCD loans. Prior to the adoption of CECL, nonaccrual loans excluded PCI loans as the Firm recognized interest income on each pool of PCI loans as each of the pools was performing.

(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 fair value of their underlying collateral less costs to sell. If the value of the underlying collateral has subsequently improved, the related allowance may be negative.

(d) Interest income on nonaccrual loans recognized on a cash basis was $39 million and $40 million for the three months ended September 30, 2020 and 2019, respectively, and $119 million and $124 million for the nine months ended September 30, 2020 and 2019, respectively.

(e) Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic. Includes loans to customers that have exited COVID-19 payment deferral programs and are 90 or more days past due, predominantly all of which were considered collateral-dependent and charged down to the lower of amortized cost or fair value of the underlying collateral less costs to sell.

(f) These balances are excluded from nonaccrual loans as the loans are guaranteed by U.S government agencies. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. At September 30, 2020, and December 31, 2019, these balances included $55 million and $34 million, respectively, of loans that are no longer accruing interest based on the agreed-upon servicing guidelines. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate. There were no loans that were not guaranteed by U.S. government agencies that are 90 or more days past due and still accruing interest at September 30, 2020, and December 31, 2019.

(g) 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.

(h) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(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 September 30, 2020.

(k) At September 30, 2020, and December 31, 2019, included mortgage loans insured by U.S. government agencies of $70 million and $63 million, respectively. These amounts have been excluded from the geographic regions presented based upon the government guarantee.

Loan modifications

Modifications of residential real estate loans where the Firm grants concessions to borrowers who are experiencing financial difficulty are generally accounted for and reported as TDRs. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs. The carrying value of new TDRs was $199 million and $112 million for the three months ended September 30, 2020 and 2019, respectively, and $537 million and $386 million for the nine months ended September 30, 2020 and 2019, respectively. There were no additional commitments to lend to borrowers whose residential real estate loans have been modified in TDRs.

Nature and extent of modifications

The Firm's proprietary modification programs as well as government programs, including U.S. GSE programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and delays of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans were modified in TDRs under the Firm's loss mitigation programs described above during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt and loans with short-term or other insignificant modifications that are not considered concessions.

	Three months ended September 30,		Nine months ended September 30,	
	2020	2019	**2020**	2019
Number of loans approved for a trial modification	**1,623**	1,219	**4,468**	4,444
Number of loans permanently modified	**1,615**	1,162	**5,200**	3,956
Concession granted:[(a)]				
Interest rate reduction	**40 %**	89 %	**51 %**	78 %
Term or payment extension	**39**	68	**53**	72
Principal and/or interest deferred	**21**	10	**12**	13
Principal forgiveness	**1**	5	**2**	5
Other[(b)]	**65**	76	**65**	63

(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 for the three and nine months ended September 30, 2020 and 2019.

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 under the loss mitigation programs described above and about redefaults of certain loans modified in TDRs for the periods presented. The following table presents only the financial effects of permanent modifications and do not include temporary concessions offered through trial modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

	Three months ended September 30,		Nine months ended September 30,	
(in millions, except weighted-average data)	**2020**	2019	**2020**	2019
Weighted-average interest rate of loans with interest rate reductions – before TDR	**4.99 %**	5.57 %	**5.10 %**	5.77 %
Weighted-average interest rate of loans with interest rate reductions – after TDR	**3.34**	3.58	**3.40**	3.90
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**23**	20	**22**	20
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**39**	39	**39**	39
Charge-offs recognized upon permanent modification	**$ 1**	$ –	**$ 2**	$ 1
Principal deferred	**3**	6	**12**	17
Principal forgiven	**1**	2	**4**	6
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 65**	$ 53	**$ 173**	$ 132

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it will generally be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last twelve months may not be representative of ultimate redefault levels.

At September 30, 2020, the weighted-average estimated remaining lives of residential real estate loans permanently modified in TDRs were 6 years. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At September 30, 2020, and December 31, 2019, the Firm had residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $904 million and $1.2 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Auto and other

The following table provides information on delinquency, which is the primary credit quality indicator for retained auto and other consumer loans.

	September 30, 2020									December 31, 2019
	Term Loans by origination year						Revolving loans			
(in millions, except ratios)	2020	2019	2018	2017	2016	Prior to 2016	Within the revolving period	Converted to term loans	Total	Total
Loan delinquency[a]										
Current	**$ 40,069** [b]	**$ 14,393**	**$ 8,516**	**$ 5,470**	**$ 2,683**	**$ 1,082**	**$ 2,573**	**$ 174**	**$ 74,960**	$ 51,005
30–119 days past due	**65**	**99**	**72**	**51**	**43**	**26**	**18**	**10**	**384**	667
120 or more days past due	**–**	**–**	**–**	**–**	**–**	**1**	**5**	**5**	**11**	10
Total retained loans	**$ 40,134**	**$ 14,492**	**$ 8,588**	**$ 5,521**	**$ 2,726**	**$ 1,109**	**$ 2,596**	**$ 189**	**$ 75,355**	$ 51,682
% of 30+ days past due to total retained loans	**0.16 %**	**0.68 %**	**0.84 %**	**0.92 %**	**1.58 %**	**2.43 %**	**0.89 %**	**7.94 %**	**0.52 %**	1.31 %

(a) At September 30, 2020, 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.
(b) At September 30, 2020, included $20.3 billion of loans in Business Banking under the PPP. PPP loans are guaranteed by the SBA. Other than in certain limited circumstances, the Firm typically does not recognize charge-offs, classify as nonaccrual nor record an allowance for loan losses on these loans.

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.

	Total Auto and other	
(in millions, except ratios)	**Sep 30, 2020**	Dec 31, 2019
Nonaccrual loans[a][b][c]	**138**	146
Geographic region[d]		
California	**$ 12,074**	$ 7,795
New York	**8,932**	3,706
Texas	**7,990**	5,457
Florida	**4,500**	3,025
Illinois	**3,829**	2,443
New Jersey	**2,633**	1,798
Arizona	**2,442**	1,347
Ohio	**2,181**	1,490
Colorado	**1,868**	1,247
Pennsylvania	**1,866**	1,721
All other	**27,040**	21,653
Total retained loans	**$ 75,355**	$ 51,682

(a) There were no loans that were 90 or more days past due and still accruing interest at September 30, 2020, and December 31, 2019.
(b) All nonaccrual auto and other consumer loans generally have an allowance.
(c) Interest income on nonaccrual loans recognized on a cash basis was not material for the three and nine months ended September 30, 2020 and 2019.
(d) The geographic regions presented in this table are ordered based on the magnitude of the corresponding loan balances at September 30, 2020.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs.

The impact of these modifications, as well as new TDRs, were not material to the Firm for the three and nine months ended September 30, 2020 and 2019. Additional commitments to lend to borrowers whose loans have been modified in TDRs as of September 30, 2020 and December 31, 2019 were not material.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. The distribution of such scores provides a general indicator of credit quality trends within the portfolio; however, the score does not capture all factors that would be predictive of future credit performance. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the following table. FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in the credit score calculation.

The following table provides information on delinquency, which is the primary credit quality indicator for retained credit card loans.

	September 30, 2020			December 31, 2019
(in millions, except ratios)	Within the revolving period	Converted to term loans[b]	Total	Total
Loan delinquency[a]				
Current and less than 30 days past due and still accruing	**$ 136,103**	**$ 1,289**	**$ 137,392**	$ 165,767
30–89 days past due and still accruing	**1,139**	**99**	**1,238**	1,550
90 or more days past due and still accruing	**916**	**44**	**960**	1,607
Total retained loans	**$ 138,158**	**$ 1,432**	**$ 139,590**	$ 168,924
Loan delinquency ratios				
% of 30+ days past due to total retained loans	**1.49 %**	**9.99 %**	**1.57 %**	**1.87 %**
% of 90+ days past due to total retained loans	**0.66**	**3.07**	**0.69**	**0.95**

(a) At September 30, 2020, 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.
(b) Represents TDRs.

Other credit quality indicators

The following table provides information on other credit quality indicators for retained credit card loans.

(in millions, except ratios)	September 30, 2020	December 31, 2019
Geographic region[a]		
California	**$ 20,400**	$ 25,783
Texas	**14,116**	16,728
New York	**11,773**	14,544
Florida	**9,170**	10,830
Illinois	**7,862**	9,579
New Jersey	**5,820**	7,165
Ohio	**4,524**	5,406
Pennsylvania	**4,315**	5,245
Colorado	**4,018**	4,763
Michigan	**3,491**	4,164
All other	**54,101**	64,717
Total retained loans	**$ 139,590**	$ 168,924
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**84.7 %**	84.0 %
Less than 660	**14.6**	15.4
No FICO available	**0.7**	0.6

(a) The geographic regions presented in the table are ordered based on the magnitude of the corresponding loan balances at September 30, 2020.

Loan modifications

The Firm may offer one of a number of loan modification programs granting concessions to credit card borrowers who are experiencing financial difficulty. The Firm grants concessions for most of the credit card loans under long-term programs. 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. Substantially all modifications under the Firm's long-term programs are considered to be TDRs. Loans with short-term or other insignificant modifications that are not considered concessions are not 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 for the periods presented. For all periods disclosed, new enrollments were less than 1% of total retained credit card loans.

(in millions, except weighted-average data)	Three months ended September 30,		Nine months ended September 30,	
	2020	2019	**2020**	2019
Balance of new TDRs[(a)]	**$ 220**	$ 242	**$ 648**	$ 717
Weighted-average interest rate of loans – before TDR	**17.65 %**	19.18 %	**18.21 %**	19.23 %
Weighted-average interest rate of loans – after TDR	**4.80**	4.65	**4.55**	4.80
Balance of loans that redefaulted within one year of modification[(b)]	**$ 22**	$ 42	**$ 83**	$ 108

(a) Represents the outstanding balance prior to modification.
(b) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default 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.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the internal risk rating assigned to each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the PD and the LGD. The PD is the likelihood that a loan will default. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate internal risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's internal risk ratings generally align with the qualitative characteristics (e.g., borrower capacity to meet financial commitments and vulnerability to changes in the economic environment) defined by S&P and Moody's, however the quantitative characteristics (e.g., PD and LGD) may differ as they reflect internal historical experiences and assumptions. The Firm considers internal ratings equivalent to BBB-/Baa3 or higher as investment grade, and these ratings have a lower PD and/or lower LGD than non-investment grade ratings.

Noninvestment-grade ratings are further classified as noncriticized and criticized, and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher PD than noncriticized loans. The Firm's definition of criticized aligns with the U.S. banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. Refer to Note 4 for further detail on industry concentrations.

The following tables provide information on internal risk rating, which is the primary credit quality indicator for retained wholesale loans.

	Secured by real estate		Commercial and industrial		Other[b]		Total retained loans	
(in millions, except ratios)	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019
Loans by risk ratings								
Investment-grade	**$ 93,052**	$ 96,611	**$ 70,373** [a]	$ 80,489	**$ 200,755**	$ 186,344	**$ 364,180** [a]	$ 363,444
Noninvestment-grade:								
Noncriticized	**26,318**	22,493	**61,920**	60,437	**28,444**	27,591	**116,682**	110,521
Criticized performing	**2,042**	1,131	**13,294**	4,399	**898**	1,126	**16,234**	6,656
Criticized nonaccrual	**450**	183	**2,351**	844	**944**	30	**3,745**	1,057
Total noninvestment- grade	**28,810**	23,807	**77,565**	65,680	**30,286**	28,747	**136,661**	118,234
Total retained loans	**$ 121,862**	$ 120,418	**$ 147,938**	$ 146,169	**$ 231,041**	$ 215,091	**$ 500,841**	$ 481,678
% of investment-grade to total retained loans	**76.36 %**	80.23 %	**47.57 %**	55.07 %	**86.89 %**	86.63 %	**72.71 %**	75.45 %
% of total criticized to total retained loans	**2.04**	1.09	**10.58**	3.59	**0.80**	0.54	**3.99**	1.60
% of criticized nonaccrual to total retained loans	**0.37**	0.15	**1.59**	0.58	**0.41**	0.01	**0.75**	0.22

	Secured by real estate									
	September 30, 2020									December 31, 2019
	Term loans by origination year						Revolving loans			
(in millions)	2020	2019	2018	2017	2016	Prior to 2016	Within the revolving period	Converted to term loans	Total	Total
Loans by risk ratings										
Investment-grade	**$ 13,326**	**$ 20,495**	**$ 12,963**	**$ 12,336**	**$ 14,590**	**$ 18,232**	**$ 1,110**	**$ –**	**$ 93,052**	$ 96,611
Noninvestment-grade	**2,192**	**3,956**	**4,429**	**2,835**	**2,777**	**12,076**	**543**	**2**	**28,810**	23,807
Total retained loans	**$ 15,518**	**$ 24,451**	**$ 17,392**	**$ 15,171**	**$ 17,367**	**$ 30,308**	**$ 1,653**	**$ 2**	**$ 121,862**	$ 120,418

	Commercial and industrial									
	September 30, 2020									December 31, 2019
	Term loans by origination year						Revolving loans			
(in millions)	2020	2019	2018	2017	2016	Prior to 2016	Within the revolving period	Converted to term loans	Total	Total
Loans by risk ratings										
Investment-grade	**$ 19,444** [a]	**$ 8,283**	**$ 3,371**	**$ 2,673**	**$ 1,107**	**$ 1,290**	**$ 34,169**	**$ 36**	**$ 70,373**	$ 80,489
Noninvestment-grade	**12,504**	**10,298**	**6,413**	**2,710**	**725**	**3,090**	**41,729**	**96**	**77,565**	65,680
Total retained loans	**$ 31,948**	**$ 18,581**	**$ 9,784**	**$ 5,383**	**$ 1,832**	**$ 4,380**	**$ 75,898**	**$ 132**	**$ 147,938**	$ 146,169

	Other[b]									
	September 30, 2020									December 31, 2019
	Term loans by origination year						Revolving loans			
(in millions)	2020	2019	2018	2017	2016	Prior to 2016	Within the revolving period	Converted to term loans	Total	Total
Loans by risk ratings										
Investment-grade	**$ 25,774**	**$ 11,508**	**$ 8,228**	**$ 6,696**	**$ 3,877**	**$ 13,642**	**$ 130,774**	**$ 256**	**$ 200,755**	$ 186,344
Noninvestment-grade	**5,991**	**2,572**	**1,705**	**468**	**155**	**848**	**18,379**	**168**	**30,286**	28,747
Total retained loans	**$ 31,765**	**$ 14,080**	**$ 9,933**	**$ 7,164**	**$ 4,032**	**$ 14,490**	**$ 149,153**	**$ 424**	**$ 231,041**	$ 215,091

(a) At September 30, 2020, included $8.0 billion of loans under the PPP, of which $7.4 billion is included in commercial and industrial. PPP loans are guaranteed by the SBA. Other than in certain limited circumstances, the Firm typically does not recognize charge-offs, classify as nonaccrual nor record an allowance for loan losses on these loans.

