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, 2018

Commission file
number 1-5805

JPMorgan Chase & Co.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-2624428 (I.R.S. employer identification no.)
270 Park Avenue, New York, New York (Address of principal executive offices)	10017 (Zip Code)

Registrant's telephone number, including area code: (212) 270-6000

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, 2018: 3,325,410,725

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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)	3Q18	2Q18	1Q18	4Q17	3Q17	Nine months ended Sept. 30, 2018	Nine months ended Sept. 30, 2017
Selected income statement data							
Total net revenue	**$ 27,260**	$ 27,753	$ 27,907	$ 24,457	$ 25,578	**$ 82,920**	$ 76,248
Total noninterest expense	**15,623**	15,971	16,080	14,895	14,570	**47,674**	44,620
Pre-provision profit	**11,637**	11,782	11,827	9,562	11,008	**35,246**	31,628
Provision for credit losses	**948**	1,210	1,165	1,308	1,452	**3,323**	3,982
Income before income tax expense	**10,689**	10,572	10,662	8,254	9,556	**31,923**	27,646
Income tax expense	**2,309**	2,256	1,950	4,022	2,824	**6,515**	7,437
Net income	**$ 8,380**	$ 8,316	$ 8,712	$ 4,232	$ 6,732	**$ 25,408**	$ 20,209
Earnings per share data							
Net income: Basic	**$ 2.35**	$ 2.31	$ 2.38	$ 1.08	$ 1.77	**$ 7.04**	$ 5.26
Diluted	**2.34**	2.29	2.37	1.07	1.76	**7.00**	5.22
Average shares: Basic	**3,376.1**	3,415.2	3,458.3	3,489.7	3,534.7	**3,416.5**	3,570.9
Diluted	**3,394.3**	3,434.7	3,479.5	3,512.2	3,559.6	**3,436.2**	3,597.0
Market and per common share data							
Market capitalization	**375,239**	350,204	374,423	366,301	331,393	**375,239**	331,393
Common shares at period-end	**3,325.4**	3,360.9	3,404.8	3,425.3	3,469.7	**3,325.4**	3,469.7
Share price:[a]							
High	**$ 119.24**	$ 115.15	$ 119.33	$ 108.46	$ 95.88	**$ 119.33**	$ 95.88
Low	**102.20**	103.11	103.98	94.96	88.08	**102.20**	81.64
Close	**112.84**	104.20	109.97	106.94	95.51	**112.84**	95.51
Book value per share	**69.52**	68.85	67.59	67.04	66.95	**69.52**	66.95
Tangible book value per share ("TBVPS")[b]	**55.68**	55.14	54.05	53.56	54.03	**55.68**	54.03
Cash dividends declared per share	**0.80**	0.56	0.56	0.56	0.56	**1.92**	1.56
Selected ratios and metrics							
Return on common equity ("ROE") [c]	**14%**	14%	15%	7%	11%	**14%**	11%
Return on tangible common equity ("ROTCE")[b][c]	**17**	17	19	8	13	**18**	14
Return on assets[c]	**1.28**	1.28	1.37	0.66	1.04	**1.31**	1.06
Overhead ratio	**57**	58	58	61	57	**57**	59
Loans-to-deposits ratio	**65**	65	63	64	63	**65**	63
Liquidity coverage ratio ("LCR") (average)[d]	**115**	115	115	119	120	**115**	118
Common equity Tier 1 ("CET1") capital ratio[e]	**12.0**	12.0	11.8	12.2	12.5 [h]	**12.0**	12.5 [h]
Tier 1 capital ratio[e]	**13.6**	13.6	13.5	13.9	14.1 [h]	**13.6**	14.1 [h]
Total capital ratio[e]	**15.4**	15.5	15.3	15.9	16.1	**15.4**	16.1
Tier 1 leverage ratio[e]	**8.2**	8.2	8.2	8.3	8.4	**8.2**	8.4
Supplementary leverage ratio ("SLR")[f]	**6.5**	6.5	6.5	6.5	6.6	**6.5**	6.6
Selected balance sheet data (period-end)							
Trading assets	**$ 419,827**	$ 418,799	$ 412,282	$ 381,844	$ 420,418	**$ 419,827**	$ 420,418
Investment securities	**231,398**	233,015	238,188	249,958	263,288	**231,398**	263,288
Loans	**954,318**	948,414	934,424	930,697	913,761	**954,318**	913,761
Core loans	**899,006**	889,433	870,536	863,683	843,432	**899,006**	843,432
Average core loans	**894,279**	877,640	861,089	850,166	837,522	**877,774**	822,611
Total assets	**2,615,183**	2,590,050	2,609,785	2,533,600	2,563,074	**2,615,183**	2,563,074
Deposits	**1,458,762**	1,452,122	1,486,961	1,443,982	1,439,027	**1,458,762**	1,439,027
Long-term debt	**270,124**	273,114	274,449	284,080	288,582	**270,124**	288,582
Common stockholders' equity	**231,192**	231,390	230,133	229,625	232,314	**231,192**	232,314
Total stockholders' equity	**258,956**	257,458	256,201	255,693	258,382	**258,956**	258,382
Headcount	**255,313**	252,942	253,707	252,539	251,503	**255,313**	251,503
Credit quality metrics							
Allowance for credit losses	**$ 14,225**	$ 14,367	$ 14,482	$ 14,672	$ 14,648	**$ 14,225**	$ 14,648
Allowance for loan losses to total retained loans	**1.39%**	1.41%	1.44%	1.47%	1.49%	**1.39%**	1.49%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[g]	**1.23**	1.22	1.25	1.27	1.29	**1.23**	1.29
Nonperforming assets	**$ 5,034**	$ 5,767	$ 6,364	$ 6,426	$ 6,154	**$ 5,034**	$ 6,154
Net charge-offs	**1,033**	1,252	1,335	1,264	1,265	**3,620**	4,123 [i]
Net charge-off rate	**0.43%**	0.54%	0.59%	0.55%	0.56%	**0.52%**	0.62% [i]

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

(a) Based on daily prices reported by the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For a further discussion of these measures, refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 16-18.
(c) Quarterly ratios are based upon annualized amounts.
(d) For the nine months ended September 30, 2017, the percentage represents the Firm's reported average LCR per the U.S. LCR public disclosure requirements effective April 1, 2017.
(e) Ratios presented are calculated under the Basel III Transitional capital rules and for the capital ratios represent the lower of the Standardized or Advanced approach. Refer to Capital Risk Management on pages 44-48 for additional information on Basel III.
(f) Effective January 1, 2018, the SLR was fully phased-in under Basel III. The SLR is defined as Tier 1 capital divided by the Firm's total leverage exposure. Ratios prior to March 31, 2018 were calculated under the Basel III Transitional rules.
(g) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For a further discussion of these measures, refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 16-18. For a further discussion, refer to Allowance for credit losses on pages 69-71.
(h) The prior period ratios have been revised to conform with the current period presentation.
(i) Excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rate for the nine months ended September 30, 2017 would have been 0.55%.

INTRODUCTION

The following is management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") for the third quarter of 2018.

This Form 10-Q should be read together with JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2017 ("2017 Annual Report" or "2017 Form 10-K"), to which reference is hereby made, and which is referred to throughout this document. Refer to the Glossary of terms and acronyms and line of business metrics on pages 175–182 *for definitions of terms and acronyms used throughout this Form 10-Q.*

This Form 10-Q contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements. For a further 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 85 of this Form 10-Q and Part I, Item 1A, Risk Factors, on pages 8–26 of JPMorgan Chase's 2017 Annual Report.

JPMorgan Chase & Co., 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; the Firm had $2.6 trillion in assets and $259.0 billion in stockholders' equity as of September 30, 2018. 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 subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states as of September 30, 2018, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's principal credit card-issuing bank. JPMorgan Chase's principal nonbank 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, and representative offices. The Firm's principal operating subsidiary in the United Kingdom ("U.K.") is J.P. Morgan Securities plc, a 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 31 of JPMorgan Chase's 2017 Form 10-K.

EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and may 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 lines of business, this Form 10-Q and the 2017 Form 10-K should be read in their entirety.

Effective January 1, 2018, the Firm adopted several new accounting standards, of which the most significant to the Firm are the guidance related to revenue recognition, and recognition and measurement of financial assets. The revenue recognition guidance required gross presentation of certain costs that were previously offset against revenue. This change was adopted retrospectively and, accordingly, prior period amounts were revised, resulting in both total net revenue and total noninterest expense increasing with no impact to net income. The adoption of the recognition and measurement guidance resulted in $505 million of fair value gains, which were recorded in total net revenue in the first quarter of 2018, on certain equity investments that were previously held at cost. For additional information, refer to Note 1.

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,		
	2018	2017	Change	**2018**	2017	Change
Selected income statement data						
Total net revenue	**$ 27,260**	$ 25,578	7%	**$ 82,920**	$ 76,248	9%
Total noninterest expense	**15,623**	14,570	7	**47,674**	44,620	7
Pre-provision profit	**11,637**	11,008	6	**35,246**	31,628	11
Provision for credit losses	**948**	1,452	(35)	**3,323**	3,982	(17)
Net income	**8,380**	6,732	24	**25,408**	20,209	26
Diluted earnings per share	**$ 2.34**	$ 1.76	33	**$ 7.00**	$ 5.22	34
Selected ratios and metrics						
Return on common equity	**14%**	11%		**14%**	11%	
Return on tangible common equity	**17**	13		**18**	14	
Book value per share	**$ 69.52**	$ 66.95	4	**$ 69.52**	$ 66.95	4
Tangible book value per share	**55.68**	54.03	3	**55.68**	54.03	3
Capital ratios[(a)]						
CET1[(b)]	**12.0%**	12.5%		**12.0%**	12.5%	
Tier 1 capital[(b)]	**13.6**	14.1		**13.6**	14.1	
Total capital	**15.4**	16.1		**15.4**	16.1	

(a) Ratios presented are calculated under the Basel III Transitional capital rules. Refer to Capital Risk Management on pages 44-48 for additional information on Basel III.
(b) The prior period ratios have been revised to conform with the current period presentation.