(b) 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 Wealth Management clients within AWM). Refer to Note 14 of JPMorgan Chase's 2019 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	
	Sep 30, 2020	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019
Retained loans secured by real estate	**$ 74,480**	$ 73,840	**$ 47,382**	$ 46,578	**$ 121,862**	$ 120,418
Criticized	**565**	340	**1,927**	974	**2,492**	1,314
% of total criticized to total retained loans secured by real estate	**0.76 %**	0.46 %	**4.07 %**	2.09 %	**2.04 %**	1.09 %
Criticized nonaccrual	**$ 51**	$ 28	**$ 399**	$ 155	**$ 450**	$ 183
% of criticized nonaccrual loans to total retained loans secured by real estate	**0.07 %**	0.04 %	**0.84 %**	0.33 %	**0.37 %**	0.15 %

Geographic distribution and delinquency

The following table provides information on the geographic distribution and delinquency for retained wholesale loans.

(in millions, except ratios)	Secured by real estate		Commercial and industrial		Other		Total retained loans	
	Sep 30, 2020	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019
Loans by geographic distribution[a]								
Total U.S.	**$ 119,062**	$ 117,836	**$ 112,316**	$ 111,954	**$ 166,006**	$ 150,512	**$ 397,384**	$ 380,302
Total non-U.S.	**2,800**	2,582	**35,622**	34,215	**65,035**	64,579	**103,457**	101,376
Total retained loans	**$ 121,862**	$ 120,418	**$ 147,938**	$ 146,169	**$ 231,041**	$ 215,091	**$ 500,841**	$ 481,678
Loan delinquency[b]								
Current and less than 30 days past due and still accruing	**$ 121,302**	$ 120,119	**$ 145,165**	$ 144,839	**$ 229,191**	$ 214,641	**$ 495,658**	$ 479,599
30–89 days past due and still accruing	**110**	115	**404**	449	**891**	415	**1,405**	979
90 or more days past due and still accruing[c]	**–**	1	**18**	37	**15**	5	**33**	43
Criticized nonaccrual	**450**	183	**2,351**	844	**944**	30	**3,745**	1,057
Total retained loans	**$ 121,862**	$ 120,418	**$ 147,938**	$ 146,169	**$ 231,041**	$ 215,091	**$ 500,841**	$ 481,678

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. Generally excludes loans under payment deferral programs offered in response to the COVID-19 pandemic.
(c) 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	
	Sep 30, 2020	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019	**Sep 30, 2020**	Dec 31, 2019
Nonaccrual loans[a]								
With an allowance	**$ 349**	$ 169	**$ 1,978**	$ 688	**$ 844**	$ 28	**$ 3,171**	$ 885
Without an allowance[b]	**101**	14	**373**	156	**100**	2	**574**	172
Total nonaccrual loans[c]	**$ 450**	$ 183	**$ 2,351**	$ 844	**$ 944**	$ 30	**$ 3,745**	$ 1,057

(a) Loans that were modified in response to the COVID-19 pandemic continue to be risk-rated in accordance with the Firm's overall credit risk management framework. As of September 30, 2020, predominantly all of these loans were considered performing.
(b) When the discounted cash flows, collateral value or market price 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.
(c) Interest income on nonaccrual loans recognized on a cash basis were not material for the three and nine months ended September 30, 2020 and 2019.

Loan modifications

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. Loans with short-term or other insignificant modifications that are not considered concessions are not TDRs. The impact of these modifications, as well as new TDRs, were not material to the Firm for the three and nine months ended September 30, 2020 and 2019.

Note 13 – Allowance for credit losses

Effective January 1, 2020, the Firm adopted the CECL accounting guidance. The adoption of this guidance established a single allowance framework for all financial assets measured at amortized cost and certain off-balance sheet credit exposures. This framework requires that management's estimate reflects credit losses over the instrument's remaining expected life and considers expected future changes in macroeconomic conditions. Refer to Note 1 for further information.

JPMorgan Chase's allowance for credit losses comprises:

- the allowance for loan losses, which covers the Firm's retained loan portfolios (scored and risk-rated) and is presented separately on the balance sheet,
- the allowance for lending-related commitments, which is presented on the balance sheet in accounts payable and other liabilities, and
- the allowance for credit losses on investment securities, which covers the Firm's HTM and AFS securities and is recognized within Investment Securities on the balance sheet.

The income statement effect of all changes in the allowance for credit losses is recognized in the provision for credit losses.

Determining the appropriateness of the allowance for credit losses is complex and requires significant judgment by management about the effect of matters that are inherently uncertain. At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm. Subsequent evaluations of credit exposures, considering the macroeconomic conditions, forecasts and other factors then prevailing, may result in significant changes in the allowance for credit losses in future periods.

The Firm's policies used to determine its allowance for loan losses and its allowance for lending-related commitments are described in the following paragraphs. Refer to Note 10 for a description of the policies used to determine the allowance for credit losses on investment securities.

Methodology for allowances for loan losses and lending-related commitments

The allowance for loan losses and allowance for lending-related commitments represents expected credit losses over the remaining expected life of retained loans and lending-related commitments that are not unconditionally cancellable. The Firm does not record an allowance for future draws on unconditionally cancellable lending-related commitments (e.g., credit cards). Expected losses related to accrued interest on credit card loans and certain performing, modified loans to borrowers impacted by COVID-19 are included in the Firm's allowance for loan losses. However, the Firm does not record an allowance on other accrued interest receivables, due to its policy to write them off no later than 90 days past due by reversing interest income.

The expected life of each instrument is determined by considering its contractual term, expected prepayments, cancellation features, and certain extension and call options. The expected life of funded credit card loans is generally estimated by considering expected future payments on the credit card account, and determining how much of those amounts should be allocated to repayments of the funded loan balance (as of the balance sheet date) versus other account activity. This allocation is made using an approach that incorporates the payment application requirements of the Credit Card Accountability Responsibility and Disclosure Act of 2009, generally paying down the highest interest rate balances first.

The estimate of expected credit losses includes expected recoveries of amounts previously charged off or expected to be charged off, even if such recoveries result in a negative allowance.

Collective and Individual Assessments

When calculating the allowance for loan losses and the allowance for lending-related commitments, the Firm assesses whether exposures share similar risk characteristics. If similar risk characteristics exist, the Firm estimates expected credit losses collectively, considering the risk associated with a particular pool and the probability that the exposures within the pool will deteriorate or default. The assessment of risk characteristics is subject to significant management judgement. Emphasizing one characteristic over another or considering additional characteristics could affect the allowance.

- Relevant risk characteristics for the consumer portfolio include product type, delinquency status, current FICO scores, geographic distribution, and, for collateralized loans, current LTV ratios.
- Relevant risk characteristics for the wholesale portfolio include LOB, geography, risk rating, delinquency status, level and type of collateral, industry, credit enhancement, product type, facility purpose, tenor, and payment terms.

The majority of the Firm's credit exposures share risk characteristics with other similar exposures, and as a result are collectively assessed for impairment ("portfolio-based component"). The portfolio-based component covers consumer loans, performing risk-rated loans and certain lending-related commitments.

If an exposure does not share risk characteristics with other exposures, the Firm generally estimates expected credit losses on an individual basis, considering expected repayment and conditions impacting that individual exposure ("asset-specific component"). The asset-specific component covers modified PCD loans, loans modified or reasonably expected to be modified in a TDR, collateral-dependent loans, as well as, risk-rated loans that have been placed on nonaccrual status.

Portfolio-based component

The portfolio-based component begins with a quantitative calculation that considers the likelihood of the borrower changing delinquency status or moving from one risk rating to another. The quantitative calculation covers expected credit losses over an instrument's expected life and is estimated by applying credit loss factors to the Firm's estimated exposure at default. The credit loss factors incorporate the probability of borrower default as well as loss severity in the event of default. They are derived using a weighted average of five internally developed macroeconomic scenarios over an eight-quarter forecast period, followed by a single year straight-line interpolation to revert to long run historical information for periods beyond the eight-quarter forecast period. The five

macroeconomic scenarios consist of a central, relative adverse, extreme adverse, relative upside and extreme upside scenario, and are updated by the Firm's central forecasting team. The scenarios take into consideration the Firm's overarching economic outlook, internal perspectives from subject matter experts across the Firm, and market consensus and involve a governed process that incorporates feedback from senior management across LOBs, Corporate Finance and Risk Management.

The COVID-19 pandemic has stressed many MEVs to degrees not experienced in recent history, which creates additional challenges in the use of modeled credit loss estimates and increases the reliance on management judgment. During the second and third quarters, certain MEVs were outside the range of historical experience on which the Firm's models had been calibrated and therefore adjustments were required to appropriately address these economic circumstances. For example, while forecasted U.S. employment rates in certain of the Firm's scenarios are higher than historical experience, such rates are developed on a reported basis and do not reflect the significant mitigating impact of current government unemployment benefits and other stimulus programs. Consequently, management considered such mitigating impact to arrive at an effective unemployment rate, which informed modeled credit loss estimates, particularly in the consumer portfolio. In addition, for the wholesale portfolio, management used the historical relationship between credit spreads and portfolio default rates to inform the adjustment of the Firm's modeled loss estimates.

The quantitative calculation is further adjusted to take into consideration model imprecision, emerging risk assessments, trends and other subjective factors that are not yet reflected in the calculation. These adjustments are accomplished in part by analyzing the historical loss experience, including during stressed periods, for each major product or model. Management applies judgement in making this adjustment, including taking into account uncertainties associated with the economic and political conditions, quality of underwriting standards, borrower behavior, credit concentrations or deterioration within an industry, product or portfolio, as well as other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties.

In the third quarter of 2020, the Firm continued to make qualitative adjustments which placed significant weighting on its adverse scenarios, as a result of continued uncertainty related to the COVID-19 pandemic.

The application of different inputs into the quantitative calculation, and the assumptions used by management to adjust the quantitative calculation, are subject to significant management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses and the allowance for lending-related commitments.

Asset-specific component

To determine the asset-specific component of the allowance, collateral-dependent loans (including those loans for which foreclosure is probable) and larger, nonaccrual risk-rated loans in the wholesale portfolio segment are generally evaluated individually, while smaller loans (both scored and risk-rated) are aggregated for evaluation using factors relevant for the respective class of assets.

The Firm generally measures the asset-specific allowance as the difference between the amortized cost of the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are generally recognized as an adjustment to the allowance for loan losses. For collateral-dependent loans, the fair value of collateral less estimated costs to sell is used to determine the charge-off amount for declines in value (to reduce the amortized cost of the loan to the fair value of collateral) or the amount of negative allowance that should be recognized (for recoveries of prior charge-offs associated with improvements in the fair value of collateral).

The asset-specific component of the allowance for loan losses that have been or are expected to be modified in TDRs incorporates the effect of the modification on the loan's expected cash flows (including forgone interest, principal forgiveness, as well as other concessions), and also the potential for redefault. For residential real estate loans modified in or expected to be modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about housing prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified loans. For credit card loans modified in or expected to be modified in TDRs, expected losses incorporate projected delinquencies and charge-offs based on the Firm's historical experience by type of modification program. For wholesale loans modified or expected to be modified in TDRs, expected losses incorporate management's expectation of the borrower's ability to repay under the modified terms.

Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as loss severities, asset valuations, default rates (including redefault rates on modified loans), the amounts and timing of interest or principal payments (including any expected prepayments) or other factors that are reflective of current and expected market conditions. These estimates are, in turn, dependent on factors such as the duration of current overall economic conditions, industry-, portfolio-, or borrower-specific factors, the expected outcome of insolvency proceedings as well as, in certain circumstances, other economic factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Allowance for credit losses and related information

The table below summarizes information about the allowances for loan losses and lending-related commitments, and includes a breakdown of loans and lending-related commitments by impairment methodology. Refer to Note 10 for further information on the allowance for credit losses on investment securities.

The adoption of the CECL accounting guidance resulted in a change in the accounting for PCI loans, which are considered PCD loans. In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 1 for further information.

	2020[e]				2019			
Nine months ended September 30, (in millions)	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,	$ 2,538	$ 5,683	$ 4,902	$ 13,123	$ 3,434	$ 5,184	$ 4,827	$ 13,445
Cumulative effect of a change in accounting principle	297	5,517	(1,642)	4,172	NA	NA	NA	NA
Gross charge-offs	620	4,104	641	5,365	665	4,050	307	5,022
Gross recoveries collected	(483)	(585)	(88)	(1,156)	(409)	(433)	(45)	(887)
Net charge-offs	137	3,519	553	4,209	256	3,617	262	4,135
Write-offs of PCI loans[a]	NA	NA	NA	NA	132	–	–	132
Provision for loan losses	1,803	10,119	5,802	17,724	(227)	4,017	258	4,048
Other	1	–	3	4	–	(1)	10	9
Ending balance at September 30,	$ 4,502	$ 17,800	$ 8,512	$ 30,814	$ 2,819	$ 5,583	$ 4,833	$ 13,235
Allowance for lending-related commitments								
Beginning balance at January 1,	$ 12	$ –	$ 1,179	$ 1,191	$ 12	$ –	$ 1,043	$ 1,055
Cumulative effect of a change in accounting principle	133	–	(35)	98	NA	NA	NA	NA
Provision for lending-related commitments	71	–	1,464	1,535	–	–	110	110
Other	–	–	(1)	(1)	–	–	–	–
Ending balance at September 30,	$ 216	$ –	$ 2,607	$ 2,823	$ 12	$ –	$ 1,153	$ 1,165
Total allowance for credit losses	$ 4,718	$ 17,800	$ 11,119	$ 33,637	$ 2,831	$ 5,583	$ 5,986	$ 14,400
Allowance for loan losses by impairment methodology								
Asset-specific[b]	$ 228	$ 652	$ 792	$ 1,672	$ 88	$ 488	$ 399	$ 975
Portfolio-based	4,274	17,148	7,720	29,142	1,475	5,095	4,434	11,004
PCI	NA	NA	NA	NA	1,256	–	–	1,256
Total allowance for loan losses	$ 4,502	$ 17,800	$ 8,512	$ 30,814	$ 2,819	$ 5,583	$ 4,833	$ 13,235
Loans by impairment methodology								
Asset-specific[b]	$ 16,888	$ 1,432	$ 3,856	$ 22,176	$ 6,117	$ 1,423	$ 1,760	$ 9,300
Portfolio-based	288,218	138,158	496,985	923,361	268,179	158,148	471,970	898,297
PCI	NA	NA	NA	NA	21,290	–	–	21,290
Total retained loans	$ 305,106	$ 139,590	$ 500,841	$ 945,537	$ 295,586	$ 159,571	$ 473,730	$ 928,887
Collateral-dependent loans								
Net charge-offs	$ 109	$ –	$ 22	$ 131	$ 23	$ –	$ 28	$ 51
Loans measured at fair value of collateral less cost to sell	4,517	–	130	4,647	2,079	–	117	2,196
Allowance for lending-related commitments by impairment methodology								
Asset-specific	$ –	$ –	$ 109	$ 109	$ –	$ –	$ 135	$ 135
Portfolio-based	216	–	2,498	2,714	12	–	1,018	1,030
Total allowance for lending-related commitments[c]	$ 216	$ –	$ 2,607	$ 2,823	$ 12	$ –	$ 1,153	$ 1,165
Lending-related commitments by impairment methodology								
Asset-specific	$ –	$ –	$ 607	$ 607	$ –	$ –	$ 446	$ 446
Portfolio-based[d]	35,587	–	417,402	452,989	32,291	–	386,203	418,494
Total lending-related commitments	$ 35,587	$ –	$ 418,009	$ 453,596	$ 32,291	$ –	$ 386,649	$ 418,940

(a) Prior to the adoption of CECL, write-offs of PCI loans were recorded against the allowance for loan losses when actual losses for a pool exceeded estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan was recognized when the underlying loan was removed from a pool.
(b) Includes modified PCD loans and loans that have been modified or are reasonably expected to be modified in a TDR. Also includes risk-rated loans that have been placed on nonaccrual status for the wholesale portfolio segment. The asset-specific credit card allowance for loans modified, or reasonably expected to be modified, in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.
(c) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.
(d) At September 30, 2020 and 2019, lending-related commitments excluded $10.8 billion and $9.4 billion, respectively, for the consumer, excluding credit card portfolio segment; $662.9 billion and $645.9 billion, respectively, for the credit card portfolio segment; and $23.2 billion and $24.2 billion. respectively, for the wholesale portfolio segment, which were not subject to the allowance for lending-related commitments.
(e) Excludes HTM securities, which had an allowance for credit losses of $120 million and a provision for credit losses of $110 million as of and for the nine months ended September 30, 2020.