Comparisons noted in the sections below are for the third quarter of 2018 versus the third quarter of 2017, unless otherwise specified.

Firmwide overview

JPMorgan Chase reported strong results in the current quarter of 2018, with record net income and EPS for a third quarter of $8.4 billion, or $2.34 per share, on net revenue of $27.3 billion. Excluding the impact of the Tax Cuts & Jobs Acts ("TCJA"), net income and EPS were still records for a third quarter. The Firm reported ROE of 14% and ROTCE of 17%.

- Net income increased 24%, reflecting higher net revenue and the impact of the lower U.S. federal statutory income tax rate as a result of the TCJA, partially offset by an increase in noninterest expense.
- Total net revenue increased 7%. Net interest income was $13.9 billion, up 9%, driven by the net impact of higher rates, which includes lower Markets net interest income in CIB, as well as loan and deposit growth. Noninterest revenue was $13.4 billion, up 4%, largely driven by higher Markets noninterest revenue and auto lease income, partially offset by markdowns on certain legacy private equity investments of approximately $220 million.
- Noninterest expense was $15.6 billion, up 7%, predominantly driven by investments in the business, including higher compensation expense on increased headcount, technology, marketing and real estate, and higher revenue-related costs, including auto lease depreciation.
- The provision for credit losses was $948 million, down from $1.5 billion in the prior year. The decrease was driven by the consumer portfolio, largely reflecting a net reduction to the allowance for credit losses in the current quarter, compared to a net addition in the prior year.
- The total allowance for credit losses was $14.2 billion at September 30, 2018, and the Firm had a loan loss coverage ratio, excluding the PCI portfolio, of 1.23%, compared with 1.29% in the prior year. The Firm's nonperforming assets totaled $5.0 billion at September 30, 2018, a decrease from $6.2 billion in the prior year, reflecting improved credit performance in the consumer portfolio, and reductions in the wholesale portfolio including repayments and loan sales.
- Firmwide average core loans increased 7%, and excluding CIB, core loans increased 6%.

Selected capital-related metrics

- The Firm's Basel III Fully Phased-In CET1 capital was $185 billion, and the Standardized and Advanced CET1 ratios were 12.0% and 12.9%, respectively.
- The Firm's Fully Phased-In SLR was 6.5% at September 30, 2018.
- The Firm continued to grow tangible book value per share ("TBVPS"), ending the third quarter of 2018 at $55.68, up 3%.

ROTCE and TBVPS are each non-GAAP financial measures. Core loans and each of the Fully Phased-In capital and certain leverage measures are all considered key performance measures. For a further discussion of each of these measures, refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 16-18, and Capital Risk Management on pages 44-48.

Lines of business highlights

Selected business metrics for each of the Firm's four lines of business are presented below for the third quarter of 2018.

CCB ROE 31%	• Average core loans up 6%; average deposits of $674 billion up 4% • Client investment assets of $298 billion, up 14% • Credit card sales volume up 12% and merchant processing volume up 14%
CIB ROE 14%	• #1 Global Investment Banking fees with 8.7% wallet share year-to-date • Equity Markets revenue of $1.6 billion, up 17% • Treasury Services revenue up 12% and Securities Services revenue up 5%
CB ROE 21%	• Average loan balances up 4% • Strong credit quality with a net recovery of 3 bps
AWM ROE 31%	• Average loan balances up 12% • Assets under management ("AUM") of $2.1 trillion, up 7%

For a detailed discussion of results by line of business, refer to the Business Segment Results on pages 19-41.

Credit provided and capital raised

JPMorgan Chase continues to support consumers, businesses and communities around the globe. The Firm provided credit and raised capital of $1.9 trillion for wholesale and consumer clients during the first nine months of 2018:

- $174 billion of credit for consumers
- $16 billion of credit for U.S. small businesses
- $682 billion of credit for corporations
- $960 billion of capital raised for corporate clients and non-U.S. government entities
- $41 billion of credit and capital raised for U.S. government and nonprofit entities, including states, municipalities, hospitals and universities.

Recent events

On August 29, 2018, JPMorgan Chase announced the launch of You Invest, a new U.S. digital investment platform.

On September 12, 2018, JPMorgan Chase announced the creation of *Advancing*Cities, a new $500 million, five-year initiative to drive inclusive growth and create greater economic opportunity in cities across the world.

2018 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 and are subject to significant risks and uncertainties. For a further 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 85 of this Form 10-Q and Risk Factors on pages 8-26 of JPMorgan Chase's 2017 Annual Report. There is no assurance that actual results for the full year of 2018 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 outlook for the remainder of 2018 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client and customer activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these interrelated factors will affect the performance of the Firm and its lines of business. The Firm expects that it will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the legal, regulatory, business and economic environments in which it operates.

Firmwide

- For full-year 2018, management expects net interest income, on a managed basis, to be approximately $55.5 billion, depending on market conditions.
- Management expects full-year 2018 noninterest revenue growth of 7-8% on a managed basis, depending on market conditions.
- The Firm continues to take a disciplined approach to managing its expenses, while investing for growth and innovation. As a result, management expects full-year 2018 adjusted expense of approximately $63.5 billion (excluding Firmwide legal expense).
- Management estimates the full-year 2018 effective tax rate to be approximately 20%, depending upon several factors, including the geographic mix of taxable income and refinements to estimates of the impacts of the TCJA.
- Management expects average core loan growth, excluding CIB, of 6-7% for full-year 2018.

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, 2018 and 2017, unless otherwise specified. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, refer to pages 79–81 of this Form 10-Q and pages 138–140 of JPMorgan Chase's 2017 Annual Report.

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

Revenue

	Three months ended September 30,			Nine months ended September 30,		
(in millions)	**2018**	2017	Change	**2018**	2017	Change
Investment banking fees	**$ 1,832**	$ 1,868	(2)%	**$ 5,736**	$ 5,594	3%
Principal transactions	**2,964**	2,721	9	**10,698**	9,440	13
Lending- and deposit-related fees	**1,542**	1,497	3	**4,514**	4,427	2
Asset management, administration and commissions	**4,310**	4,072	6	**12,923**	11,996	8
Investment securities losses	**(46)**	(1)	NM	**(371)**	(38)	NM
Mortgage fees and related income	**262**	429	(39)	**1,051**	1,239	(15)
Card income	**1,328**	1,242	7	**3,623**	3,323	9
Other income[(a)]	**1,160**	952	22	**4,041**	3,197	26
Noninterest revenue	**13,352**	12,780	4	**42,215**	39,178	8
Net interest income	**13,908**	12,798	9	**40,705**	37,070	10
Total net revenue	**$ 27,260**	$ 25,578	7%	**$ 82,920**	$ 76,248	9%

(a) Included operating lease income of $1.2 billion and $928 million for the three months ended September 30, 2018 and 2017, respectively, and $3.3 billion and $2.6 billion for the nine months ended September 30, 2018 and 2017, respectively.

Quarterly results

Investment banking fees decreased slightly compared to a strong prior year, with overall share gains, driven by higher equity underwriting fees, which were more than offset by lower debt underwriting and advisory fees. The increase in equity underwriting fees was driven by a higher share of fees including a strong performance in the IPO market. The decrease in debt underwriting fees was driven by declines in industry-wide fee levels, and advisory fees declined compared to a strong prior year. For additional information, refer to CIB segment results on pages 26-31 and Note 5.

Principal transactions revenue increased primarily reflecting higher revenue in CIB driven by:

- higher Equity Markets revenue in derivatives and prime brokerage reflecting strong client activity, and
- in Fixed Income Markets, higher revenue in Currencies & Emerging Markets on increased activity levels, as well as in Commodities compared to a challenging prior year. The increase was partially offset by lower revenue in Credit and Securitized Products. For additional information, refer to CIB segment results on pages 26-31 , and Note 5.

The increase in CIB was partially offset by private equity losses reflecting markdowns on certain legacy private equity investments in Corporate.

For information on lending- and deposit-related fees, refer to the segment results for CCB on pages 21–25, CIB on pages 26-31, CB on pages 32-35 and Note 5.

Asset management, administration and commissions revenue increased reflecting:

- higher asset management fees in AWM and CCB driven by higher market levels and net long-term product inflows, partially offset by fee compression in AWM, and
- higher brokerage commissions driven by higher volumes in CIB.

For additional information, refer to AWM, CCB and CIB segment results on pages 36–39, pages 21–25 and pages 26-31, respectively, and Note 5.

For further information on investment securities gains/(losses) and the investment securities portfolio, refer to Corporate segment results on pages 40–41 and Note 9.

Mortgage fees and related income decreased driven by lower net mortgage servicing revenue reflecting lower MSR risk management results and lower servicing revenue on a lower level of third-party loans serviced, as well as lower net production revenue reflecting lower production margins and volumes. For further information, refer to CCB segment results on pages 21–25 and Note 14.

Card income increased driven by:

- lower new account origination costs, and
- higher merchant processing fees on higher volumes,

largely offset by

- lower net interchange income reflecting higher rewards costs and partner payments, largely offset by higher card sales volumes.

For further information, refer to CCB segment results on pages 21–25 and Note 5.

Other income reflects higher operating lease income from growth in auto operating lease volume in CCB. For further information, refer to Note 5.

Net interest income increased primarily due to the net impact of higher rates, which includes lower Markets net interest income in CIB, as well as loan and deposit growth. The Firm's average interest-earning assets were $2.2 trillion, up $26.1 billion from the prior year, and the net interest yield on these assets, on a fully taxable equivalent ("FTE") basis, was 2.51%, an increase of 14 basis points from the prior year. The net interest yield excluding CIB Markets was 3.30%, an increase of 40 basis points from the prior year. Net interest yield excluding CIB Markets is a non-GAAP financial measure. For a further discussion of this measure, refer to Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures and Key Performance Measures on pages 16-18.

Year-to-date results

Investment banking fees increased reflecting:

- higher equity underwriting and advisory fees in CIB. The increase in equity underwriting fees was driven by a higher share of fees, primarily due to strong performance in the IPO market; the increase in advisory fees was driven by a higher number of large completed transactions,

partially offset by

- lower debt underwriting fees primarily driven by declines in industry-wide fee levels and a lower share in leveraged finance.

Principal transactions revenue increased primarily reflecting higher revenue in CIB driven by:

- strength across products in Equity Markets, primarily in derivatives and prime brokerage, reflecting strong client activity, and
- in Fixed Income Markets, higher revenue in Commodities compared to a challenging prior year, and strong performance in Currencies & Emerging Markets, largely offset by lower revenue in Credit.

The increase in CIB was partially offset by private equity losses reflecting markdowns on certain legacy private equity investments compared with gains in the prior year in Corporate.

Asset management, administration and commissions revenue increased reflecting:

- higher asset management fees in AWM and CCB driven by higher market levels and net long-term product inflows partially offset by fee compression in AWM
- higher brokerage commissions driven by higher volumes in CIB and AWM, and higher asset-based fees in CIB driven by net client inflows and higher market levels.

Investment securities losses increased due to sales related to the repositioning of the investment securities portfolio.

Mortgage fees and related income decreased driven by lower net production revenue reflecting lower production margins, as well as lower net servicing revenue reflecting lower servicing revenue on a lower level of third-party loans serviced, partially offset by higher MSR risk management results.

Card income increased driven by:

- lower new account origination costs, and
- higher merchant processing fees on higher volumes,

largely offset by

- lower net interchange income reflecting higher rewards costs and partner payments, largely offset by higher card sales volumes. The rewards costs included an adjustment to the credit card rewards liability of approximately $330 million in the second quarter of 2018, driven by an increase in redemption rate assumptions.

Other income increased reflecting:

- higher operating lease income from growth in auto operating lease volume in CCB
- fair value gains of $505 million recognized in the first quarter of 2018 related to the adoption of the new recognition and measurement accounting guidance for certain equity investments previously held at cost,

partially offset by

- the absence of a legal benefit of $645 million that was recorded in the prior year in Corporate related to a settlement with the FDIC receivership for Washington Mutual and with Deutsche Bank as trustee to certain Washington Mutual trusts.

Net interest income increased primarily due to the net impact of higher rates, which includes lower Markets net interest income in CIB, as well as loan and deposit growth. The Firm's average interest-earning assets were $2.2 trillion, up $37.9 billion from the prior year, and the net interest yield on these assets, on an FTE basis, was 2.49%, an increase of 15 basis points from the prior year. The net interest yield excluding CIB Markets was 3.21%, an increase of 40 basis points from the prior year.

Provision for credit losses

(in millions)	Three months ended September 30, 2018	2017	Change	Nine months ended September 30, 2018	2017	Change
Consumer, excluding credit card	**$ (242)**	$ 206	NM	**$ (152)**	$ 660	NM
Credit card	**1,223**	1,319	(7)%	**3,557**	3,699	(4)
Total consumer	**981**	1,525	(36)	**3,405**	4,359	(22)
Wholesale	**(33)**	(73)	55	**(82)**	(377)	78
Total provision for credit losses	**$ 948**	$ 1,452	(35)%	**$ 3,323**	$ 3,982	(17)%

Quarterly results

The **provision for credit losses** decreased as a result of:

- a decrease in the consumer provision in CCB due to
  - a $250 million reduction in the allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies,
  - a $150 million addition to the allowance for loan losses in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, compared to a $300 million addition in the prior year,
  - lower net charge-offs in the residential real estate portfolio, largely driven by a recovery of approximately $80 million from a loan sale, and
  - lower net charge-offs in the auto portfolio as the prior year included $49 million of incremental charge-offs recorded in accordance with regulatory guidance

  partially offset by
  - higher net charge-offs in the credit card portfolio due to seasoning of more recent vintages, as anticipated
- the decrease in the consumer provision was partially offset by a lower net benefit in the wholesale provision in the current period, which includes net recoveries predominantly related to a loan sale in CIB.

For a more detailed discussion of the credit portfolio and the allowance for credit losses, refer to the segment discussions of CCB on pages 21-25, CIB on pages 26-31, CB on pages 32-35, the Allowance for Credit Losses on pages 69-71 and Note 12.

Year-to-date results

The **provision for credit losses** decreased as a result of:

- a decrease in the consumer provision in CCB due to
  - a $150 million addition to the allowance for loan losses in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, compared to a $650 million addition in the prior year,
  - lower net charge-offs in the residential real estate portfolio, largely driven by recoveries from loan sales, and
  - a $250 million reduction in the allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies, compared to a $175 million reduction in the non credit-impaired portfolio in the prior year

  partially offset by
  - higher net charge-offs in the credit card portfolio due to seasoning of more recent vintages, as anticipated
  - the prior year included a $218 million write-down recorded in connection with the sale of the student loan portfolio
- the decrease in the consumer provision was partially offset by a lower net benefit in the wholesale provision with the current period net benefit primarily driven by loan sales and other activity related to a single name in the Oil & Gas portfolio, partially offset by other net portfolio activity. The prior year benefit was driven by a reduction in the allowance for credit losses in the Oil & Gas, Natural Gas Pipelines, and Metals and Mining portfolios.

Noninterest expense

(in millions)	Three months ended September 30, 2018	2017	Change	Nine months ended September 30, 2018	2017	Change
Compensation expense	**$ 8,108**	$ 7,697	5%	**$ 25,308**	$ 23,710	7%
Noncompensation expense:						
Occupancy	**1,014**	930	9	**2,883**	2,803	3
Technology, communications and equipment	**2,219**	1,972	13	**6,441**	5,677	13
Professional and outside services	**2,086**	1,955	7	**6,333**	5,646	12
Marketing	**798**	710	12	**2,396**	2,179	10
Other expense[(a)(b)]	**1,398**	1,306	7	**4,313**	4,605	(6)
Total noncompensation expense	**7,515**	6,873	9	**22,366**	20,910	7
Total noninterest expense	**$ 15,623**	$ 14,570	7%	**$ 47,674**	$ 44,620	7%

(a) Included Firmwide legal expense/(benefit) of $20 million and $(107) million for the three months ended September 30, 2018 and 2017, respectively, and $90 million and $172 million for the nine months ended September 30, 2018 and 2017.

(b) Included FDIC-related expense of $349 million and $353 million for the three months ended September 30, 2018 and 2017, respectively, and $1.1 billion for each of the nine months ended September 30, 2018 and 2017.

Quarterly results

Compensation expense increased driven by investments in headcount across the businesses, including bankers and advisors, as well as technology and other support staff; and higher revenue-related compensation expense.

Noncompensation expense increased as a result of:

- higher depreciation expense due to growth in auto operating lease volume in CCB
- higher legal expense; the prior year was a net benefit
- higher outside services expense primarily due to higher volume-related transaction costs in CIB and higher external fees on revenue growth in AWM
- higher investments in technology, and
- higher marketing expense in CCB.

For a discussion of legal expense, refer to Note 22.

Year-to-date results

Compensation expense increased driven by investments in headcount across the businesses, including bankers and advisors, as well as technology and other support staff, and higher revenue-related compensation expense largely in CIB.

Noncompensation expense increased as a result of:

- higher outside services expense primarily due to higher volume-related transaction costs in CIB and higher external fees on revenue growth in AWM
- higher depreciation expense due to growth in auto operating lease volume in CCB
- higher marketing expense in CCB
- a loss of $174 million recorded in other expense in Corporate on the liquidation of a legal entity, and
- higher investments in technology.

For additional information on the liquidation of a legal entity, refer to Note 17.

Income tax expense

	Three months ended September 30,			Nine months ended September 30,		
(in millions)	**2018**	2017	Change	**2018**	2017	Change
Income before income tax expense	**$ 10,689**	$ 9,556	12%	**$ 31,923**	$ 27,646	15%
Income tax expense	**2,309**	2,824	(18)	**6,515**	7,437	(12)
Effective tax rate	**21.6%**	29.6%		**20.4%**	26.9%	

Quarterly results

The **effective tax rate** decreased due to the TCJA, including the reduction in the U.S. federal statutory income tax rate as well as a $132 million net tax benefit resulting from changes in the estimates related to the remeasurement of certain deferred taxes and the deemed repatriation tax on non-U.S. earnings. These items that reduced the effective tax rate were partially offset by the impact of higher pre-tax income, and the change in mix of income and expense subject to U.S. federal, state and local taxes.