Discussion of changes in the allowance during 2020

The increase in the allowance for loan losses and lending related commitments was primarily driven by an increase in the provision for credit losses, reflecting the deterioration in and uncertainty around the future macroeconomic environment as a result of the impact of the COVID-19 pandemic.

- In the first quarter of 2020, management's macroeconomic forecast included a decline in the U.S. real GDP of approximately 25% and an increase in the U.S. unemployment rate to above 10%, for the first half of 2020, followed by a solid recovery in the second half of 2020.
- In the second quarter of 2020, based on the increased uncertainty around the duration and depth of the downturn and speed of economic recovery, the Firm's central case assumptions reflected a more protracted downturn with the slower recovery of U.S. real GDP.
- In the third quarter of 2020, the Firm's central case assumptions reflected some near term improvement in economic trends, however there is elevated uncertainty around potential impacts to medium and longer term macroeconomic conditions.

In the first, second and third quarters of 2020, the Firm's central case assumptions reflected forecasted U.S. unemployment rates and cumulative changes in U.S. real GDP as follows:

	2020	2021	
	4Q	2Q	4Q
Central case assumptions			
U.S. unemployment rate[(a)]			
1Q 2020	6.6 %	5.5 %	4.6 %
2Q 2020	10.9	9.0	7.7
3Q 2020	9.5	8.5	7.3
U.S. real GDP - cumulative change from December 31, 2019			
1Q 2020	(5.4)	(2.3)	0.3
2Q 2020	(6.2)	(4.0)	(3.0)
3Q 2020	(5.4)	(3.7)	(2.4)

(a) Reflects quarterly average of forecasted reported U.S. unemployment rate.

As a result of elevated macroeconomic uncertainty beyond the central case, the Firm continued to place significant weighting on its adverse scenarios, which incorporate more punitive macroeconomic factors than the central case assumptions outlined above, resulting in weighted average U.S. unemployment rates, remaining above ten percent into the fourth quarter of 2021.

Subsequent changes to this forecast and related estimates will be reflected in the provision for credit losses in future periods.

Note 14 – Variable interest entities

Refer to Note 1 of JPMorgan Chase's 2019 Form 10-K for a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment.

Line of Business	*Transaction Type*	*Activity*	*Form 10-Q page reference*
CCB	Credit card securitization trusts	Securitization of originated credit card receivables	163
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	163-165
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, and other consumer loans	163-165
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	165
	Municipal bond vehicles	Financing of municipal bond investments	165

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties. Refer to pages 166–167 of this Note for more information on the VIEs sponsored by third parties.

Significant Firm-sponsored VIEs

Credit card securitizations

Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a more detailed discussion of JPMorgan Chase's involvement with 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. Refer to the table on page 166 of this Note for further information on consolidated VIE assets and liabilities.

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.

Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a detailed discussion of the Firm's involvement with Firm-sponsored mortgage and other securitization trusts, as well as the accounting treatment relating to such trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests (including amounts required to be held pursuant to credit risk retention rules), recourse or guarantee arrangements, and derivative contracts. In certain instances, the Firm's only continuing involvement is servicing the loans. The Firm's maximum loss exposure from retained and purchased interests is the carrying value of these interests. Refer to Securitization activity on page 167 of this Note for further information regarding the Firm's cash flows associated with and interests retained in nonconsolidated VIEs, and pages 167-168 of this Note for information on the Firm's loan sales and securitization activity related to U.S. GSEs and government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
September 30, 2020 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	Investment securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related[a]							
Residential mortgage:							
Prime/Alt-A and option ARMs	**$ 54,012**	**$ 2,034**	**$ 44,680**	**$ 571**	**$ 884**	**$ –**	**$ 1,455**
Subprime	**13,353**	**48**	**12,586**	**3**	**–**	**–**	**3**
Commercial and other[b]	**117,103**	**–**	**94,944**	**887**	**1,591**	**280**	**2,758**
Total	**$ 184,468**	**$ 2,082**	**$ 152,210**	**$ 1,461**	**$ 2,475**	**$ 280**	**$ 4,216**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
December 31, 2019 (in millions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	Investment securities	Other financial assets	Total interests held by JPMorgan Chase
Securitization-related[a]							
Residential mortgage:							
Prime/Alt-A and option ARMs	$ 60,348	$ 2,796	$ 48,734	$ 535	$ 625	$ –	$ 1,160
Subprime	14,661	–	13,490	7	–	–	7
Commercial and other[b]	111,903	–	80,878	785	773	241	1,799
Total	$ 186,912	$ 2,796	$ 143,102	$ 1,327	$ 1,398	$ 241	$ 2,966

(a) Excludes U.S. GSEs and government agency securitizations and re-securitizations, which are not Firm-sponsored. Refer to pages 167-168 of this Note for information on the Firm's loan sales and securitization activity related to U.S. GSEs and government agencies.
(b) Consists of securities backed by commercial real estate loans and non-mortgage-related consumer receivables purchased from third parties.
(c) Excludes the following: retained servicing (refer to Note 15 for a discussion of MSRs); 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 (refer to Note 5 for further information on derivatives); senior and subordinated securities of $125 million and $24 million, respectively, at September 30, 2020, and $106 million and $94 million, respectively, at December 31, 2019, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of September 30, 2020, and December 31, 2019, 71% and 63%, 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 $1.4 billion and $1.1 billion of investment-grade retained interests, and $53 million and $72 million of noninvestment-grade retained interests at September 30, 2020, and December 31, 2019, respectively. The retained interests in commercial and other securitization trusts consisted of $1.9 billion and $1.2 billion of investment-grade retained interests, and $857 million and $575 million of noninvestment-grade retained interests at September 30, 2020, and December 31, 2019, respectively.

Residential mortgage
The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a more detailed description of the Firm's involvement with residential mortgage securitizations. Refer to the table on page 166 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

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. Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a more detailed description of the Firm's involvement with commercial mortgage and other consumer securitizations. Refer to the table on page 166 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations
Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a more detailed description of JPMorgan Chase's participation in certain re-securitization transactions.

The following table presents the principal amount of securities transferred to re-securitization VIEs.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Transfers of securities to VIEs				
U.S. GSEs and government agencies	**$12,488**	$ 5,377	**$27,710**	$12,444

The Firm did not transfer any private label securities to re-securitization VIEs during the three and nine months ended September 30, 2020 and 2019, respectively, and retained interests in any such Firm-sponsored VIEs as of September 30, 2020 and December 31, 2019 were immaterial.

The following table presents information on nonconsolidated re-securitization VIEs.

	Nonconsolidated re-securitization VIEs	
(in millions)	**September 30, 2020**	December 31, 2019
U.S. GSEs and government agencies		
Interest in VIEs	**$ 3,456**	$ 2,928

As of September 30, 2020, and December 31, 2019, 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
Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a more detailed description of JPMorgan Chase's principal involvement with Firm-administered 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 $11.4 billion and $16.3 billion of the commercial paper issued by the Firm-administered multi-seller conduits at September 30, 2020, and December 31, 2019, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $10.7 billion and $8.9 billion at September 30, 2020, and December 31, 2019, respectively, and are reported as off-balance sheet lending-related commitments in other unfunded commitments to extend credit. Refer to Note 23 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, refer to pages 166-167 of this Note for further information. The Firm serves as sponsor for all non-customer TOB transactions. Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a more detailed description of JPMorgan Chase's Municipal bond vehicles.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of September 30, 2020, and December 31, 2019.

	Assets				Liabilities		
September 30, 2020 (in millions)	Trading assets	Loans	Other[b]	Total assets[c]	Beneficial interests in VIE assets[d]	Other[e]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 11,838**	**$ 207**	**$ 12,045**	**$ 4,942**	**$ 3**	**$ 4,945**
Firm-administered multi-seller conduits	**4**	**22,957**	**160**	**23,121**	**11,622**	**30**	**11,652**
Municipal bond vehicles	**2,461**	**–**	**5**	**2,466**	**2,402**	**1**	**2,403**
Mortgage securitization entities[a]	**–**	**2,012**	**118**	**2,130**	**225**	**113**	**338**
Other	**2**	**167**	**254**	**423**	**–**	**89**	**89**
Total	**$ 2,467**	**$ 36,974**	**$ 744**	**$ 40,185**	**$ 19,191**	**$ 236**	**$ 19,427**

	Assets				Liabilities		
December 31, 2019 (in millions)	Trading assets	Loans	Other[b]	Total assets[c]	Beneficial interests in VIE assets[d]	Other[e]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 14,986	$ 266	$ 15,252	$ 6,461	$ 6	$ 6,467
Firm-administered multi-seller conduits	1	25,183	355	25,539	9,223	36	9,259
Municipal bond vehicles	1,903	–	4	1,907	1,881	3	1,884
Mortgage securitization entities[a]	66	2,762	64	2,892	276	130	406
Other	663	–	192	855	–	272	272
Total	$ 2,633	$ 42,931	$ 881	$ 46,445	$ 17,841	$ 447	$ 18,288

(a) Includes residential and commercial mortgage securitizations.
(b) Includes assets classified as cash and other assets on the Consolidated balance sheets.
(c) 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.
(d) 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 variable interest entities." The holders of these beneficial interests generally do not have recourse to the general credit of JPMorgan Chase. Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for conduits program-wide credit enhancements. Included in beneficial interests in VIE assets are long-term beneficial interests of $5.2 billion and $6.7 billion at September 30, 2020, and December 31, 2019, respectively.
(e) 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 $21.5 billion and $19.1 billion, of which $7.8 billion and $5.5 billion was unfunded at September 30, 2020 and December 31, 2019, respectively. In order to reduce the risk of loss, the Firm assesses each project and withholds varying amounts of its capital investment until the project qualifies for tax credits. Refer to Note 25 of JPMorgan Chase's 2019 Form 10-K for further information on affordable housing tax credits. Refer to Note 23 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. The Firm's maximum exposure as a liquidity provider to customer TOB trusts at September 30, 2020 and December 31, 2019 was $6.4 billion and $5.5 billion, respectively. The fair value of assets held by such VIEs at September 30, 2020 and December 31, 2019, was $9.9 billion and $8.6 billion, respectively. Refer to Note 23 for more information on off-balance sheet lending-related commitments.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, and commercial mortgage. Refer to Note 14 of JPMorgan Chase's 2019 Form 10-K for a further description of the Firm's accounting policies regarding securitizations.

Securitization activity

The following table provides information related to the Firm's securitization activities for the three and nine months ended September 30, 2020 and 2019, 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.

	Three months ended September 30,				Nine months ended September 30,			
	2020		2019		**2020**		2019	
(in millions)	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]	Residential mortgage[d]	Commercial and other[e]
Principal securitized	**$ 2,852**	**$ 1,330**	$ 3,225	$ 1,477	**$ 6,450**	**$ 5,379**	$ 7,132	$ 4,215
All cash flows during the period:[a]								
Proceeds received from loan sales as financial instruments[b][c]	**$ 2,955**	**$ 1,392**	$ 3,327	$ 1,506	**$ 6,645**	**$ 5,577**	$ 7,337	$ 4,329
Servicing fees collected	**54**	**1**	70	–	**165**	**1**	220	1
Cash flows received on interests	**207**	**78**	115	34	**538**	**138**	314	183

(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) Includes prime mortgages only. Excludes loan securitization activity related to U.S. GSEs and government agencies.
(e) Includes commercial mortgage and other consumer loans.

Loans and excess MSRs sold to U.S. government-sponsored enterprises and loans in securitization transactions pursuant to Ginnie Mae guidelines

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. Refer to Note 23 of this Form 10-Q, and Note 28 of JPMorgan Chase's 2019 Form 10-K for additional information about the Firm's loan sales- and securitization-related indemnifications. Refer to Note 15 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, and loans in securitization transactions pursuant to Ginnie Mae guidelines.

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Carrying value of loans sold	**$ 18,065**	$ 35,556	**$ 60,447**	$ 73,873
Proceeds received from loan sales as cash	**5**	3	**27**	73
Proceeds from loan sales as securities[(a)(b)]	**17,858**	35,512	**59,795**	73,172
Total proceeds received from loan sales[(c)]	**$ 17,863**	$ 35,515	**$ 59,822**	$ 73,245
Gains/(losses) on loan sales[(d)(e)]	**$ –**	$ 342	**$ 6**	$ 495

(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 23, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. Refer to Note 12 for additional information.

The following table presents loans the Firm repurchased or had an option to repurchase, real estate owned, and foreclosed government-guaranteed residential mortgage loans recognized on the Firm's Consolidated balance sheets as of September 30, 2020 and December 31, 2019. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

(in millions)	Sep 30, 2020	Dec 31, 2019
Loans repurchased or option to repurchase[(a)]	**$ 1,491**	$ 2,941
Real estate owned	**10**	41
Foreclosed government-guaranteed residential mortgage loans[(b)]	**72**	198

(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 September 30, 2020, and December 31, 2019.

	Securitized assets		90 days past due		Net liquidation losses			
					Three months ended September 30,		Nine months ended September 30,	
(in millions)	Sep 30, 2020	Dec 31, 2019	Sep 30, 2020	Dec 31, 2019	2020	2019	2020	2019
Securitized loans								
Residential mortgage:								
Prime / Alt-A & option ARMs	**$ 44,680**	$ 48,734	**$ 5,591**	$ 2,449	**$ 9**	$ 146	**$ 184**	$ 474
Subprime	**12,586**	13,490	**2,417**	1,813	**24**	145	**159**	456
Commercial and other	**94,944**	80,878	**5,025**	187	**–**	118	**11**	283
Total loans securitized	**$ 152,210**	$ 143,102	**$ 13,033**	$ 4,449	**$ 33**	$ 409	**$ 354**	$ 1,213

Note 15 – Goodwill and Mortgage servicing rights

Refer to Note 15 of JPMorgan Chase's 2019 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 business segments.