Year-to-date results

The **effective tax rate** decreased due to the TCJA, including the reduction in the U.S. federal statutory income tax rate as well as a $305 million net tax benefit recorded in the first nine months of 2018 resulting from changes in the estimates related to the remeasurement of certain deferred taxes and the deemed repatriation tax on non-U.S. earnings. These items that reduced the effective tax rate were partially offset by the impact of higher pre-tax income, and the change in mix of income and expense subject to U.S. federal, state and local taxes.

CONSOLIDATED BALANCE SHEETS AND CASH FLOWS ANALYSIS

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

Consolidated balance sheets analysis

The following is a discussion of the significant changes between September 30, 2018, and December 31, 2017.

Selected Consolidated balance sheets data

(in millions)	Sep 30, 2018	Dec 31, 2017	Change
Assets			
Cash and due from banks	**$ 23,225**	$ 25,898	(10)%
Deposits with banks	**395,872**	405,406	(2)
Federal funds sold and securities purchased under resale agreements	**217,632**	198,422	10
Securities borrowed	**122,434**	105,112	16
Trading assets:			
Debt and equity instruments	**359,765**	325,321	11
Derivative receivables	**60,062**	56,523	6
Investment securities	**231,398**	249,958	(7)
Loans	**954,318**	930,697	3
Allowance for loan losses	**(13,128)**	(13,604)	(3)
Loans, net of allowance for loan losses	**941,190**	917,093	3
Accrued interest and accounts receivable	**78,792**	67,729	16
Premises and equipment	**14,180**	14,159	–
Goodwill, MSRs and other intangible assets	**54,697**	54,392	1
Other assets	**115,936**	113,587	2
Total assets	**$ 2,615,183**	$ 2,533,600	3%

Cash and due from banks and deposits with banks decreased primarily as a result of net long-term debt maturities. The Firm's excess cash is largely placed with various central banks, predominantly Federal Reserve Banks.

Federal funds sold and securities purchased under resale agreements increased primarily due to higher client-driven market-making activities and higher demand for securities to cover short positions in CIB. For additional information on the Firm's Liquidity Risk Management, refer to pages 49–54.

Securities borrowed increased driven by higher demand for securities to cover short positions related to client-driven market-making activities in CIB.

Trading assets-debt and equity instruments increased predominantly as a result of client-driven market-making activities in CIB, primarily equity instruments in prime brokerage, and debt instruments in Fixed Income Markets, driven by higher client demand. For additional information, refer to Notes 2 and 4.

Investment securities decreased primarily reflecting net sales, paydowns and maturities of U.S. government agency mortgage-backed securities ("MBS"), commercial MBS, and obligations of U.S. states and municipalities. For additional information on Investment securities, refer to Corporate segment results on pages 40–41, Investment Portfolio Risk Management on page 72, and Notes 2 and 9.

Loans increased reflecting:

- higher wholesale loans across all lines of business, predominantly driven by CIB, including loans to financial institution and commercial and industrial clients, and in AWM due to an increase in loans to Wealth Management clients globally, and
- higher consumer loans driven by retention of high-quality prime mortgages in CCB and AWM, predominantly offset by lower home equity loans, run-off of PCI loans, lower auto loans, and mortgage loan sales.

The **allowance for loan losses** decreased driven by:

- a $250 million reduction in the CCB allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies, as well as a $151 million reduction in the allowance for write-offs of PCI loans partially due to loan sales. These reductions were partially offset by a $150 million addition in the credit card portfolio, due to loan growth and higher loss rates, as anticipated.
- a reduction in the wholesale allowance primarily driven by loan sales related to a single name in the Oil & Gas portfolio in the first quarter of 2018 and other net portfolio activity.

For a detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 55-72, and Notes 2, 3, 11 and 12.

Accrued interest and accounts receivable increased primarily reflecting higher client receivables related to client-driven activities in CIB.

Other assets increased reflecting higher auto operating lease assets from growth in business volume in CCB.

For information on Goodwill and MSRs, refer to Note 14.

Selected Consolidated balance sheets data (continued)

(in millions)	Sep 30, 2018	Dec 31, 2017	Change
Liabilities			
Deposits	**$ 1,458,762**	$ 1,443,982	1%
Federal funds purchased and securities loaned or sold under repurchase agreements	**181,608**	158,916	14
Short-term borrowings	**64,635**	51,802	25
Trading liabilities:			
Debt and equity instruments	**109,457**	85,886	27
Derivative payables	**41,693**	37,777	10
Accounts payable and other liabilities	**209,707**	189,383	11
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**20,241**	26,081	(22)
Long-term debt	**270,124**	284,080	(5)
Total liabilities	**2,356,227**	2,277,907	3
Stockholders' equity	**258,956**	255,693	1
Total liabilities and stockholders' equity	**$ 2,615,183**	$ 2,533,600	3%

Deposits increased in CIB and CCB, largely offset by decreases in AWM and CB.

- The increase in CIB was predominantly driven by growth in client activity in Treasury Services, and in CCB driven by the continuation of growth from new customers, partially offset by balance migration into investment-related products.
- The decrease in AWM was driven by balance migration predominantly into the Firm's investment-related products, and in CB primarily driven by the impact of seasonality and migration of non-operating deposits into higher-yielding investment products.

For more information, refer to the Liquidity Risk Management discussion on pages 49–54; and Notes 2 and 15.

Federal funds purchased and securities loaned or sold under repurchase agreements increased reflecting higher secured financing of trading assets-debt and equity instruments and client-driven market-making activities in CIB.

Short-term borrowings increased due to the net issuance of commercial paper and short-term advances from Federal Home Loan Banks ("FHLBs"). For additional information, refer to Liquidity Risk Management on pages 49–54.

Trading liabilities–debt and equity instruments increased predominantly as a result of client-driven market-making activities in CIB, primarily debt instruments in Fixed Income Markets, and equity instruments in prime brokerage. For additional information, refer to Note 2 .

Trading liabilities–derivative payables increased predominantly as a result of client-driven market-making activities, which increased equity and commodity derivative payables. For additional information, refer to Derivative contracts on pages 67–68, and Notes 2 and 4.

Accounts payable and other liabilities increased partly as a result of higher client payables related to prime brokerage activities in CIB.

Beneficial interests issued by consolidated VIEs decreased due to net maturities of credit card securitizations. For further information on Firm-sponsored VIEs and loan securitization trusts, refer to Off-Balance Sheet Arrangements on page 15 and Notes 13 and 20.

Long-term debt decreased primarily driven by lower FHLB advances, partially offset by net issuance of structured notes in CIB. For additional information on the Firm's long-term debt activities, refer to Liquidity Risk Management on pages 49–54.

For information on changes in stockholders' equity, refer to page 89, and on the Firm's capital actions, refer to Capital actions on pages 47-48.

Consolidated cash flows analysis

The following is a discussion of cash flow activities during the nine months ended September 30, 2018 and 2017.

(in millions)	Nine months ended September 30, 2018	2017
Net cash provided by/(used in)		
Operating activities	**$ 13,765**	$ (23,381)
Investing activities	**(39,782)**	47,706
Financing activities	**16,319**	36,405
Effect of exchange rate changes on cash	**(2,509)**	7,272
Net increase/(decrease) in cash and due from banks and deposits with banks	**$ (12,207)**	$ 68,002

Operating activities

- In 2018, cash provided primarily reflected net income, increased trading liabilities and accounts payable and other liabilities, partially offset by increases in trading assets and securities borrowed.
- In 2017, cash used primarily reflected increases in trading assets, and decreases in trading liabilities, and accounts payable and other liabilities, partially offset by net income and a decrease in other assets.

Investing activities

- In 2018, cash used reflected higher net loan originations and an increase in securities purchased under resale agreements, partially offset by lower investment securities.
- In 2017, cash provided reflected a decrease in securities purchased under resale agreements and lower investment securities, partially offset by higher net loan originations.

Financing activities

- In 2018, cash provided reflected higher securities loaned or sold under repurchase agreements, deposits and short-term borrowings, partially offset by a decrease in long-term borrowings.
- In 2017, cash provided reflected higher deposits and short-term borrowings, partially offset by a decrease in long-term borrowings.
- Additionally, for both periods, cash was used for repurchases of common stock and dividends on common and preferred stock.

For a further discussion of the activities affecting the Firm's cash flows, refer to Consolidated Balance Sheets Analysis on pages 12–14, Capital Risk Management on pages 44-48, and Liquidity Risk Management on pages 49–54 of this Form 10-Q, and pages 92–97 of JPMorgan Chase's 2017 Annual Report.

OFF-BALANCE SHEET ARRANGEMENTS

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

The Firm is involved with 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 deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions 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. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct.

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. In addition, refer to Note 1 for 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 13	148-153
Off-balance sheet lending-related financial instruments, guarantees, and other commitments	Refer to Note 20	162-165

Non-GAAP financial measures

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 86-90. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year-to-year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews Firmwide results, including the overhead ratio, on a "managed" basis; these Firmwide managed basis results are non-GAAP financial measures. The Firm also reviews the results of the lines of business on a managed basis. The Firm's definition of managed basis starts, in each case, with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. These financial measures allow management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the Firm and business-segment level, because these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the Firm or of the particular business segment, as the case may be, and, therefore, facilitate a comparison of the Firm or the business segment with the performance of its relevant competitors. For additional information on these non-GAAP measures, refer to Business Segment Results on pages 19-41.

Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

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

	Three months ended September 30,					
	2018			2017		
(in millions, except ratios)	Reported results	Fully taxable-equivalent adjustments[a][b]	Managed basis	Reported results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 1,160**	**$ 408**	**$ 1,568**	$ 952	$ 555	$ 1,507
Total noninterest revenue	**13,352**	**408**	**13,760**	12,780	555	13,335
Net interest income	**13,908**	**154**	**14,062**	12,798	319	13,117
Total net revenue	**27,260**	**562**	**27,822**	25,578	874	26,452
Pre-provision profit	**11,637**	**562**	**12,199**	11,008	874	11,882
Income before income tax expense	**10,689**	**562**	**11,251**	9,556	874	10,430
Income tax expense	**$ 2,309**	**$ 562**	**$ 2,871**	$ 2,824	$ 874	$ 3,698
Overhead ratio	**57%**	**NM**	**56%**	57%	NM	55%

	Nine months ended September 30,					
	2018			2017		
(in millions, except ratios)	Reported results	Fully taxable-equivalent adjustments[a][b]	Managed basis	Reported results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 4,041**	**$ 1,337**	**$ 5,378**	$ 3,197	$ 1,733	$ 4,930
Total noninterest revenue	**42,215**	**1,337**	**43,552**	39,178	1,733	40,911
Net interest income	**40,705**	**473**	**41,178**	37,070	987	38,057
Total net revenue	**82,920**	**1,810**	**84,730**	76,248	2,720	78,968
Pre-provision profit	**35,246**	**1,810**	**37,056**	31,628	2,720	34,348
Income before income tax expense	**31,923**	**1,810**	**33,733**	27,646	2,720	30,366
Income tax expense	**$ 6,515**	**$ 1,810**	**$ 8,325**	$ 7,437	$ 2,720	$ 10,157
Overhead ratio	**57%**	**NM**	**56%**	59%	NM	57%

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

(a) Predominantly recognized in CIB and CB business segments and Corporate.
(b) The decrease in fully taxable-equivalent adjustments in the three and nine months ended September 30, 2018, reflects the impact of the TCJA.

Net interest income and net yield excluding CIB's Markets businesses

In addition to reviewing net interest income and the net interest yield on a managed basis, management also reviews these metrics excluding CIB's Markets businesses to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. The resulting metrics are referred to as non-markets related net interest income and net yield. CIB's Markets businesses are Fixed Income Markets and Equity Markets. Management believes that disclosure of non-markets related net interest income and net yield provides investors and analysts with other measures by which to analyze the non-markets-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on lending, investing and deposit-raising activities.

The data presented below are non-GAAP financial measures due to the exclusion of markets-related net interest income arising from CIB.

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except rates)	**2018**	2017	Change	**2018**	2017	Change
Net interest income – managed basis[(a)(b)]	**$ 14,062**	$ 13,117	7%	**$ 41,178**	$ 38,057	8%
Less: CIB Markets net interest income[(c)]	**704**	1,070	(34)	**2,488**	3,509	(29)
Net interest income excluding CIB Markets[(a)]	**$ 13,358**	$ 12,047	11	**$ 38,690**	$ 34,548	12
Average interest-earning assets	**$ 2,220,258**	$ 2,194,174	1	**$ 2,215,377**	$ 2,177,520	2
Less: Average CIB Markets interest-earning assets[(c)]	**613,737**	544,867	13	**605,653**	535,044	13
Average interest-earning assets excluding CIB Markets	**$ 1,606,521**	$ 1,649,307	(3)%	**$ 1,609,724**	$ 1,642,476	(2)%
Net interest yield on average interest-earning assets – managed basis	**2.51%**	2.37%		**2.49%**	2.34%	
Net interest yield on average CIB Markets interest-earning assets[(c)]	**0.46**	0.78		**0.55**	0.88	
Net interest yield on average interest-earning assets excluding CIB Markets	**3.30%**	2.90%		**3.21%**	2.81%	

(a) Interest includes the effect of related hedges. Taxable-equivalent amounts are used where applicable.
(b) For a reconciliation of net interest income on a reported and managed basis, refer to reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 16.
(c) For further information on CIB's Markets businesses, refer to page 30.

The Firm also reviews adjusted expense, which is noninterest expense excluding Firmwide legal expense and is therefore a non-GAAP financial measure. Additionally, certain credit metrics and ratios disclosed by the Firm exclude PCI loans, and are therefore non-GAAP measures. Management believes these measures help investors understand the effect of these items on reported results and provide an alternate presentation of the Firm's performance. For additional information on credit metrics and ratios excluding PCI loans, refer to Credit and Investment Risk Management on pages 55-72.

Tangible common equity, ROTCE and TBVPS

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's net income applicable to common equity as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are utilized by the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

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

	Period-end		Average			
			Three months ended September 30,		Nine months ended September 30,	
(in millions, except per share and ratio data)	**Sep 30, 2018**	Dec 31, 2017	**2018**	2017	**2018**	2017
Common stockholders' equity	**$ 231,192**	$ 229,625	**$ 230,439**	$ 231,861	**$ 228,995**	$ 229,937
Less: Goodwill	**47,483**	47,507	**47,490**	47,309	**47,496**	47,297
Less: Other intangible assets	**781**	855	**795**	818	**820**	836
Add: Certain Deferred tax liabilities[(a)(b)]	**2,239**	2,204	**2,233**	3,262	**2,221**	3,243
Tangible common equity	**$ 185,167**	$ 183,467	**$ 184,387**	$ 186,996	**$ 182,900**	$ 185,047
Return on tangible common equity	**NA**	NA	**17%**	13%	**18%**	14%
Tangible book value per share	**$ 55.68**	$ 53.56	**NA**	NA	**NA**	NA

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.
(b) Amounts presented for December 31, 2017 and later periods include the effect from the revaluation of the Firm's net deferred tax liability as a result of the TCJA.

Key performance measures

The Firm considers the following to be key regulatory capital measures:

- Capital, risk-weighted assets ("RWA"), and capital and leverage ratios presented under Basel III Standardized and Advanced Fully Phased-In rules, and
- SLR calculated under Basel III Advanced Fully Phased-In rules.

The Firm, as well as banking regulators, investors and analysts use these measures to assess the Firm's regulatory capital position and to compare the Firm's regulatory capital to that of other financial services companies.

For additional information on these measures, refer to Capital Risk Management on pages 44-48.

Core loans are also considered a key performance measure. Core loans represent loans considered central to the Firm's ongoing businesses; and exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit. Core loans is a measure utilized by the Firm and its investors and analysts in assessing actual growth in the loan portfolio.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business 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 management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, refer to Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures and Key Performance Measures on pages 16-18.

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. For further information about line of business capital, refer to Line of business equity on page 47. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Business segment capital allocation

The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. For additional information on business segment capital allocation, refer to Line of business equity on pages 88-89 of JPMorgan Chase's 2017 Annual Report.

For a further discussion of those methodologies, refer to Business Segment Results – Description of business segment reporting methodology on pages 55–56 of JPMorgan Chase's 2017 Annual Report.

Segment results – managed basis

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

Net income in 2018 for the business segments reflects the favorable impact of the reduction in the U.S. federal statutory income tax rate as a result of the TCJA.

The following tables summarize the business segment results for the periods indicated.

Three months ended September 30,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2018**	2017	Change	**2018**	2017	Change	**2018**	2017	Change
Consumer & Community Banking	**$ 13,290**	$ 12,033	10%	**$ 6,982**	$ 6,495	7%	**$ 6,308**	$ 5,538	14%
Corporate & Investment Bank	**8,805**	8,615	2	**5,175**	4,793	8	**3,630**	3,822	(5)
Commercial Banking	**2,271**	2,146	6	**853**	800	7	**1,418**	1,346	5
Asset & Wealth Management	**3,559**	3,472	3	**2,585**	2,408	7	**974**	1,064	(8)
Corporate	**(103)**	186	NM	**28**	74	(62)	**(131)**	112	NM
Total	**$ 27,822**	$ 26,452	5%	**$ 15,623**	$ 14,570	7%	**$ 12,199**	$ 11,882	3%

Three months ended September 30,	Provision for credit losses			Net income/(loss)			Return on equity	
(in millions, except ratios)	**2018**	2017	Change	**2018**	2017	Change	**2018**	2017
Consumer & Community Banking	**$ 980**	$ 1,517	(35)%	**$ 4,086**	$ 2,553	60%	**31%**	19%
Corporate & Investment Bank	**(42)**	(26)	(62)	**2,626**	2,546	3	**14**	13
Commercial Banking	**(15)**	(47)	68	**1,089**	881	24	**21**	17
Asset & Wealth Management	**23**	8	188	**724**	674	7	**31**	29
Corporate	**2**	–	NM	**(145)**	78	NM	**NM**	NM
Total	**$ 948**	$ 1,452	(35)%	**$ 8,380**	$ 6,732	24%	**14%**	11%

Nine months ended September 30,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2018**	2017	Change	**2018**	2017	Change	**2018**	2017	Change
Consumer & Community Banking	**$ 38,384**	$ 34,415	12%	**$ 20,770**	$ 19,390	7%	**$ 17,614**	$ 15,025	17%
Corporate & Investment Bank	**29,211**	27,139	8	**16,237**	14,854	9	**12,974**	12,285	6
Commercial Banking	**6,753**	6,252	8	**2,541**	2,415	5	**4,212**	3,837	10
Asset & Wealth Management	**10,637**	10,197	4	**7,732**	7,606	2	**2,905**	2,591	12
Corporate	**(255)**	965	NM	**394**	355	11	**(649)**	610	NM
Total	**$ 84,730**	$ 78,968	7%	**$ 47,674**	$ 44,620	7%	**$ 37,056**	$ 34,348	8%

Nine months ended September 30,	Provision for credit losses			Net income/(loss)			Return on equity	
(in millions, except ratios)	**2018**	2017	Change	**2018**	2017	Change	**2018**	2017
Consumer & Community Banking	**$ 3,405**	$ 4,341	(22)%	**$ 10,824**	$ 6,764	60%	**27%**	17%
Corporate & Investment Bank	**(142)**	(175)	19	**9,798**	8,497	15	**18**	15
Commercial Banking	**23**	(214)	NM	**3,201**	2,582	24	**20**	16
Asset & Wealth Management	**40**	30	33	**2,249**	1,683	34	**32**	24
Corporate	**(3)**	–	NM	**(664)**	683	NM	**NM**	NM
Total	**$ 3,323**	$ 3,982	(17)%	**$ 25,408**	$ 20,209	26%	**14%**	11%

The following sections provide a comparative discussion of business segment results as of or for the three and nine months ended September 30, 2018 versus the corresponding period in the prior year, unless otherwise specified.