(in millions)	**September 30, 2020**	December 31, 2019
Consumer & Community Banking[a]	**$ 30,082**	$ 30,082
Corporate & Investment Bank[a]	**7,897**	7,901
Commercial Banking	**2,985**	2,982
Asset & Wealth Management	**6,855**	6,858
Total goodwill	**$ 47,819**	$ 47,823

(a) In the first quarter of 2020, the Merchant Services business was realigned from CCB to CIB, including the associated Goodwill of $959 million. Prior-period amounts have been revised to conform with the current presentation.

The following table presents changes in the carrying amount of goodwill.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Balance at beginning of period	**$ 47,811**	$ 47,477	**$ 47,823**	$ 47,471
Changes during the period from:				
Business combinations[a]	**–**	348	**–**	348
Other[b]	**8**	(7)	**(4)**	(1)
Balance at September 30,	**$ 47,819**	$ 47,818	**$ 47,819**	$ 47,818

(a) For the three and nine months ended September 30, 2019, represents goodwill associated with the July 24, 2019 acquisition of InstaMed. This goodwill was allocated to CIB, CB and CCB.
(b) Primarily relates to foreign currency adjustments.

Goodwill impairment testing

Effective January 1, 2020, the Firm adopted new accounting guidance related to goodwill impairment testing. The adoption of the guidance requires recognition of an impairment loss when the estimated fair value of a reporting unit falls below its carrying value. It eliminated the requirement that an impairment loss be recognized only if the estimated implied fair value of the goodwill is below its carrying value. Refer to Note 15 of JPMorgan Chase's 2019 Form 10-K for a further discussion of the primary method used to estimate the fair value of the reporting units and the assumptions used in the goodwill impairment test.

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.

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 September 30, 2020, the Firm reviewed current economic conditions, including the potential impacts of the COVID-19 pandemic on business performance, estimated market cost of equity, as well as actuals and projections of business performance for all its reporting units. The Firm has concluded that the goodwill allocated to its reporting units was not impaired as of September 30, 2020, or December 31, 2019, nor was goodwill written off due to impairment during the nine months ended September 30, 2020 or 2019.

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 2019 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 and nine months ended September 30, 2020 and 2019.

	As of or for the three months ended September 30,		As of or for the nine months ended September 30,	
(in millions, except where otherwise noted)	**2020**	2019	**2020**	2019
Fair value at beginning of period	**$ 3,080**	$ 5,093	**$ 4,699**	$ 6,130
MSR activity:				
Originations of MSRs	**204**	390	**639**	1,146
Purchase of MSRs	**17**	(2)	**24**	104
Disposition of MSRs[a]	**(104)**	(359)	**(177)**	(687)
Net additions/(dispositions)	**117**	29	**486**	563
Changes due to collection/realization of expected cash flows	**(215)**	(256)	**(710)**	(702)
Changes in valuation due to inputs and assumptions:				
Changes due to market interest rates and other[b]	**(59)**	(433)	**(1,573)**	(1,274)
Changes in valuation due to other inputs and assumptions:				
Projected cash flows (e.g., cost to service)	**(82)**	17	**(80)**	(333) [e]
Discount rates	**199**	–	**199**	153
Prepayment model changes and other[c]	**(24)**	(31)	**(5)**	(118)
Total changes in valuation due to other inputs and assumptions	**93**	(14)	**114**	(298)
Total changes in valuation due to inputs and assumptions	**34**	(447)	**(1,459)**	(1,572)
Fair value at September 30	**$ 3,016**	$ 4,419	**$ 3,016**	$ 4,419
Changes in unrealized gains/(losses) included in income related to MSRs held at September 30,	**$ 34**	$ (447)	**$ (1,459)**	$ (1,572)
Contractual service fees, late fees and other ancillary fees included in income	**333**	397	**1,026**	1,254
Third-party mortgage loans serviced at September 30, (in billions)	**456**	537	**456**	537
Servicer advances, net of an allowance for uncollectible amounts, at September 30, (in billions)[d]	**1.7**	2.0	**1.7**	2.0

(a) Includes excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired the remaining balance of those SMBS as trading securities.
(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.
(e) The decrease in projected cash flows was largely related to default servicing assumption updates.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the three and nine months ended September 30, 2020 and 2019.

(in millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
CCB mortgage fees and related income				
Net production revenue	**$ 765**	$ 738	**$ 1,826**	$ 1,291
Net mortgage servicing revenue:				
Operating revenue:				
Loan servicing revenue	**381**	351	**1,063**	1,172
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(215)**	(256)	**(710)**	(702)
Total operating revenue	**166**	95	**353**	470
Risk management:				
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(59)**	(433)	**(1,573)**	(1,274)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**93**	(14)	**114**	(298)
Changes in derivative fair value and other	**111**	500	**1,593**	1,372
Total risk management	**145**	53	**134**	(200)
Total net mortgage servicing revenue	**311**	148	**487**	270
Total CCB mortgage fees and related income	**1,076**	886	**2,313**	1,561
All other	**11**	1	**11**	1
Mortgage fees and related income	**$ 1,087**	$ 887	**$ 2,324**	$ 1,562

(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).

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at September 30, 2020, and December 31, 2019, and outlines hypothetical sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

(in millions, except rates)	Sep 30, 2020	Dec 31, 2019
Weighted-average prepayment speed assumption (constant prepayment rate)	**16.94 %**	11.67 %
Impact on fair value of 10% adverse change	**$ (203)**	$ (200)
Impact on fair value of 20% adverse change	**(386)**	(384)
Weighted-average option adjusted spread[(a)]	**7.37 %**	7.93 %
Impact on fair value of a 100 basis point adverse change	**$ (121)**	$ (169)
Impact on fair value of a 200 basis point adverse change	**(233)**	(326)

(a) Includes the impact of operational risk and regulatory capital.

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 this 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.

Note 16 – Deposits

Refer to Note 17 of JPMorgan Chase's 2019 Form 10-K for further information on deposits.

At September 30, 2020, and December 31, 2019, noninterest-bearing and interest-bearing deposits were as follows.

(in millions)	**September 30, 2020**	December 31, 2019
U.S. offices		
Noninterest-bearing (included **$12,699** and $22,637 at fair value)[a]	**$ 540,116**	$ 395,667
Interest-bearing (included **$2,567** and $2,534 at fair value)[a]	**1,117,149**	876,156
Total deposits in U.S. offices	**1,657,265**	1,271,823
Non-U.S. offices		
Noninterest-bearing (included **$1,481** and $1,980 at fair value)[a]	**21,406**	20,087
Interest-bearing (included **$2,567** and $1,438 at fair value)[a]	**322,745**	270,521
Total deposits in non-U.S. offices	**344,151**	290,608
Total deposits	**$ 2,001,416**	$ 1,562,431

(a) Includes structured notes classified as deposits for which the fair value option has been elected. Refer to Note 3 for further information.

Note 17 – Leases

Refer to Note 18 of JPMorgan Chase's 2019 Form 10-K for a further discussion on leases.

Firm as lessee

At September 30, 2020, 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 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)	**September 30, 2020**	December 31, 2019
Right-of-use assets	**$ 7,883**	$ 8,190
Lease liabilities	**8,335**	8,505

The Firm's net rental expense was $474 million and $468 million for the three months ended September 30, 2020 and 2019, and $1.4 billion for each of the nine months ended September 30, 2020 and 2019.

Firm as lessor

The Firm's lease financings are generally 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 September 30,		Nine months ended September 30,	
(in millions)	**2020**	2019	**2020**	2019
Operating lease income	**$ 1,425**	$ 1,384	**$ 4,236**	$ 4,027
Depreciation expense	**1,035**	1,053	**3,261**	3,038

Note 18 - Preferred stock

Refer to Note 21 of JPMorgan Chase's 2019 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 September 30, 2020 and December 31, 2019, and the quarterly dividend declarations for the three and nine months ended September 30, 2020 and 2019.

	Shares		Carrying value (in millions)						Dividend declared per share				
									Three months ended September 30,		Nine months ended September 30,		
	September 30, 2020	December 31, 2019	**September 30, 2020**	December 31, 2019	Issue date	Contractual rate in effect at September 30, 2020	Earliest redemption date	Floating annualized rate of three-month LIBOR/ Term SOFR plus:	**2020**	2019	**2020**	2019	
Fixed-rate:													
Series P	**–**	–	**$ –**	$ –	2/5/2013	**– %**	3/1/2018	NA	**$–**	$136.25	**$–**	$408.75	
Series T	**–**	–	**–**	–	1/30/2014	**–**	3/1/2019	NA	–	NA	**–**	167.50	
Series W	**–**	–	**–**	–	6/23/2014	**–**	9/1/2019	NA	–	157.50	**–**	472.50	
Series Y	**–**	143,000	**–**	1,430	2/12/2015	**–**	3/1/2020	NA	**–**	153.13	**153.13**	459.39	
Series AA	**142,500**	142,500	**1,425**	1,425	6/4/2015	**6.100**	9/1/2020	NA	**152.50**	152.50	**457.50**	457.50	
Series BB	**115,000**	115,000	**1,150**	1,150	7/29/2015	**6.150**	9/1/2020	NA	**153.75**	153.75	**461.25**	461.25	
Series DD	**169,625**	169,625	**1,696**	1,696	9/21/2018	**5.750**	12/1/2023	NA	**143.75**	143.75	**431.25**	431.25	
Series EE	**185,000**	185,000	**1,850**	1,850	1/24/2019	**6.000**	3/1/2024	NA	**150.00**	150.00	**450.00**	361.67	
Series GG	**90,000**	90,000	**900**	900	11/7/2019	**4.750**	12/1/2024	NA	**118.75**	NA	**387.92**	NA	
Fixed-to-floating-rate:													
Series I	**293,375**	293,375	**$ 2,934**	$ 2,934	4/23/2008	**LIBOR + 3.47%**	4/30/2018	LIBOR + 3.47%	**$95.53**	$146.58	**$334.90**	$455.09	
Series Q	**150,000**	150,000	**1,500**	1,500	4/23/2013	**5.150**	5/1/2023	LIBOR + 3.25	**128.75**	128.75	**386.25**	386.25	
Series R	**150,000**	150,000	**1,500**	1,500	7/29/2013	**6.000**	8/1/2023	LIBOR + 3.30	**150.00**	150.00	**450.00**	450.00	
Series S	**200,000**	200,000	**2,000**	2,000	1/22/2014	**6.750**	2/1/2024	LIBOR + 3.78	**168.75**	168.75	**506.25**	506.25	
Series U	**100,000**	100,000	**1,000**	1,000	3/10/2014	**6.125**	4/30/2024	LIBOR + 3.33	**153.13**	153.13	**459.38**	459.38	
Series V	**250,000**	250,000	**2,500**	2,500	6/9/2014	**LIBOR + 3.32**	7/1/2019	LIBOR + 3.32	**92.41**	144.11	**343.30**	394.11	(a)
Series X	**160,000**	160,000	**1,600**	1,600	9/23/2014	**6.100**	10/1/2024	LIBOR + 3.33	**152.50**	152.50	**457.50**	457.50	
Series Z	**200,000**	200,000	**2,000**	2,000	4/21/2015	**LIBOR + 3.80**	5/1/2020	LIBOR + 3.80	**102.40**	132.50	**352.05**	397.50	(b)
Series CC	**125,750**	125,750	**1,258**	1,258	10/20/2017	**4.625**	11/1/2022	LIBOR + 2.58	**115.63**	115.63	**346.88**	346.88	
Series FF	**225,000**	225,000	**2,250**	2,250	7/31/2019	**5.000**	8/1/2024	SOFR + 3.38	**125.00**	126.39	**375.00**	126.39	
Series HH	**300,000**	–	**3,000**	–	1/23/2020	**4.600**	2/1/2025	SOFR + 3.125	**115.00**	NA	**355.22**	NA	
Series II	**150,000**	–	**1,500**	–	2/24/2020	**4.000**	4/1/2025	SOFR + 2.745	**100.00**	NA	**241.11**	NA	
Total preferred stock	**3,006,250**	2,699,250	**$ 30,063**	$ 26,993									

(a) Prior to July 1, 2019, the dividend rate was fixed at 5%.
(b) Prior to May 1, 2020, the dividend rate was fixed at 5.3%.

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 $30.4 billion at September 30, 2020.

Redemptions

On March 1, 2020, the Firm redeemed all $1.43 billion of its 6.125% preferred stock, Series Y.
On December 1, 2019, the Firm redeemed all $900 million of its 5.45% preferred stock, Series P.
On October 30, 2019, the Firm redeemed $1.37 billion of its fixed-to-floating rate perpetual preferred stock, Series I.
On September 1, 2019, the Firm redeemed all $880 million of its 6.30% preferred stock, Series W.
On March 1, 2019, the Firm redeemed all $925 million of its 6.70% preferred stock, Series T.

Note 19 – Earnings per share

Refer to Note 23 of JPMorgan Chase's 2019 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 and nine months ended September 30, 2020 and 2019.

(in millions, except per share amounts)	Three months ended September 30,		Nine months ended September 30,	
	2020	2019	**2020**	2019
Basic earnings per share				
Net income	**$ 9,443**	$ 9,080	**$ 16,995**	$ 27,911
Less: Preferred stock dividends	**381**	423	**1,203**	1,201
Net income applicable to common equity	**9,062**	8,657	**15,792**	26,710
Less: Dividends and undistributed earnings allocated to participating securities	**47**	51	**80**	159
Net income applicable to common stockholders	**$ 9,015**	$ 8,606	**$ 15,712**	$ 26,551
Total weighted-average basic shares outstanding	**3,077.8**	3,198.5	**3,083.3**	3,248.7
Net income per share	**$ 2.93**	$ 2.69	**$ 5.10**	$ 8.17
Diluted earnings per share				
Net income applicable to common stockholders	**$ 9,015**	$ 8,606	**$ 15,712**	$ 26,551
Total weighted-average basic shares outstanding	**3,077.8**	3,198.5	**3,083.3**	3,248.7
Add: Dilutive impact of SARs and employee stock options, unvested PSUs and nondividend-earning RSUs	**5.0**	8.7	**4.8**	9.3
Total weighted-average diluted shares outstanding	**3,082.8**	3,207.2	**3,088.1**	3,258.0
Net income per share	**$ 2.92**	$ 2.68	**$ 5.09**	$ 8.15

Note 20 – 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 loss and prior service costs/(credit) 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 September 30, 2020 (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 July 1, 2020	**$ 7,920**	**$ (895)**	**$ (27)**	**$ 2,762**	**$ (1,318)**	**$ 347**	**$ 8,789**
Net change	**514**	**127**	**(69)**	**(70)**	**(12)**	**(339)**	**151**
Balance at September 30, 2020	**$ 8,434** [(a)]	**$ (768)**	**$ (96)**	**$ 2,692**	**$ (1,330)**	**$ 8**	**$ 8,940**

As of or for the three months ended September 30, 2019 (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 July 1, 2019	$ 3,709	$ (652)	(73)	$ 126	$ (2,231)	$ 235	$ 1,114
Net change	479	(165)	(1)	195	46	132	686
Balance at September 30, 2019	$ 4,188	$ (817)	$ (74)	$ 321	$ (2,185)	$ 367	$ 1,800

As of or for the nine months ended September 30, 2020 (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, 2020	**$ 4,057**	**$ (707)**	**$ (131)**	**$ 63**	**$ (1,344)**	**$ (369)**	**$ 1,569**
Net change	**4,377**	**(61)**	**35**	**2,629**	**14**	**377**	**7,371**
Balance at September 30, 2020	**$ 8,434** [(a)]	**$ (768)**	**$ (96)**	**$ 2,692**	**$ (1,330)**	**$ 8**	**$ 8,940**

As of or for the nine months ended September 30, 2019 (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, 2019	$ 1,202	$ (727)	$ (161)	$ (109)	$ (2,308)	$ 596	$ (1,507)
Net change	2,986	(90)	87	430	123	(229)	3,307
Balance at September 30, 2019	$ 4,188	$ (817)	$ (74)	$ 321	$ (2,185)	$ 367	$ 1,800

(a) Includes after-tax net unamortized unrealized gains of $2.7 billion related to AFS securities that have been transferred to HTM. Refer to Note 10 for further information.

The following table presents the pre-tax and after-tax changes in the components of OCI.

Three months ended September 30, (in millions)	2020			2019		
	Pre-tax	Tax effect	After-tax	Pre-tax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:						
Net unrealized gains/(losses) arising during the period	**$ 1,143**	**$ (270)**	**$ 873**	$ 708	$ (169)	$ 539
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(473)**	**114**	**(359)**	(78)	18	(60)
Net change	**670**	**(156)**	**514**	630	(151)	479
Translation adjustments[b]:						
Translation	**871**	**(86)**	**785**	(861)	40	(821)
Hedges	**(868)**	**210**	**(658)**	866	(210)	656
Net change	**3**	**124**	**127**	5	(170)	(165)
Fair value hedges, net change[c]:	**(91)**	**22**	**(69)**	(1)	–	(1)
Cash flow hedges:						
Net unrealized gains/(losses) arising during the period	**134**	**(32)**	**102**	222	(55)	167
Reclassification adjustment for realized (gains)/losses included in net income[d]	**(227)**	**55**	**(172)**	37	(9)	28
Net change	**(93)**	**23**	**(70)**	259	(64)	195
Defined benefit pension and OPEB plans:						
Net gain/(loss) arising during the period	**–**	**–**	**–**	–	–	–
Reclassification adjustments included in net income[e]:						
Amortization of net loss	**4**	**(1)**	**3**	42	(10)	32
Amortization of prior service cost/(credit)	**–**	**1**	**1**	–	–	–
Foreign exchange and other	**(22)**	**6**	**(16)**	18	(4)	14
Net change	**(18)**	**6**	**(12)**	60	(14)	46
DVA on fair value option elected liabilities, net change:	**(445)**	**106**	**(339)**	173	(41)	132
Total other comprehensive income/(loss)	**$ 26**	**$ 125**	**$ 151**	$ 1,126	$ (440)	$ 686

Nine months ended September 30, (in millions)	2020			2019		
	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	**$ 6,494**	**$ (1,561)**	**$ 4,933**	$ 4,074	$ (985)	$ 3,089
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(732)**	**176**	**(556)**	(135)	32	(103)
Net change	**5,762**	**(1,385)**	**4,377**	3,939	(953)	2,986
Translation adjustments[b]:						
Translation	**(316)**	**15**	**(301)**	(697)	76	(621)
Hedges	**316**	**(76)**	**240**	700	(169)	531
Net change	**–**	**(61)**	**(61)**	3	(93)	(90)
Fair value hedges, net change[c]:	**45**	**(10)**	**35**	114	(27)	87
Cash flow hedges:						
Net unrealized gains/(losses) arising during the period	**3,787**	**(909)**	**2,878**	464	(112)	352
Reclassification adjustment for realized (gains)/losses included in net income[d]	**(328)**	**79**	**(249)**	102	(24)	78
Net change	**3,459**	**(830)**	**2,629**	566	(136)	430
Defined benefit pension and OPEB plans:						
Net gain/(loss) arising during the period	**9**	**(2)**	**7**	2	(2)	–
Reclassification adjustments included in net income[e]:						
Amortization of net loss	**11**	**(3)**	**8**	125	(26)	99
Amortization of prior service cost/(credit)	**2**	**(1)**	**1**	2	(1)	1
Foreign exchange and other	**1**	**(3)**	**(2)**	19	4	23
Net change	**23**	**(9)**	**14**	148	(25)	123
DVA on fair value option elected liabilities, net change:	**496**	**(119)**	**377**	(296)	67	(229)
Total other comprehensive income/(loss)	**$ 9,785**	**$ (2,414)**	**$ 7,371**	$ 4,474	$ (1,167)	$ 3,307

(a) The pre-tax amount is reported in Investment securities gains 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. The amounts were not material for the three and nine months ended September 30, 2020. During the nine months ended September 30, 2019, the Firm reclassified net pre-tax gains of $6 million to other income and $1 million to other expense, respectively. These amounts, which related to the liquidation of certain legal entities, are comprised of $5 million related to net investment hedge gains and $2 million related to cumulative translation adjustments.
(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 swap.
(d) The pre-tax amounts are primarily recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.
(e) The pre-tax amount is reported in other expense in the Consolidated statements of income.

Note 21 – Restricted cash and other restricted assets

Refer to Note 26 of JPMorgan Chase's 2019 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)	**September 30, 2020**	December 31, 2019
Cash reserves – Federal Reserve Banks[(a)]	**$ –**	$ 26.6
Segregated for the benefit of securities and cleared derivative customers	**20.0**	16.0
Cash reserves at non-U.S. central banks and held for other general purposes	**4.7**	3.9
Total restricted cash[(b)]	**$ 24.7**	$ 46.5

(a) Effective March 26, 2020, the Federal Reserve temporarily eliminated reserve requirements for depository institutions.
(b) Comprises $23.1 billion and $45.3 billion in deposits with banks, and $1.6 billion and $1.2 billion in cash and due from banks on the Consolidated balance sheet as of September 30, 2020 and December 31, 2019, respectively.

Also, as of September 30, 2020 and December 31, 2019, the Firm had the following other restricted assets:

- Cash and securities pledged with clearing organizations for the benefit of customers of $35.1 billion and $24.7 billion, respectively.
- Securities with a fair value of $5.6 billion and $8.8 billion, respectively, were also restricted in relation to customer activity.

Note 22 – Regulatory capital

Refer to Note 27 of JPMorgan Chase's 2019 Form 10-K for a detailed discussion on regulatory capital.

The Federal Reserve establishes capital requirements, including well-capitalized standards, 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 minimum and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of September 30, 2020 and December 31, 2019.

	Minimum capital ratios		Well-capitalized ratios	
	BHC[(a)(e)]	IDI[(b)(e)]	BHC[(c)]	IDI[(d)]
Capital ratios				
CET1 capital	10.5 %	7.0 %	N/A	6.5 %
Tier 1 capital	12.0	8.5	6.0	8.0
Total capital	14.0	10.5	10.0	10.0
Tier 1 leverage	4.0	4.0	N/A	5.0
SLR	5.0	6.0	N/A	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 the minimum capital ratios applicable to the Firm under Basel III. The CET1, Tier 1 and Total capital minimum capital ratios include a capital conservation buffer requirement of 2.5% and GSIB surcharge of 3.5% as calculated under Method 2.
(b) Represents requirements for JPMorgan Chase's IDI subsidiaries. The CET1, Tier 1 and Total capital minimum capital ratios include a capital conservation buffer requirement of 2.5% that is applicable to the IDI subsidiaries. The IDI subsidiaries are not subject to the GSIB surcharge.
(c) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
(d) Represents requirements for IDI subsidiaries pursuant to regulations issued under the FDIC Improvement Act.
(e) Represents minimum SLR requirement of 3.0%, as well as supplementary leverage buffer requirements of 2.0% and 3.0% for BHC and IDI, respectively.

Current Expected Credit Losses

As disclosed in the Firm's 2019 Form 10-K, the Firm initially elected to phase-in the January 1, 2020 ("day 1") CECL adoption impact to retained earnings of $2.7 billion to CET1 capital, at 25% per year in each of 2020 to 2023. As part of their response to the impact of the COVID-19 pandemic, on March 31, 2020, the federal banking agencies issued an interim final rule (issued as final on August 26, 2020) that provided the option to delay the effects of CECL on regulatory capital for two years, followed by a three-year transition period.

The final rule provides a uniform approach for estimating the effects of CECL compared to the legacy incurred loss model during the first two years of the transition period (the "day 2" transition amount), whereby the Firm may exclude from CET1 capital 25% of the change in the allowance for credit losses (excluding allowances on PCD loans). The cumulative day 2 transition amount as at December 31, 2021 that is not recognized in CET1 capital as well as the $2.7 billion day 1 impact, will be phased into CET1 capital at 25% per year beginning January 1, 2022. The Firm has elected to apply the CECL capital transition provisions, and accordingly, for the period ended September 30, 2020, the capital metrics of the Firm exclude $6.4 billion, which is the $2.7 billion day 1 impact to retained earnings and 25% of the $15.2 billion increase in the allowance for credit losses (excluding allowances on PCD loans).

The impacts of the CECL capital transition provisions on Tier 2 capital, adjusted average assets, and total leverage exposure have also been incorporated into the Firm's capital metrics. Refer to Note 1 for further information on the CECL accounting guidance.

The following tables present the risk-based and leverage-based capital metrics for JPMorgan Chase and JPMorgan Chase Bank, N.A. under both the Basel III Standardized and Basel III Advanced Approaches. As of September 30, 2020, the capital metrics are presented applying the CECL capital transition provisions. As of September 30, 2020 and December 31, 2019, JPMorgan Chase and JPMorgan Chase Bank, N.A. were well-capitalized and met all capital requirements to which each was subject.

	Basel III Standardized		**Basel III Advanced**	
September 30, 2020 (in millions, except ratios)	JPMorgan Chase & Co.[d]	JPMorgan Chase Bank, N.A.[d]	JPMorgan Chase & Co.[d]	JPMorgan Chase Bank, N.A.[d]
Risk-based capital metrics:[a]				
CET1 capital	**$ 197,719**	**$ 225,547**	**$ 197,719**	**$ 225,547**
Tier 1 capital	**227,486**	**225,549**	**227,486**	**225,549**
Total capital	**262,397**	**242,927**	**249,947**	**230,846**
Risk-weighted assets	**1,514,509**	**1,444,069**	**1,429,334**	**1,298,354**
CET1 capital ratio	**13.1 %**	**15.6 %**	**13.8 %**	**17.4 %**
Tier 1 capital ratio	**15.0**	**15.6**	**15.9**	**17.4**
Total capital ratio	**17.3**	**16.8**	**17.5**	**17.8**
Leverage-based capital metrics:				
Adjusted average assets[b]	**$ 3,243,290**	**$ 2,852,307**	**$ 3,243,290**	**$ 2,852,307**
Tier 1 leverage ratio	**7.0 %**	**7.9 %**	**7.0 %**	**7.9 %**
Total leverage exposure[c]	**NA**	**NA**	**$ 3,247,392**	**$ 3,544,506**
SLR[c]	**NA**	**NA**	**7.0 %**	**6.4 %**

	Basel III Standardized		**Basel III Advanced**	
December 31, 2019 (in millions, except ratios)	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.
Risk-based capital metrics:[a]				
CET1 capital	$ 187,753	$ 206,848	$ 187,753	$ 206,848
Tier 1 capital	214,432	206,851	214,432	206,851
Total capital	242,589	224,390	232,112	214,091
Risk-weighted assets	1,515,869	1,457,689	1,397,878	1,269,991
CET1 capital ratio	12.4 %	14.2 %	13.4 %	16.3 %
Tier 1 capital ratio	14.1	14.2	15.3	16.3
Total capital ratio	16.0	15.4	16.6	16.9
Leverage-based capital metrics:				
Adjusted average assets[b]	$ 2,730,239	$ 2,353,432	$ 2,730,239	$ 2,353,432
Tier 1 leverage ratio	7.9 %	8.8 %	7.9 %	8.8 %
Total leverage exposure	NA	NA	$ 3,423,431	$ 3,044,509
SLR	NA	NA	6.3 %	6.8 %

(a) The capital adequacy of the Firm and JPMorgan Chase Bank, N.A. is evaluated against the lower of the two ratios as calculated under Basel III approaches (Standardized or Advanced).

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

(c) As of September 30, 2020, JPMorgan Chase's total leverage exposure for purposes of calculating the SLR, excludes on-balance sheet amounts of U.S. Treasury securities and deposits at Federal Reserve Banks, as provided by the interim final rule issued by the Federal Reserve on April 1, 2020. On June 1, 2020, the Federal Reserve, OCC and FDIC issued an interim final rule that provides IDI subsidiaries with an option to apply this temporary exclusion subject to certain restrictions. As of September 30, 2020, JPMorgan Chase Bank, N.A. has not elected to apply this exclusion.

(d) As of September 30, 2020, the capital metrics for the Firm reflect the exclusion of assets purchased from money market mutual fund clients pursuant to nonrecourse advances provided under the MMLF. Additionally, loans originated under the PPP in the Firm and JPMorgan Chase Bank, N.A. receive a zero percent risk weight.

Note 23 – 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 2019 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 13 for further information regarding the allowance for credit losses on lending-related commitments, including the impact of the Firm's adoption of the CECL accounting guidance on January 1, 2020.

The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at September 30, 2020, and December 31, 2019. 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.