CONSUMER & COMMUNITY BANKING

For a discussion of the business profile of CCB, refer to pages 57-61 of JPMorgan Chase's 2017 Annual Report and Line of Business Metrics on page 180.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except ratios)	**2018**	2017	Change	**2018**	2017	Change
Revenue						
Lending- and deposit-related fees	**$ 936**	$ 885	6%	**$ 2,668**	$ 2,547	5%
Asset management, administration and commissions	**626**	543	15	**1,792**	1,644	9
Mortgage fees and related income	**260**	428	(39)	**1,049**	1,235	(15)
Card income	**1,219**	1,141	7	**3,299**	3,019	9
All other income	**1,135**	901	26	**3,255**	2,454	33
Noninterest revenue	**4,176**	3,898	7	**12,063**	10,899	11
Net interest income	**9,114**	8,135	12	**26,321**	23,516	12
Total net revenue	**13,290**	12,033	10	**38,384**	34,415	12
Provision for credit losses	**980**	1,517	(35)	**3,405**	4,341	(22)
Noninterest expense						
Compensation expense[(a)]	**2,635**	2,548	3	**7,916**	7,578	4
Noncompensation expense[(a)(b)]	**4,347**	3,947	10	**12,854**	11,812	9
Total noninterest expense	**6,982**	6,495	7	**20,770**	19,390	7
Income before income tax expense	**5,328**	4,021	33	**14,209**	10,684	33
Income tax expense	**1,242**	1,468	(15)	**3,385**	3,920	(14)
Net income	**$ 4,086**	$ 2,553	60	**$ 10,824**	$ 6,764	60
Revenue by line of business						
Consumer & Business Banking	**$ 6,385**	$ 5,408	18	**$ 18,238**	$ 15,547	17
Home Lending	**1,306**	1,558	(16)	**4,162**	4,513	(8)
Card, Merchant Services & Auto	**5,599**	5,067	10	**15,984**	14,355	11
Mortgage fees and related income details:						
Net production revenue	**108**	158	(32)	**296**	451	(34)
Net mortgage servicing revenue[(c)]	**152**	270	(44)	**753**	784	(4)
Mortgage fees and related income	**$ 260**	$ 428	(39)%	**$ 1,049**	$ 1,235	(15)%
Financial ratios						
Return on equity	**31%**	19%		**27%**	17%	
Overhead ratio	**53**	54		**54**	56	

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures.

(a) Effective in the first quarter of 2018, certain operations staff were transferred from CCB to CB. The prior period amounts have been revised to conform with the current period presentation. For a further discussion of this transfer, refer to CB segment results on page 32.

(b) Included operating lease depreciation expense of $862 million and $688 million for the three months ended September 30, 2018 and 2017, respectively, and $2.5 billion and $1.9 billion for nine months ended September 30, 2018 and 2017, respectively.

(c) Included MSR risk management results of $(88) million and $(23) million for the three months ended September 30, 2018 and 2017, respectively, and $(94) million and $(132) million for nine months ended September 30, 2018 and 2017, respectively.

Quarterly results

Net income was $4.1 billion, an increase of 60%.

Net revenue was $13.3 billion, an increase of 10%.

Net interest income was $9.1 billion, up 12%, driven by:

- higher deposit margins and growth in deposit balances in CBB, as well as margin expansion and higher loan balances in Card,

partially offset by

- loan spread compression from higher rates in Home Lending and Auto.

Noninterest revenue was $4.2 billion, up 7%, driven by:

- higher auto lease volume,
- higher card income due to
  - lower new account origination costs, and
  - higher merchant processing fees on higher volumes

  largely offset by
  - lower net interchange reflecting higher rewards costs and partner payments, largely offset by higher card sales volumes
- higher asset management fees reflecting an increase in client investment assets,

partially offset by

- lower net mortgage servicing revenue reflecting lower MSR risk management results and lower mortgage servicing revenue on a lower level of third-party loans serviced, as well as lower net production revenue reflecting lower mortgage production margins and volumes.

Refer to Note 14 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

Noninterest expense was $7.0 billion, up 7%, driven by:

- investments in technology and marketing, and
- higher auto lease depreciation.

The provision for credit losses was $980 million, a decrease of 35% from the prior year, reflecting:

- a $250 million reduction in the allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies,
- a $150 million addition to the allowance for loan losses in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, compared to a $300 million addition in the prior year,
- lower net charge-offs in the residential real estate portfolio, largely driven by a recovery of approximately $80 million from a loan sale, and
- lower net charge-offs in the auto portfolio as the prior year included $49 million of incremental charge-offs recorded in accordance with regulatory guidance

partially offset by

- higher net charge-offs in the credit card portfolio due to seasoning of more recent vintages, as anticipated.

Year-to-date results

Net income was $10.8 billion, an increase of 60%.

Net revenue was $38.4 billion, an increase of 12%.

Net interest income was $26.3 billion, up 12%, driven by:

- higher deposit margins and growth in deposit balances in CBB, as well as margin expansion and higher loan balances in Card,

partially offset by

- loan spread compression from higher rates in Home Lending and Auto.

Noninterest revenue was $12.1 billion, up 11%, driven by:

- higher auto lease volume,
- higher card income due to
  - lower new account origination costs, and
  - higher merchant processing fees on higher volumes

  largely offset by
  - lower net interchange reflecting higher rewards costs and partner payments, largely offset by higher card sales volumes. The rewards costs included an adjustment to the credit card rewards liability of approximately $330 million in the second quarter of 2018, driven by an increase in redemption rate assumptions
- higher deposit-related fees, as well as higher asset management fees reflecting an increase in client investment assets,

partially offset by

- lower net production revenue reflecting lower mortgage production margins.

Noninterest expense was $20.8 billion, up 7%, driven by:

- investments in technology and marketing, and
- higher auto lease depreciation.

The provision for credit losses was $3.4 billion, a decrease of 22% from the prior year, reflecting:

- a $150 million addition to the allowance for loan losses in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, compared to a $650 million addition in the prior year,
- lower net charge-offs in the residential real estate portfolio, largely driven by recoveries from loan sales, and
- a $250 million reduction in the allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies, compared to a $175 million reduction in the non credit-impaired portfolio in the prior year

partially offset by

- higher net charge-offs in the credit card portfolio due to seasoning of more recent vintages, as anticipated
- the prior year included a $218 million write-down recorded in connection with the sale of the student loan portfolio.

Selected metrics

(in millions, except headcount)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Selected balance sheet data (period-end)						
Total assets	**$ 560,432**	$ 537,459	4%	**$ 560,432**	$ 537,459	4%
Loans:						
Consumer & Business Banking	**26,451**	25,275	5	**26,451**	25,275	5
Home equity	**37,461**	44,542	(16)	**37,461**	44,542	(16)
Residential mortgage	**205,389**	195,134	5	**205,389**	195,134	5
Home Lending	**242,850**	239,676	1	**242,850**	239,676	1
Card	**147,881**	141,313	5	**147,881**	141,313	5
Auto	**63,619**	65,102	(2)	**63,619**	65,102	(2)
Student	**–**	47	NM	**–**	47	NM
Total loans	**480,801**	471,413	2	**480,801**	471,413	2
Core loans	**425,917**	401,648	6	**425,917**	401,648	6
Deposits	**677,260**	653,460	4	**677,260**	653,460	4
Equity	**51,000**	51,000	–	**51,000**	51,000	–
Selected balance sheet data (average)						
Total assets	**$ 551,080**	$ 531,959	4	**$ 544,931**	$ 530,884	3
Loans:						
Consumer & Business Banking	**26,351**	25,166	5	**26,104**	24,753	5
Home equity	**38,211**	45,424	(16)	**39,951**	47,333	(16)
Residential mortgage	**204,689**	192,805	6	**201,665**	187,954	7
Home Lending	**242,900**	238,229	2	**241,616**	235,287	3
Card	**146,272**	141,172	4	**143,986**	138,852	4
Auto	**64,060**	65,175	(2)	**65,096**	65,321	–
Student	**–**	58	NM	**–**	3,847	NM
Total loans	**479,583**	469,800	2	**476,802**	468,060	2
Core loans	**422,582**	398,319	6	**415,662**	389,103	7
Deposits	**674,211**	645,732	4	**669,244**	636,257	5
Equity	**51,000**	51,000	–	**51,000**	51,000	–
Headcount[(a)(b)]	**129,891**	134,151	(3)%	**129,891**	134,151	(3)%

(a) Effective in the first quarter of 2018, certain operations staff were transferred from CCB to CB. The prior period amount has been revised to conform with the current period presentation. For further discussion of this transfer, refer to CB segment results on page 32.