In conjunction with the adoption of CECL, the Firm reclassified risk-rated loans and lending-related commitments from the consumer, excluding credit card portfolio segment to the wholesale portfolio segment, to align with the methodology applied when determining the allowance. Prior-period amounts have been revised to conform with the current presentation. Refer to Note 1 for further information.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

	Contractual amount						Carrying value[j]	
	September 30, 2020					Dec 31, 2019	Sep 30, 2020	Dec 31, 2019
By remaining maturity (in millions)	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]	**$ 15,739**	**$ 1,447**	**$ 3,570**	**$ 14,816**	**$ 35,572**	$ 30,217	**$ 216**	$ 12
Auto and other	**10,044**	**1**	**16**	**792**	**10,853**	9,952	**–**	–
Total consumer, excluding credit card	**25,783**	**1,448**	**3,586**	**15,608**	**46,425**	40,169	**216**	12
Credit card[b]	**662,860**	**–**	**–**	**–**	**662,860**	650,720	**–**	–
Total consumer[b][c]	**688,643**	**1,448**	**3,586**	**15,608**	**709,285**	690,889	**216**	12
Wholesale:								
Other unfunded commitments to extend credit[d][e]	**96,207**	**160,733**	**134,223**	**15,571**	**406,734**	380,307	**2,492**	952
Standby letters of credit and other financial guarantees[d]	**17,847**	**8,170**	**3,915**	**1,520**	**31,452**	34,242	**473**	618
Other letters of credit[d]	**2,954**	**76**	**19**	**–**	**3,049**	2,961	**20**	4
Total wholesale[c]	**117,008**	**168,979**	**138,157**	**17,091**	**441,235**	417,510	**2,985**	1,574
Total lending-related	**$ 805,651**	**$170,427**	**$ 141,743**	**$ 32,699**	**$ 1,150,520**	$ 1,108,399	**$ 3,201**	$ 1,586
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[f]	**$ 220,361**	**$ –**	**$ –**	**$ –**	**$ 220,361**	$ 204,827	**$ –**	$ –
Derivatives qualifying as guarantees	**2,668**	**290**	**12,045**	**40,377**	**55,380**	53,089	**451**	159
Unsettled resale and securities borrowed agreements	**142,799**	**3,555**	**–**	**–**	**146,354**	117,951	1	–
Unsettled repurchase and securities loaned agreements	**120,904**	**586**	**–**	**–**	**121,490**	73,351	(1)	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**84**	59
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**853**	944	**24**	27
Exchange & clearing house guarantees and commitments[g]	**89,121**	**–**	**–**	**–**	**89,121**	206,432	**–**	–
Other guarantees and commitments[e][h]	**1,236**	**499**	**711**	**4,052**	**6,498**	6,334 [i]	**(64)**	(66)

(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 September 30, 2020, and December 31, 2019, reflected the contractual amount net of risk participations totaling $50 million and $76 million, respectively, for other unfunded commitments to extend credit; $8.8 billion and $9.8 billion, respectively, for standby letters of credit and other financial guarantees; and $462 million and $546 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(e) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans, which resulted in a corresponding reclassification of commitments from Other guarantees and commitments to Wholesale other unfunded commitments to extend credit. Prior-period amounts have been revised to conform with the current presentation.
(f) At September 30, 2020, and December 31, 2019, collateral held by the Firm in support of securities lending indemnification agreements was $233.0 billion and $216.2 billion, respectively. Securities lending collateral primarily consists of cash, G7 government securities, and securities issued by U.S. GSEs and government agencies.
(g) At September 30, 2020, and December 31, 2019, 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.
(h) At September 30, 2020, and December 31, 2019, primarily includes letters of credit hedged by derivative transactions and managed on a market risk basis, and unfunded commitments related to institutional lending. Additionally, includes unfunded commitments predominantly related to certain tax-oriented equity investments.
(i) Prior-period amounts have been revised to conform with the current presentation.
(j) 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. At September 30, 2020, includes net markdowns on held-for-sale positions related to unfunded commitments in the bridge financing portfolio.

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.

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 and similar transactions.

The following table summarizes the contractual amount and carrying value of standby letters of credit and other financial guarantees and other letters of credit arrangements as of September 30, 2020, and December 31, 2019.

Standby letters of credit, other financial guarantees and other letters of credit

	September 30, 2020		December 31, 2019	
(in millions)	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade[(a)]	**$ 23,461**	**$ 2,338**	$ 26,880	$ 2,137
Noninvestment-grade[(a)]	**7,991**	**711**	7,362	824
Total contractual amount	**$ 31,452**	**$ 3,049**	$ 34,242	$ 2,961
Allowance for lending-related commitments	**$ 98**	**$ 20**	$ 216	$ 4
Guarantee liability	**375**	**–**	402	–
Total carrying value	**$ 473**	**$ 20**	$ 618	$ 4
Commitments with collateral	**$ 17,249**	**$ 417**	$ 17,853	$ 728

(a) The ratings scale is based on the Firm's internal risk ratings. Refer to Note 12 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 2019 Form 10-K for further information on these derivatives.

The following table summarizes the derivatives qualifying as guarantees as of September 30, 2020, and December 31, 2019.

(in millions)	**September 30, 2020**	December 31, 2019
Notional amounts		
Derivative guarantees	**$ 55,380**	$ 53,089
Stable value contracts with contractually limited exposure	**28,955**	28,877
Maximum exposure of stable value contracts with contractually limited exposure	**2,974**	2,967
Fair value		
Derivative payables	**451**	159

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. Refer to Note 5 for a further discussion of credit derivatives.

Merchant charge-backs

Under the rules of payment networks, the Firm, in its role as a merchant acquirer, 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, Merchant Services 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 Merchant Services is unable to collect the amount from the merchant, Merchant Services will bear the loss for the amount credited or refunded to the cardholder. Merchant Services mitigates this risk by withholding future settlements, retaining cash reserve accounts or obtaining other collateral. In addition, Merchant Services recognizes a valuation allowance that covers the payment or performance risk to the Firm related to charge-backs. The carrying value of the valuation allowance was $14 million and $11 million at September 30, 2020 and December 31, 2019, respectively.

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. Further, although the Firm's securitizations are predominantly nonrecourse, the Firm does provide recourse servicing in certain limited cases where it agrees to share credit risk with the owner of the mortgage loans. Refer to Note 28 of JPMorgan Chase's 2019 Form 10-K for additional information.

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 25 of this Form 10-Q and Note 30 of JPMorgan Chase's 2019 Form 10-K for additional information regarding litigation.

Sponsored member repo program

The Firm acts as a sponsoring member to clear eligible overnight 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 overnight 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 180. Refer to Note 11 of JPMorgan Chase's 2019 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. These guarantees, which rank on parity with the Firm's unsecured and unsubordinated indebtedness, are not included in the table on page 180 of this Note. Refer to Note 20 of JPMorgan Chase's 2019 Form 10-K for additional information.

Note 24 – Pledged assets and collateral

Refer to Note 29 of JPMorgan Chase's 2019 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)	**September 30, 2020**	December 31, 2019
Assets that may be sold or repledged or otherwise used by secured parties	**$ 189.9**	$ 125.2
Assets that may not be sold or repledged or otherwise used by secured parties	**98.8**	80.2
Assets pledged at Federal Reserve banks and FHLBs	**441.6**	478.9
Total pledged assets	**$ 730.3**	$ 684.3

Total pledged assets do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. Refer to Note 14 for additional information on assets and liabilities of consolidated VIEs. Refer to Note 11 for additional information on the Firm's securities financing activities. Refer to Note 20 of JPMorgan Chase's 2019 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)	**September 30, 2020**	December 31, 2019
Collateral permitted to be sold or repledged, delivered, or otherwise used	**$ 1,361.5**	$ 1,282.5
Collateral sold, repledged, delivered or otherwise used	**999.8**	1,000.5 [(a)]

(a) Includes collateral repledged to the Federal Reserve under the Federal Reserve's open market operations.

Note 25 – Litigation

Contingencies

As of September 30, 2020, the Firm and its subsidiaries and affiliates are defendants, putative defendants or respondents in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations 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 $1.7 billion at September 30, 2020. 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 attendant 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.

Advisory and Other Activities. JPMorgan Chase Bank, N.A. has been advised by one of its U.S. regulators of a potential civil money penalty action against the Bank related to historical deficiencies in internal controls and internal audit over certain advisory and other activities. The Bank already has controls in place to address the deficiencies related to the proposed penalty. The Firm is currently engaged in resolution discussions with the U.S. regulator. There is no assurance that such discussions will result in resolution.

Amrapali. India's Enforcement Directorate ("ED") is investigating JPMorgan 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 since 2017 pursuant to its jurisdiction over public interest litigation. 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 Enforcement Directorate issued a provisional attachment order as part of the criminal PMLA proceedings freezing approximately $25 million held by JPMorgan India Private Limited. In June 2020, the funds were transferred to an account held by the Supreme Court of India. A separate civil proceeding relating to alleged FEMA violations is ongoing. The Firm is responding to and cooperating with the investigation.

Federal Republic of Nigeria Litigation. JPMorgan Chase Bank, N.A. operated an escrow and depository account for the Federal Government of Nigeria ("FGN") and two major international oil companies. The account held approximately $1.1 billion in connection with a dispute among the clients over rights to an oil field. Following the settlement of the dispute, JPMorgan Chase Bank, N.A. paid out the monies in the account in 2011 and 2013 in accordance with directions received from its clients. In November 2017, the Federal Republic of Nigeria ("FRN") commenced a claim in the English High Court for approximately $875 million in payments made out of the accounts. The FRN, claiming to be the same entity as the FGN, alleges that the payments were instructed as part of a complex fraud not involving JPMorgan Chase Bank, N.A., but that JPMorgan Chase Bank, N.A. was or should have been on notice that the payments may be fraudulent. JPMorgan

Chase Bank, N.A. applied for summary judgment and was unsuccessful. The claim is ongoing and no trial date has been set.

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. In January 2017, the Firm was sentenced, with judgment entered thereafter and a term of probation ending in January 2020. The term of probation has concluded, with the Firm remaining in good standing throughout the probation period. The Department of Labor granted the Firm a five-year exemption of disqualification that allows the Firm and its affiliates to continue to rely on the Qualified Professional Asset Manager exemption under the Employee Retirement Income Security Act ("ERISA") until January 2023. The Firm will need to reapply in due course for a further exemption to cover the remainder of the ten-year disqualification period. A South Africa Competition Commission matter is the remaining FX-related governmental inquiry, and is currently pending before the South Africa Competition Tribunal.

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. Certain members of the settlement class filed requests to the Court to be excluded from the class, and certain of them filed a complaint against the Firm and a number of other foreign exchange dealers in November 2018. A number of these actions remain pending. Further, putative class actions have been filed against the Firm and a number of other foreign exchange dealers on behalf of certain consumers who purchased foreign currencies at allegedly inflated rates and purported indirect purchasers of FX instruments; these actions also remain pending in the District Court. In 2020, the Firm and 11 other defendants agreed to settle the class action filed by purported indirect purchasers for a total of $10 million. That settlement remains subject to court approval. 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 and Australia.

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, a temporary reduction of credit card interchange, and modifications to certain credit card network rules. In 2017, after the approval of that settlement was reversed on appeal, the case was remanded to the United States District Court for the Eastern District of New York for further proceedings consistent with the appellate decision.

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 class action seeking monetary relief 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 agreement was approved by the District Court. Certain merchants appealed the District Court's approval order, and those appeals are pending. 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 class action seeking primarily injunctive relief continues separately.

In addition, certain merchants have filed individual actions raising similar allegations against Visa and Mastercard, as well as against the Firm and other banks, and some of those actions remain pending.

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 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 other banks are 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 a series of individual and putative class actions related to benchmarks, including U.S. dollar LIBOR during the period that it was administered by the BBA and, in a separate consolidated putative class action, during the period that it was administered by ICE Benchmark Administration. These actions have been filed, or consolidated for pre-trial purposes, in the United States District Court for the Southern District of New York. In these actions, plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated various benchmark rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by

changes in these rates and assert a variety of claims including antitrust claims seeking treble damages.

In actions related to U.S. dollar LIBOR during the period that it was administered by the BBA, the Firm has resolved certain of these actions, and others are in various stages of litigation. The District Court dismissed certain claims, including antitrust claims brought by some plaintiffs whom the District Court found did not have standing to assert such claims, and permitted certain claims to proceed, including antitrust, Commodity Exchange Act, Section 10(b) of the Securities Exchange Act and common law claims. The plaintiffs whose antitrust claims were dismissed for lack of standing have filed an appeal. The District Court granted class certification of antitrust claims related to bonds and interest rate swaps sold directly by the defendants and denied class certification motions filed by other plaintiffs. In the consolidated putative class action related to the time period that U.S. dollar LIBOR was administered by ICE Benchmark Administration, the District Court granted defendants' motion to dismiss plaintiffs' complaint, and the plaintiffs have appealed. The Firm's settlements of putative class actions related to Swiss franc LIBOR, the Singapore Interbank Offered Rate and the Singapore Swap Offer Rate ("SIBOR"), the Australian Bank Bill Swap Reference Rate, and one of the putative class actions related to U.S. dollar LIBOR remain subject to court approval. In the class actions related to SIBOR and Swiss franc LIBOR, the District Court concluded that the Court lacked subject matter jurisdiction, and plaintiffs' appeals of those decisions are pending.

In addition to the actions pending or consolidated in the Southern District of New York, in August 2020, a group of individual plaintiffs filed a lawsuit asserting antitrust claims in the United States District Court for the Northern District of California, alleging that the Firm and other defendants were engaged in an unlawful agreement to set LIBOR and conspired to monopolize the market for LIBOR-based consumer loans and credit cards. The complaint seeks injunctive relief and monetary damages.

Metals and U.S. Treasuries Investigations and Litigation and Related Inquiries. The Firm previously reported that it and/or certain of its subsidiaries had entered into resolutions with the U.S. Department of Justice ("DOJ"), the U.S. Commodity Futures Trading Commission ("CFTC") and the U.S. Securities and Exchange Commission ("SEC"), which, collectively, resolved those agencies' respective investigations relating to historical trading practices by former employees in the precious metals and U.S. treasuries markets and related conduct from 2008 to 2016.

The Firm entered into a Deferred Prosecution Agreement ("DPA") with the DOJ in which it agreed to the filing of a criminal information charging JPMorgan Chase & Co. with two counts of wire fraud and agreed, along with JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC, to certain terms and obligations as set forth therein. Under the terms of the DPA, the criminal information will be dismissed after three years, provided that JPMorgan Chase & Co., JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC fully comply with all of their obligations.

Across the three resolutions with the DOJ, CFTC and SEC, JPMorgan Chase & Co., JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC agreed to pay a total monetary amount of approximately $920 million. A portion of the total monetary amount includes victim compensation payments.

Several putative class action complaints have been filed in the United States District Court for the Southern District of New York against the Firm and certain former employees, alleging a precious metals futures and options price manipulation scheme in violation of the Commodity Exchange Act. Some of the complaints also allege unjust enrichment and deceptive acts or practices under the General Business Law of the State of New York. The Court consolidated these putative class actions in February 2019, and the consolidated action is stayed through May 2021. In addition, several putative class actions have been filed in the United States District Courts for the Northern District of Illinois and Southern District of New York against the Firm, alleging manipulation of U.S. Treasury futures and options, and bringing claims under the Commodity Exchange Act. Some of the complaints also allege unjust enrichment. The actions in the Northern District of Illinois have been transferred to the Southern District of New York. A putative class action complaint has also been filed under the Securities Exchange Act of 1934 in the United States District Court for the Eastern District of New York against the Firm and certain individual defendants on behalf of shareholders who acquired shares during the putative class period alleging that certain SEC filings of the Firm were materially false or misleading in that they did not disclose certain information relating to the above-referenced investigations.

Wendel. Since 2012, the French criminal authorities have been investigating a series of transactions entered into by senior managers of Wendel Investissement ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in Wendel. JPMorgan Chase Bank, N.A., Paris branch provided financing for the transactions to a number of managers of Wendel in 2007. JPMorgan Chase has cooperated with the investigation. The investigating judges issued an *ordonnance de renvoi* in November 2016, referring JPMorgan Chase Bank, N.A. to the French *tribunal correctionnel* for alleged complicity in tax fraud. In January 2018, the Paris Court of Appeal issued a decision cancelling the *mise en examen* of JPMorgan Chase Bank, N.A. The Court of Cassation, France's highest court, ruled in September 2018 that a *mise en examen* is a prerequisite for an *ordonnance de renvoi* and in January 2020 ordered the annulment of the *ordonnance de renvoi* referring JPMorgan Chase Bank, N.A. to the French *tribunal correctionnel.* Court of Appeal hearings are scheduled in November and December 2020 to further consider JPMorgan Chase's

status in this matter. A trial of the managers of Wendel is due to commence before the *tribunal correctionnel* in January 2021. In addition, a number of the managers have commenced civil proceedings against JPMorgan Chase Bank, N.A. The claims are separate, involve different allegations and are at various stages of proceedings.