(b) During the third quarter of 2018, approximately 1,200 employees transferred from CCB to CIB as part of the reorganization of the Commercial Card business.

Selected metrics

(in millions, except ratio data)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Credit data and quality statistics						
Nonaccrual loans[a][b]	**$ 3,520**	$ 4,068	(13)%	**$ 3,520**	$ 4,068	(13)%
Net charge-offs/(recoveries)[c]						
Consumer & Business Banking	**68**	71	(4)	**171**	184	(7)
Home equity	**(12)**	13	NM	**(3)**	67	NM
Residential mortgage	**(105)**	(2)	NM	**(252)**	(3)	NM
Home Lending	**(117)**	11	NM	**(255)**	64	NM
Card	**1,073**	1,019	5	**3,407**	3,049	12
Auto	**56**	116	(52)	**182**	245	(26)
Student	**–**	–	–	**–**	498 [h]	NM
Total net charge-offs/(recoveries)	**$ 1,080**	$ 1,217 [g]	(11)	**$ 3,505**	$ 4,040 [h]	(13)
Net charge-off/(recovery) rate[c]						
Consumer & Business Banking	**1.02%**	1.12%		**0.88%**	0.99%	
Home equity[d]	**(0.17)**	0.15		**(0.01)**	0.25	
Residential mortgage[d]	**(0.22)**	–		**(0.18)**	–	
Home Lending[d]	**(0.21)**	0.02		**(0.16)**	0.04	
Card	**2.91**	2.87		**3.16**	2.94	
Auto	**0.35**	0.71		**0.37**	0.50	
Student	**–**	–		**–**	NM	
Total net charge-off/(recovery) rate[d]	**0.95**	1.10 [g]		**1.05**	1.25 [h]	
30+ day delinquency rate						
Home Lending[e][f]	**0.81%**	1.03%		**0.81%**	1.03%	
Card	**1.75**	1.76		**1.75**	1.76	
Auto	**0.82**	0.93		**0.82**	0.93	
90+ day delinquency rate – Card	**0.85**	0.86		**0.85**	0.86	
Allowance for loan losses						
Consumer & Business Banking	**$ 796**	$ 796	–	**$ 796**	$ 796	–
Home Lending, excluding PCI loans	**1,003**	1,153	(13)	**1,003**	1,153	(13)
Home Lending – PCI loans[c]	**1,824**	2,245	(19)	**1,824**	2,245	(19)
Card	**5,034**	4,684	7	**5,034**	4,684	7
Auto	**464**	499	(7)	**464**	499	(7)
Total allowance for loan losses[c]	**$ 9,121**	$ 9,377	(3)%	**$ 9,121**	$ 9,377	(3)%

(a) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.
(b) At September 30, 2018 and 2017, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $2.9 billion and $4.0 billion, respectively. These amounts have been excluded based upon the government guarantee.
(c) Net charge-offs/(recoveries) and the net charge-off/(recovery) rates for the three months ended September 30, 2018 and 2017, excluded $58 million and $20 million, respectively, and for nine months ended September 30, 2018 and 2017, excluded $151 million and $66 million, respectively, of write-offs in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, refer to Summary of changes in the allowance for credit losses on page 70.
(d) Excludes the impact of PCI loans. For the three months ended September 30, 2018 and 2017, the net charge-off/(recovery) rates including the impact of PCI loans were as follows: (1) home equity of (0.12)% and 0.11%, respectively; (2) residential mortgage of (0.20)% and -%, respectively; (3) Home Lending of (0.19)% and 0.02%, respectively; and (4) total CCB of 0.89% and 1.03%, respectively. For the nine months ended September 30, 2018 and 2017, the net charge-off/(recovery) rates including the impact of PCI loans were as follows: (1) home equity of (0.01)% and 0.19%, respectively; (2) residential mortgage of (0.17)% and -%, respectively; (3) Home Lending of (0.14)% and 0.04%, respectively; and (4) total CCB of 0.98% and 1.16%, respectively.
(e) At September 30, 2018 and 2017, excluded mortgage loans insured by U.S. government agencies of $4.5 billion and $5.9 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.
(f) Excludes PCI loans. The 30+ day delinquency rate for PCI loans was 9.39% and 9.30% at September 30, 2018 and 2017, respectively.
(g) Net charge-offs and net charge-off rates for the three months ended September 30, 2017 included $63 million of incremental charge-offs recorded in accordance with regulatory guidance regarding the timing of loss recognition for certain auto and residential real estate loans in bankruptcy and auto loans where assets were acquired in loan satisfaction.
(h) Excluding net charge-offs of $467 million related to the student loan portfolio sale, the total net charge-off rate for the nine months ended September 30, 2017 would have been 1.10%.

Selected metrics

(in billions, except ratios and where otherwise noted)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Business Metrics						
Number of branches	**5,066**	5,174	(2)%	**5,066**	5,174	(2)%
Active digital customers (in thousands)[a]	**48,664**	46,349	5	**48,664**	46,349	5
Active mobile customers (in thousands)[b]	**32,538**	29,273	11	**32,538**	29,273	11
Debit and credit card sales volume	**$ 259.0**	$ 231.1	12	**$ 746.4**	$ 671.8	11
Consumer & Business Banking						
Average deposits	**$ 659.5**	$ 630.4	5	**$ 655.3**	$ 621.7	5
Deposit margin	**2.43%**	2.02%		**2.33%**	1.95%	
Business banking origination volume	**$ 1.6**	$ 1.7	(2)	**$ 5.2**	$ 5.6	(6)
Client investment assets	**298.4**	262.5	14	**298.4**	262.5	14
Home Lending						
Mortgage origination volume by channel						
Retail	**$ 10.6**	$ 10.6	–	**$ 29.3**	$ 29.3	–
Correspondent	**11.9**	16.3	(27)	**32.9**	43.9	(25)
Total mortgage origination volume[c]	**$ 22.5**	$ 26.9	(16)	**$ 62.2**	$ 73.2	(15)
Total loans serviced (period-end)	**$ 798.6**	$ 821.6	(3)	**$ 798.6**	$ 821.6	(3)
Third-party mortgage loans serviced (period-end)	**526.5**	556.9	(5)	**526.5**	556.9	(5)
MSR carrying value (period-end)	**6.4**	5.7	12	**6.4**	5.7	12
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**1.22%**	1.02%		**1.22%**	1.02%	
MSR revenue multiple[d]	**3.49x**	2.91x		**3.49x**	2.91x	
Card, excluding Commercial Card						
Credit card sales volume	**$ 176.0**	$ 157.7	12	**$ 507.1**	$ 454.2	12
New accounts opened (in millions)	**1.9**	1.9	–	**5.8**	6.5	(11)
Card Services						
Net revenue rate	**11.50%**	10.95%		**11.17%**	10.55%	
Merchant Services						
Merchant processing volume	**$ 343.8**	$ 301.6	14	**$ 990.9**	$ 870.3	14
Auto						
Loan and lease origination volume	**$ 8.1**	$ 8.8	(8)	**$ 24.8**	$ 25.1	(1)
Average auto operating lease assets	**19.2**	15.6	23%	**18.4**	14.7	25%

(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 $24.5 billion and $29.2 billion for the three months ended September 30, 2018 and 2017, respectively, and $68.2 billion and $81.0 billion for the nine months ended September 30, 2018 and 2017, 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).

CORPORATE & INVESTMENT BANK

For a discussion of the business profile of CIB, refer to pages 62–66 of JPMorgan Chase's 2017 Annual Report and Line of Business Metrics on page 180.

Effective January 1, 2018, the Firm adopted several new accounting standards; the guidance which had the most significant impact on the CIB segment results was revenue recognition, and recognition and measurement of financial assets. The revenue recognition guidance was applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except ratios)	**2018**	2017	Change	**2018**	2017	Change
Revenue						
Investment banking fees	**$ 1,823**	$ 1,844	(1)%	**$ 5,658**	$ 5,558	2%
Principal transactions	**3,091**	2,673	16	**10,786**	9,108	18
Lending- and deposit-related fees	**373**	374	–	**1,136**	1,149	(1)
Asset management, administration and commissions	**1,130**	1,041	9	**3,416**	3,161	8
All other income	**88**	187	(53)	**958**	622	54
Noninterest revenue	**6,505**	6,119	6	**21,954**	19,598	12
Net interest income	**2,300**	2,496	(8)	**7,257**	7,541	(4)
Total net revenue[a]	**8,805**	8,615	2	**29,211**	27,139	8
Provision for credit losses	**(42)**	(26)	(62)	**(142)**	(175)	19
Noninterest expense						
Compensation expense	**2,402**	2,284	5	**8,158**	7,534	8
Noncompensation expense	**2,773**	2,509	11	**8,079**	7,320	10
Total noninterest expense	**5,175**	4,793	8	**16,237**	14,854	9
Income before income tax expense	**3,672**	3,848	(5)	**13,116**	12,460	5
Income tax expense	**1,046**	1,302	(20)	**3,318**	3,963	(16)
Net income	**$ 2,626**	$ 2,546	3%	**$ 9,798**	$ 8,497	15%
Financial ratios						
Return on equity	**14%**	13%		**18%**	15%	
Overhead ratio	**59**	56		**56**	55	
Compensation expense as percentage of total net revenue	**27**	27		**28**	28	

(a) Included 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 $354 million and $505 million for the three months ended September 30, 2018 and 2017, respectively, and $1.2 billion and $1.6 billion for the nine months ended September 30, 2018 and 2017, respectively.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions)	**2018**	2017	Change	**2018**	2017	Change
Revenue by business						
Investment Banking	**$ 1,731**	$ 1,730	–%	**$ 5,267**	$ 5,175	2%
Treasury Services	**1,183**	1,058	12	**3,480**	3,094	12
Lending	**331**	331	–	**954**	1,093	(13)
Total Banking	**3,245**	3,119	4	**9,701**	9,362	4
Fixed Income Markets	**2,844**	3,164	(10)	**10,850**	10,595	2
Equity Markets	**1,595**	1,363	17	**5,571**	4,555	22
Securities Services	**1,057**	1,007	5	**3,219**	2,905	11
Credit Adjustments & Other[a]	**64**	(38)	NM	**(130)**	(278)	53
Total Markets & Investor Services	**5,560**	5,496	1	**19,510**	17,777	10
Total net revenue	**$ 8,805**	$ 8,615	2%	**$ 29,211**	$ 27,139	8%

(a) Consists primarily of credit valuation adjustments ("CVA") managed centrally within CIB and funding valuation adjustments ("FVA") on derivatives. Results 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 $2.6 billion, up 3%.