* * *

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/(benefit) was $524 million and $10 million for the three months ended September 30, 2020 and 2019, respectively, and $839 million and $(2) million for the nine months ended September 30, 2020 and 2019, 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 26 – 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 2019 Form 10-K for a further discussion concerning JPMorgan Chase's business segments.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the three and nine months ended September 30, 2020 and 2019, 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 2019 Form 10-K for additional information on the Firm's managed basis.

Business segment capital allocation

The amount of capital assigned to each business is referred to as equity. Periodically, the assumptions and methodologies used to allocate capital are assessed and as a result, the capital allocated to the LOBs may change. Refer to Line of business equity on page 90 of JPMorgan Chase's 2019 Form 10-K for additional information on business segment capital allocation.

Business segment changes

In the first quarter of 2020, the Firm began reporting a Wholesale Payments business unit within CIB following a realignment of the Firm's wholesale payments businesses. The Wholesale Payments business comprises:

- Merchant Services, which was realigned from CCB to CIB
- Treasury Services and Trade Finance in CIB. Trade Finance was previously reported in Lending in CIB.

In connection with the alignment of Wholesale Payments, the assets, liabilities and headcount associated with the Merchant Services business were realigned to CIB from CCB, and the revenue and expenses of the Merchant Services business are reported across CCB, CIB and CB based primarily on client relationships. Prior period amounts have been revised to reflect this realignment and revised allocation methodology.

Segment results and reconciliation[a]

As of or for the three months ended September 30, (in millions, except ratios)	Consumer & Community Banking[b]		Corporate & Investment Bank		Commercial Banking		Asset & Wealth Management	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019
Noninterest revenue	**$ 4,758**	$ 4,806	**$ 8,075**	$ 7,354	**$ 761**	$ 666	**$ 2,887**	$ 2,713
Net interest income	**7,997**	9,152	**3,428**	2,168	**1,524**	1,608	**850**	855
Total net revenue	**12,755**	13,958	**11,503**	9,522	**2,285**	2,274	**3,737**	3,568
Provision for credit losses	**794**	1,311	**(81)**	92	**(147)**	67	**(51)**	44
Noninterest expense	**6,770**	7,025	**5,797**	5,504	**966**	940	**2,623**	2,622
Income/(loss) before income tax expense/(benefit)	**5,191**	5,622	**5,787**	3,926	**1,466**	1,267	**1,165**	902
Income tax expense/(benefit)	**1,318**	1,377	**1,483**	1,095	**378**	324	**288**	234
Net income/(loss)	**$ 3,873**	$ 4,245	**$ 4,304**	$ 2,831	**$ 1,088**	$ 943	**$ 877**	$ 668
Average equity	**$ 52,000**	$ 52,000	**$ 80,000**	$ 80,000	**$ 22,000**	$ 22,000	**$ 10,500**	$ 10,500
Total assets	**480,325**	525,223	**1,089,293**	1,030,396	**228,587**	222,483	**194,596**	174,226
ROE	**29 %**	31 %	**21 %**	13 %	**19 %**	16 %	**32 %**	24 %
Overhead ratio	**53**	50	**50**	58	**42**	41	**70**	73

As of or for the three months ended September 30, (in millions, except ratios)	Corporate		Reconciling Items[a]		Total[b]	
	2020	2019	**2020**	2019	**2020**	2019
Noninterest revenue	**$ 343**	$ 120	**$ (690)**	$ (596)	**$ 16,134**	$ 15,063
Net interest income	**(682)**	572	**(104)**	(127)	**13,013**	14,228
Total net revenue	**(339)**	692	**(794)**	(723)	**29,147**	29,291
Provision for credit losses	**96**	–	**–**	–	**611**	1,514
Noninterest expense	**719**	281	**–**	–	**16,875**	16,372
Income/(loss) before income tax expense/(benefit)	**(1,154)**	411	**(794)**	(723)	**11,661**	11,405
Income tax expense/(benefit)	**(455)**	18	**(794)**	(723)	**2,218**	2,325
Net income/(loss)	**$ (699)**	$ 393	**$ –**	$ –	**$ 9,443**	$ 9,080
Average equity	**$ 72,297**	$ 71,113	**$ –**	$ –	**$ 236,797**	$ 235,613
Total assets	**1,253,275**	812,333	**NA**	NA	**3,246,076**	2,764,661
ROE	**NM**	NM	**NM**	NM	**15 %**	15 %
Overhead ratio	**NM**	NM	**NM**	NM	**58**	56

(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 second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.

Segment results and reconciliation[a]

As of or for the nine months ended September 30, (in millions, except ratios)	Consumer & Community Banking[b]		Corporate & Investment Bank		Commercial Banking		Asset & Wealth Management	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019
Noninterest revenue	**$ 12,833**	$ 12,948	**$ 27,189**	$ 22,850	**$ 2,197**	$ 2,022	**$ 8,316**	$ 7,989
Net interest income	**25,251**	27,937	**10,614**	6,537	**4,658**	4,950	**2,637**	2,627
Total net revenue	**38,084**	40,885	**37,803**	29,387	**6,855**	6,972	**10,953**	10,616
Provision for credit losses	**12,394**	3,745	**3,307**	179	**3,294**	186	**266**	48
Noninterest expense	**20,498**	20,784	**18,457**	16,794	**2,853**	2,809	**7,788**	7,865
Income/(loss) before income tax expense/(benefit)	**5,192**	16,356	**16,039**	12,414	**708**	3,977	**2,899**	2,703
Income tax expense/(benefit)	**1,304**	4,007	**4,283**	3,377	**164**	972	**700**	655
Net income/(loss)	**$ 3,888**	$ 12,349	**$ 11,756**	$ 9,037	**$ 544**	$ 3,005	**$ 2,199**	$ 2,048
Average equity	**$ 52,000**	$ 52,000	**$ 80,000**	$ 80,000	**$ 22,000**	$ 22,000	**$ 10,500**	$ 10,500
Total assets	**480,325**	525,223	**1,089,293**	1,030,396	**228,587**	222,483	**194,596**	174,226
Return on equity	**9 %**	31 %	**19 %**	14 %	**2 %**	17 %	**27 %**	25 %
Overhead ratio	**54**	51	**49**	57	**42**	40	**71**	74

As of or for the nine months ended September 30, (in millions, except ratios)	Corporate		Reconciling Items[a]		Total[b]	
	2020	2019	**2020**	2019	**2020**	2019
Noninterest revenue	**$ 607**	$ 3	**$ (2,128)**	$ (1,777)	**$ 49,014**	$ 44,035
Net interest income	**(1,534)**	1,436	**(321)**	(408)	**41,305**	43,079
Total net revenue	**(927)**	1,439	**(2,449)**	(2,185)	**90,319**	87,114
Provision for credit losses	**108**	–	**–**	–	**19,369**	4,158
Noninterest expense	**1,012**	724	**–**	–	**50,608**	48,976
Income/(loss) before income tax expense/(benefit)	**(2,047)**	715	**(2,449)**	(2,185)	**20,342**	33,980
Income tax expense/(benefit)	**(655)**	(757)	**(2,449)**	(2,185)	**3,347**	6,069
Net income/(loss)	**$ (1,392)**	$ 1,472	**$ –**	$ –	**$ 16,995**	$ 27,911
Average equity	**$ 70,751**	$ 68,417	**$ –**	$ –	**$ 235,251**	$ 232,917
Total assets	**1,253,275**	812,333	**NA**	NA	**3,246,076**	2,764,661
Return on equity	**NM**	NM	**NM**	NM	**9 %**	15 %
Overhead ratio	**NM**	NM	**NM**	NM	**56**	56

(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 second quarter of 2020, the Firm reclassified certain spend-based credit card reward costs from marketing expense to be a reduction of card income, with no effect on net income. Prior-period amounts have been revised to conform with the current presentation.

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 September 30, 2020, and the related consolidated statements of income, comprehensive income, and changes in stockholders' equity for the three-month and nine-month periods ended September 30, 2020 and 2019 and the consolidated statements of cash flows for the nine-month periods ended September 30, 2020 and 2019, 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, 2019, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for the year then ended (not presented herein), and in our report dated February 25, 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, 2019, 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.

PricewaterhouseCoopers LLP

November 2, 2020

PricewaterhouseCoopers LLP, 300 Madison Avenue, New York, NY 10017

JPMorgan Chase & Co.
Consolidated average balance sheets, interest and rates (unaudited)
(Taxable-equivalent interest and rates; in millions, except rates)

	Three months ended September 30, 2020			Three months ended September 30, 2019		
	Average balance	Interest[g]	Rate (annualized)	Average balance	Interest[g]	Rate (annualized)
Assets						
Deposits with banks	**$ 509,979**	**$ 69**	**0.05 %**	$ 267,578	$ 898	1.33 %
Federal funds sold and securities purchased under resale agreements	**277,899**	**401**	**0.57**	276,721	1,542	2.21
Securities borrowed	**147,184**	**(128)**	**(0.35)** [h]	139,939	434	1.23
Trading assets – debt instruments[a]	**322,321**	**1,859**	**2.29**	298,358	2,228	2.96
Taxable securities	**515,007**	**1,816**	**1.40**	308,619	2,132	2.74
Nontaxable securities[b]	**33,537**	**358**	**4.25**	34,515	396	4.55
Total investment securities	**548,544**	**2,174**	**1.58** [i]	343,134	2,528	2.92 [i]
Loans[a]	**991,241**	**10,246**	**4.11**	984,248	13,014	5.25
All other interest-earning assets[a][c]	**77,806**	**183**	**0.94**	54,973	604	4.36
Total interest-earning assets	**2,874,974**	**14,804**	**2.05**	2,364,951	21,248	3.56
Allowance for loan losses	**(31,574)**			(13,142)		
Cash and due from banks	**21,404**			20,375		
Trading assets – equity and other instruments	**119,905**			113,980		
Trading assets – derivative receivables	**81,300**			57,062		
Goodwill, MSRs and other intangible Assets	**51,547**			53,125		
All other noninterest-earning assets[a]	**172,601**			168,701		
Total assets	**$ 3,290,157**			$ 2,765,052		
Liabilities						
Interest-bearing deposits	**$ 1,434,034**	**$ 245**	**0.07 %**	$ 1,123,452	$ 2,409	0.85 %
Federal funds purchased and securities loaned or sold under repurchase agreements	**253,779**	**105**	**0.17**	239,698	1,241	2.05
Short-term borrowings[d]	**36,697**	**60**	**0.65**	44,814	261	2.31
Trading liabilities – debt and all other interest-bearing liabilities[e][f]	**206,643**	**(51)**	**(0.10)** [h]	183,369	660	1.43
Beneficial interests issued by consolidated VIEs	**19,838**	**35**	**0.71**	21,123	134	2.53
Long-term debt	**267,175**	**1,293**	**1.93**	248,985	2,188	3.49
Total interest-bearing liabilities	**2,218,166**	**1,687**	**0.30**	1,861,441	6,893	1.47
Noninterest-bearing deposits	**551,565**			407,428		
Trading liabilities – equity and other instruments[f]	**32,256**			31,310		
Trading liabilities – derivative payables	**64,599**			45,987		
All other liabilities, including the allowance for lending-related commitments	**156,711**			155,032		
Total liabilities	**3,023,297**			2,501,198		
Stockholders' equity						
Preferred stock	**30,063**			28,241		
Common stockholders' equity	**236,797**			235,613		
Total stockholders' equity	**266,860**			263,854		
Total liabilities and stockholders' equity	**$ 3,290,157**			$ 2,765,052		
Interest rate spread			**1.75 %**			2.09 %
Net interest income and net yield on interest-earning assets		**$ 13,117**	**1.82**		$ 14,355	2.41

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.
(b) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(c) Includes prime 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.
(d) Includes commercial paper.
(e) All other interest-bearing liabilities include prime brokerage-related customer payables.
(f) The combined balance of trading liabilities – debt and equity instruments was $105.0 billion and $102.3 billion for the three months ended September 30, 2020 and 2019, respectively.
(g) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(h) Negative interest income and yield are related to the impact of current interest rates combined with the fees paid on client-driven securities borrowed balances. The negative interest expense related to prime brokerage customer payables is recognized in interest expense and reported within trading liabilities - debt and all other interest-bearing liabilities.
(i) The annualized rate for securities based on amortized cost was 1.61% and 2.97% for the three months ended September 30, 2020 and 2019, respectively, and does not give effect to changes in fair value that are reflected in AOCI.

JPMorgan Chase & Co.
Consolidated average balance sheets, interest and rates (unaudited)
(Taxable-equivalent interest and rates; in millions, except rates)

	Nine months ended September 30, 2020			Nine months ended September 30, 2019		
	Average balance	Interest[g]	Rate (annualized)	Average balance	Interest[g]	Rate (annualized)
Assets						
Deposits with banks	**$ 422,860**	**$ 708**	**0.22 %**	$ 282,483	$ 3,200	1.51 %
Federal funds sold and securities purchased under resale agreements	**258,607**	**2,097**	**1.08**	284,616	4,865	2.29
Securities borrowed	**141,567**	**(151)**	**(0.14)** [h]	129,915	1,298	1.34
Trading assets – debt instruments[a]	**324,061**	**6,008**	**2.48**	299,834	7,160	3.19
Taxable securities	**456,733**	**6,203**	**1.81**	258,406	5,712	2.96
Nontaxable securities[b]	**33,589**	**1,096**	**4.36**	36,490	1,271	4.66
Total investment securities	**490,322**	**7,299**	**1.99** [i]	294,896	6,983	3.17 [i]
Loans[a]	**1,007,360**	**33,507**	**4.44**	990,731	39,390	5.32
All other interest-earning assets[a][c]	**75,859**	**826**	**1.46**	51,931	1,625	4.18
Total interest-earning assets	**2,720,636**	**50,294**	**2.47**	2,334,406	64,521	3.70
Allowance for loan losses	**(24,100)**			(13,366)		
Cash and due from banks	**21,745**			20,824		
Trading assets – equity and other instruments	**111,198**			114,394		
Trading assets – derivative receivables	**75,656**			54,098		
Goodwill, MSRs and other intangible Assets	**52,006**			53,853		
All other noninterest-earning assets[a]	**179,972**			165,692		
Total assets	**$ 3,137,113**			$ 2,729,901		
Liabilities						
Interest-bearing deposits	**$ 1,342,270**	**$ 2,169**	**0.22 %**	$ 1,102,751	$ 7,010	0.85 %
Federal funds purchased and securities loaned or sold under repurchase agreements	**258,156**	**1,023**	**0.53**	225,471	3,577	2.12
Short-term borrowings[d]	**39,749**	**335**	**1.13**	56,635	1,051	2.48
Trading liabilities – debt and all other interest-bearing liabilities[e][f]	**202,322**	**278**	**0.18** [h]	186,167	2,141	1.54
Beneficial interests issued by consolidated VIEs	**19,407**	**184**	**1.27**	23,549	459	2.61
Long-term debt	**260,194**	**4,679**	**2.40**	247,782	6,796	3.67
Total interest-bearing liabilities	**2,122,098**	**8,668**	**0.55**	1,842,355	21,034	1.53
Noninterest-bearing deposits	**495,704**			405,075		
Trading liabilities – equity and other instruments[f]	**32,258**			32,059		
Trading liabilities – derivative payables	**60,936**			41,952		
All other liabilities, including the allowance for lending-related commitments	**161,022**			148,086		
Total liabilities	**2,872,018**			2,469,527		
Stockholders' equity						
Preferred stock	**29,844**			27,457		
Common stockholders' equity	**235,251**			232,917		
Total stockholders' equity	**265,095**			260,374		
Total liabilities and stockholders' equity	**$ 3,137,113**			$ 2,729,901		
Interest rate spread			**1.92 %**			2.17 %
Net interest income and net yield on interest-earning assets		**$ 41,626**	**2.04**		$ 43,487	2.49

(a) In the third quarter of 2020, the Firm reclassified certain fair value option elected lending-related positions from trading assets to loans and other assets. Prior-period amounts have been revised to conform with the current presentation.
(b) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(c) Includes prime 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.
(d) Includes commercial paper.
(e) Other interest-bearing liabilities include prime brokerage-related customer payables.
(f) The combined balance of trading liabilities – debt and equity instruments were $105.0 billion and $106.8 billion for the nine months ended September 30, 2020 and 2019, respectively.
(g) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(h) Negative interest income and yield are related to the impact of current interest rates combined with the fees paid on client-driven securities borrowed balances. The negative interest expense related to prime brokerage customer payables is recognized in interest expense and reported within trading liabilities - debt and all other liabilities.
(i) The annualized rate for securities based on amortized cost was 2.03% and 3.20% and for the nine months ended September 30, 2020 and 2019, respectively, and does not give effect to changes in fair value that are reflected in AOCI.

2019 Form 10-K: Annual report on Form 10-K for year ended December 31, 2019, 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.

Benefit obligation: refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

BHC: Bank holding company

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

CBB: Consumer & Business 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

CFTC: Commodity Futures Trading Commission

CFO: Chief Financial Officer

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.

CLTV: Combined loan-to-value

Collateral-dependent: A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided substantially through the operation or sale of the-collateral when the borrower is experiencing financial difficulty, including when foreclosure is deemed probable based on borrower delinquency.

Commercial Card: provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Criticized: Criticized loans, lending-related commitments and derivative receivables that are classified as special mention, substandard and doubtful categories for regulatory purposes and are generally consistent with a rating of CCC+/Caa1 and below, as defined by S&P and Moody's.

CRO: Chief Risk Officer

CVA: Credit valuation adjustment

DVA: Debit valuation adjustment

EC: European Commission

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.

ERISA: Employee Retirement Income Security Act of 1974

EPS: Earnings per share

Exchange-traded derivatives: Derivative contracts that are executed on an exchange and settled via a central clearing house.

Expense categories:

- Volume- and 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.

EU: European Union

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FDIC: Federal Deposit Insurance Corporation

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.

Firm: JPMorgan Chase & Co.

Follow-on offering: An issuance of shares following a company's IPO.

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.

FRBB: Federal Reserve Bank of Boston

FRBNY: Federal Reserve Bank of New York

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

IPO: Initial public offering

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

J.P. Morgan Securities: J.P. Morgan Securities LLC

LCR: Liquidity coverage ratio

LGD: Loss given default

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.

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.

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).

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

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

MMLF: Money Market Mutual Fund Liquidity Facility

MMMF: Money market mutual funds

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.

MSA: Metropolitan statistical areas

MSR: Mortgage servicing rights

NA: Data is not applicable or available for the period presented.

NAV: Net Asset Value

Net Capital Rule: Rule 15c3-1 under the Securities Exchange Act of 1934.

Net charge-off/(recovery) rate: represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net interchange income includes the following components:

- **Interchange income:** Fees earned by credit and debit card issuers on sales transactions.
- **Rewards costs:** The cost to the Firm for points earned by cardholders enrolled in credit card rewards programs generally tied to sales transactions.
- **Partner payments:** Payments to co-brand credit card partners based on the cost of loyalty program rewards earned by cardholders on credit card transactions.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

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.

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.

OTTI: Other-than-temporary impairment

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.

PCI: "Purchased credit-impaired" loans represented certain loans that were acquired and deemed to be credit-impaired on the acquisition date. The superseded FASB guidance allowed purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans had common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool was then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

PD: Probability of default

PDCF: Primary Dealer Credit Facility

Phishing: a type of social engineering cyberattack received through email or online messages.

PPP: Paycheck Protection Program

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.

Scored portfolios: Consumer loan portfolios that predominantly include residential real estate loans, credit card loans, auto loans to individuals and certain small business loans.

S&P: Standard and Poors

SAR(s): Stock appreciation rights

SCB: Stress capital buffer

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 Deals: Shelf offerings are SEC provisions that allow issuers to register for new securities without selling the entire issuance at once. Since these issuances are filed with the SEC but are not yet priced in the market, they are not included in the league tables until the actual securities are issued.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SMBS: Stripped mortgage-backed securities

SOFR: Secured Overnight Financing Rate

SPEs: Special purpose entities

SPV: Special purpose vehicle

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, 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" is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty. Loans with short-term and other insignificant modifications that are not considered concessions are not TDRs.

TLAC: Total Loss Absorbing Capacity

U.K.: United Kingdom

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S.: 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. GAAP: Accounting principles generally accepted in the United States of America.

U.S. GSE(s): "U.S. government-sponsored enterprises" are quasi-governmental, privately-held entities established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae or FHA. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury

VA: U.S. Department of Veterans Affairs

VaR: "Value-at-risk" is a measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

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.

CONSUMER & COMMUNITY BANKING ("CCB")

Debit and credit card sales volume: Dollar amount of cardmember purchases, net of returns.

Deposit margin/deposit spread: 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.

Net 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. Net 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 Credit Card 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.

Wholesale Payments includes the following:

- **Treasury Services:** offers a broad range of products and services that enable clients to manage payments and receipts, as well as invest and manage funds. Products include U.S. dollar and multi-currency clearing, automated clearing house, lockbox, disbursement and reconciliation services, check deposits, and currency-related services;
- **Merchant Services:** primarily processes transactions for merchants; and
- **Trade Finance:** which includes loans tied directly to goods crossing borders, export/import loans, commercial letters of credit, standby letters of credit, and supply chain finance.

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

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

Corporate Client Banking: covers large corporations.

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

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.

Wholesale payments: includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

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: product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activity and certain income derived from principal transactions.

ASSET & WEALTH MANAGEMENT ("AWM")

Assets under management ("AUM"): represent assets managed by AWM on behalf of its Private Banking, Institutional and Retail clients.

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.

AWM's lines of business consist of the following:

Asset Management: provides comprehensive global investment services - including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Wealth Management: offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AWM's client segments consist of the following:

Private Banking: clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional: clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail: 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. The "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 given 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 this analysis. All ratings, the assigned peer categories and the asset values used to derive this

analysis are sourced from these fund rating providers. The data providers re-denominate the asset values into U.S. dollars. This % 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 where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). The performance data could have been different if all funds/ accounts would have 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 this analysis are sourced from the fund ranking providers. Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into U.S. dollars. This % 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 of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Refer to the Market Risk Management section of Management's discussion and analysis and pages 119–126 of JPMorgan Chase's 2019 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 misstatements. In addition, in a firm as large and complex as JPMorgan Chase, lapses or deficiencies 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 142 of JPMorgan Chase's 2019 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 September 30, 2020, 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 25 of this Form 10-Q for information that updates the disclosures set forth under Part I, Item 3: Legal Proceedings, in JPMorgan Chase's 2019 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 6–28 of JPMorgan Chase's 2019 Form 10-K. 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.

The COVID-19 pandemic has caused and is causing significant harm to the global economy and our businesses.

On March 11, 2020, the World Health Organization declared the outbreak of a strain of novel coronavirus disease, COVID-19, a global pandemic. The COVID-19 pandemic and governmental responses to the pandemic have had, and continue to have, a severe impact on global economic conditions, including:

- significant disruption and volatility in the financial markets
- disruption of global supply chains
- closures of many businesses, leading to loss of revenues and increased unemployment, and
- the institution of social distancing and sheltering-in-place requirements in the U.S. and other countries.

If the pandemic is prolonged, or other diseases emerge that give rise to similar effects, the adverse impact on the global economy could deepen.

The continuation of the adverse economic conditions caused by the pandemic can be expected to have a significant adverse effect on JPMorgan Chase's businesses and results of operations, including:

- significantly reduced demand for products and services from JPMorgan Chase's clients and customers
- possible recognition of credit losses and increases in the allowance for credit losses, especially if businesses remain closed, unemployment continues to rise and clients and customers draw on their lines of credit
- possible material impacts on the value of securities, derivatives and other financial instruments which JPMorgan Chase owns or in which it makes markets due to market fluctuations
- possible downgrades in JPMorgan Chase's credit ratings

- possible constraints on liquidity and capital, whether due to increases in risk-weighted assets related to supporting client activities or to regulatory actions, and
- the possibility that significant portions of JPMorgan Chase's workforce are unable to work effectively, including because of illness, quarantines, sheltering-in-place arrangements, government actions or other restrictions in connection with the pandemic.

The extent to which the COVID-19 pandemic negatively affects JPMorgan Chase's businesses, results of operations and financial condition, as well as its regulatory capital and liquidity ratios, will depend on future developments that are highly uncertain and cannot be predicted, including the scope and duration of the pandemic and actions taken by governmental authorities and other third parties in response to the pandemic. Those negative effects, including the recognition of charge-offs, may be delayed because of the impact of prior and potential future government stimulus actions or payment assistance provided to clients and customers. In addition, JPMorgan Chase's participation directly or on behalf of customers and clients in U.S. government programs designed to support individuals, households and businesses impacted by the economic disruptions caused by the COVID-19 pandemic could be criticized and subject JPMorgan Chase to increased governmental and regulatory scrutiny, negative publicity or increased exposure to litigation, which could increase its operational, legal and compliance costs and damage its reputation. To the extent the COVID-19 pandemic adversely affects JPMorgan Chase's business, results of operations and financial condition, it may also have the effect of heightening many of the other risks described in Risk Factors in the 2019 Form 10-K.

Supervision and regulation

Refer to the Supervision and regulation section on pages 1–6 of JPMorgan Chase's 2019 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 September 30, 2020.

Repurchases under the common equity repurchase program

Refer to Capital Risk Management on pages 49-54 of this Form 10-Q and pages 85-92 of JPMorgan Chase's 2019 Form 10-K for information regarding repurchases under the Firm's common equity repurchase program.

On March 15, 2020, in response to the COVID-19 pandemic, the Firm temporarily suspended repurchases of its common equity. In June 2020, the Federal Reserve directed all large bank holding companies, including the Firm, to discontinue net share repurchases, at least through the end of the third quarter of 2020. As such, there were no shares repurchased during the second and third quarters of 2020. On September 30, 2020, the Federal Reserve directed all large bank holding companies, including the Firm, to extend the discontinuation of net share repurchases through the end of the fourth quarter of 2020. Through the date of the filing of this Form 10-Q, the Firm has not authorized a stock repurchase program as part of its annual capital plan.

Nine months ended September 30, 2020	Total shares of common stock repurchased	Average price paid per share of common stock[a]	Aggregate repurchases of common equity (in millions)[a]	Dollar value of remaining authorized repurchase (in millions)[a]	
First quarter	50,003,062	127.92	6,397	9,183	[b]
Second quarter	–	–	–	9,183	[b]
July	–	–	–	–	
August	–	–	–	–	
September	–	–	–	–	
Third quarter	–	–	–	–	
Year-to-date	50,003,062	127.92	6,397	–	

(a) Excludes commissions cost.
(b) The remaining $9.2 billion unused portion under the prior $29.4 billion repurchase program expired on June 30, 2020.

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]
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 September 30, 2020, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income (unaudited) for the three and nine months ended September 30, 2020 and 2019, (ii) the Consolidated statements of comprehensive income (unaudited) for the three and nine months ended September 30, 2020 and 2019, (iii) the Consolidated balance sheets (unaudited) as of September 30, 2020, and December 31, 2019, (iv) the Consolidated statements of changes in stockholders' equity (unaudited) for the three and nine months ended September 30, 2020 and 2019, (v) the Consolidated statements of cash flows (unaudited) for the three and nine months ended September 30, 2020 and 2019, 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/ Nicole Giles
Nicole Giles
Managing Director and Firmwide Controller
(Principal Accounting Officer)

Date: November 2, 2020

INDEX TO EXHIBITS

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† 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.

Exhibit 15

November 2, 2020

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Re: JPMorgan Chase & Co.

Registration Statements on Form S-3
(No. 333-236659)
(No. 333-236659-01)
(No. 333-230098)

Registration Statements on Form S-8
(No. 333-219702)
(No. 333-219701)
(No. 333-219699)
(No. 333-185584)
(No. 333-185582)
(No. 333-185581)
(No. 333-175681)
(No. 333-158325)
(No. 333-142109)
(No. 333-125827)
(No. 333-112967)

Commissioners:

We are aware that our report dated November 2, 2020 on our review of interim financial information of JPMorgan Chase & Co. and its subsidiaries (the "Firm"), which appears in this Quarterly Report on Form 10-Q, is incorporated by reference in the Registration Statements of the Firm referred to above. Pursuant to Rule 436(c) under the Securities Act of 1933, such report should not be considered a part of such Registration Statements, and is not a report within the meaning of Sections 7 and 11 of that Act.

Very truly yours,

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP, 300 Madison Avenue, New York, NY 10017

Exhibit 31.1
JPMorgan Chase & Co.

CERTIFICATION

I, James Dimon, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of JPMorgan Chase & Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2020

/s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Exhibit 31.2

JPMorgan Chase & Co.

CERTIFICATION

I, Jennifer Piepszak, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of JPMorgan Chase & Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 2, 2020

/s/ Jennifer Piepszak

Jennifer Piepszak
Executive Vice President and Chief Financial Officer

Exhibit 32

JPMorgan Chase & Co.

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of JPMorgan Chase & Co. on Form 10-Q for the period ended September 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of JPMorgan Chase & Co., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of JPMorgan Chase & Co.

Date: November 2, 2020 By: /s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Date: November 2, 2020 By: /s/ Jennifer Piepszak

Jennifer Piepszak
Executive Vice President and Chief Financial Officer

This certification accompanies this Quarterly Report on Form 10-Q and 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.

A signed original of this written statement required by Section 906 has been provided to, and will be retained by, JPMorgan Chase & Co. and furnished to the Securities and Exchange Commission or its staff upon request.