Net revenue was $8.8 billion, up 2%.

Banking revenue was $3.2 billion, up 4%. Investment Banking revenue was $1.7 billion, flat compared to a strong prior year, driven by higher equity underwriting fees offset by lower debt underwriting and advisory fees. The Firm maintained its #1 ranking for Global Investment Banking fees with overall share gains, according to Dealogic. Equity underwriting fees were $420 million, up 40%, driven by a higher share of fees including a strong performance in the IPO market. Advisory fees were $581 million, down 6% compared to a strong prior year. Debt underwriting fees were $822 million, down 11% compared to a strong prior year, driven by declines in industry-wide fee levels. Treasury Services revenue was $1.2 billion, up 12%, predominantly driven by the impact of higher interest rates and growth in operating deposits.

Markets & Investor Services revenue was $5.6 billion, up 1%. Fixed Income Markets revenue was $2.8 billion, down 10%. Excluding the reduction of approximately $140 million in tax-equivalent adjustments as a result of the TCJA, Fixed Income Markets revenue was down 6%. Fixed Income Markets reflected lower revenue in Rates, Fixed Income Financing, Credit and Securitized Products as a result of compressed margins and tighter spreads in competitive markets. This decline was partially offset by increased activity levels in Currencies & Emerging Markets, and higher Commodities revenue compared to a challenging prior year. Equity Markets revenue was $1.6 billion, up 17%, driven by strength across derivatives, prime brokerage and Cash Equities, reflecting strong client activity. Securities Services revenue was $1.1 billion, up 5%, driven by higher interest rates and operating deposit growth, as well as higher asset-based fees driven by net client inflows.

The provision for credit losses was a benefit of $42 million, reflecting a net recovery related to a loan sale. The prior year was a benefit of $26 million.

Noninterest expense was $5.2 billion, up 8%, predominantly due to a combination of higher legal expense, higher compensation expense largely driven by investments in technology and bankers, and higher volume-related transaction costs.

Year-to-date results

Net income was $9.8 billion, up 15%.

Net revenue was $29.2 billion, up 8%.

Banking revenue was $9.7 billion, up 4%. Investment Banking revenue was $5.3 billion, up 2%, driven by higher equity underwriting and advisory fees, largely offset by lower debt underwriting fees. The Firm maintained its #1 ranking for Global Investment Banking fees with overall share gains, according to Dealogic. Equity underwriting fees were $1.3 billion, up 21% driven by a higher share of fees, primarily due to strong performance in the IPO market. Advisory fees were $1.8 billion, up 10%, driven by a higher number of large completed transactions. Debt underwriting fees were $2.5 billion, down 10%, primarily driven by declines in industry-wide fee levels and a lower share in leveraged finance. Treasury Services revenue was $3.5 billion, up 12%, predominantly driven by the impact of higher interest rates and growth in operating deposits. Lending revenue was $954 million, down 13%, driven by lower net interest income primarily reflecting a change in the portfolio composition and overall spread tightening as well as higher gains in the prior year on securities received from restructurings.

Markets & Investor Services revenue was $19.5 billion, up 10%. The results included approximately $500 million of fair value gains related to the adoption in the first quarter of 2018 of the new recognition and measurement accounting guidance for certain equity investments previously held at cost, and a reduction of approximately $450 million in tax-equivalent adjustments as a result of the TCJA. Fixed Income Markets revenue was $10.9 billion, up 2%. Excluding the impact of these fair value gains and tax-equivalent adjustments, Fixed Income Markets revenue remained up 2%, with strong performance in Currencies & Emerging Markets, and higher Commodities revenue compared to a challenging prior year, largely offset by lower revenue in Rates and Credit. Equity Markets revenue was $5.6 billion, up 22%, driven by strength across derivatives, prime brokerage and Cash Equities, reflecting strong client activity. Securities Services revenue was $3.2 billion, up 11%, predominantly driven by the impact of higher interest rates and operating deposit growth as well as higher asset-based fees driven by net client inflows and higher market levels.

The provision for credit losses was a benefit of $142 million, primarily driven by loan sales and other activity related to a single name in the Oil & Gas portfolio, partially offset by other net portfolio activity. The prior year was a benefit of $175 million primarily driven by a reduction in the allowance for credit losses in the Oil & Gas and Metals & Mining portfolios.

Noninterest expense was $16.2 billion, up 9%, predominantly driven by higher compensation expense including performance-related compensation expense and investments in technology and bankers, as well as volume-related transaction costs and legal expense.

Selected metrics

(in millions, except headcount)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Selected balance sheet data (period-end)						
Assets	**$ 928,148**	$ 851,808	9%	**$ 928,148**	$ 851,808	9%
Loans:						
Loans retained[a]	**117,084**	106,955	9	**117,084**	106,955	9
Loans held-for-sale and loans at fair value	**6,133**	3,514	75	**6,133**	3,514	75
Total loans	**123,217**	110,469	12	**123,217**	110,469	12
Core loans	**122,953**	110,133	12	**122,953**	110,133	12
Equity	**70,000**	70,000	–	**70,000**	70,000	–
Selected balance sheet data (average)						
Assets	**$ 924,909**	$ 858,912	8	**$ 924,145**	$ 853,948	8
Trading assets-debt and equity instruments	**349,390**	349,448	–	**354,270**	343,232	3
Trading assets-derivative receivables	**62,025**	55,875	11	**60,943**	56,575	8
Loans:						
Loans retained[a]	**$ 115,390**	$ 107,829	7	**$ 112,921**	$ 108,741	4
Loans held-for-sale and loans at fair value	**7,328**	4,674	57	**6,263**	5,254	19
Total loans	**$ 122,718**	$ 112,503	9	**$ 119,184**	$ 113,995	5
Core loans	**122,442**	112,168	9	**118,877**	113,631	5
Equity	**70,000**	70,000	–	**70,000**	70,000	–
Headcount[b]	**54,052**	50,641	7%	**54,052**	50,641	7%

(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) During the third quarter of 2018 approximately 1,200 employees transferred from CCB to CIB as part of the reorganization of the Commercial Card business.

Selected metrics

(in millions, except ratios)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Credit data and quality statistics						
Net charge-offs/(recoveries)	**$ (40)**	$ 20	NM	**$ 94**	$ 49	92%
Nonperforming assets:						
Nonaccrual loans:						
Nonaccrual loans retained[a]	**$ 318**	$ 437	(27)%	**$ 318**	$ 437	(27)
Nonaccrual loans held-for-sale and loans at fair value	**9**	2	350	**9**	2	350
Total nonaccrual loans	**327**	439	(26)	**327**	439	(26)
Derivative receivables	**90**	164	(45)	**90**	164	(45)
Assets acquired in loan satisfactions	**61**	92	(34)	**61**	92	(34)
Total nonperforming assets	**$ 478**	$ 695	(31)	**$ 478**	$ 695	(31)
Allowance for credit losses:						
Allowance for loan losses	**$ 1,068**	$ 1,253	(15)	**$ 1,068**	$ 1,253	(15)
Allowance for lending-related commitments	**802**	745	8	**802**	745	8
Total allowance for credit losses	**$ 1,870**	$ 1,998	(6)%	**$ 1,870**	$ 1,998	(6)%
Net charge-off/(recovery) rate[b]	**(0.14)%**	0.07%		**0.11%**	0.06%	
Allowance for loan losses to period-end loans retained	**0.91**	1.17		**0.91**	1.17	
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[c]	**1.27**	1.79		**1.27**	1.79	
Allowance for loan losses to nonaccrual loans retained[a]	**336**	287		**336**	287	
Nonaccrual loans to total period-end loans	**0.27 %**	0.40%		**0.27%**	0.40%	

(a) Allowance for loan losses of $145 million and $177 million were held against these nonaccrual loans at September 30, 2018 and 2017, respectively.
(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.
(c) 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, 2018	2017	Change	Nine months ended September 30, 2018	2017	Change
Advisory	**$ 581**	$ 620	(6)%	**$ 1,782**	$ 1,624	10%
Equity underwriting	**420**	300	40	**1,336**	1,107	21
Debt underwriting[a]	**822**	924	(11)	**2,540**	2,827	(10)
Total investment banking fees	**$ 1,823**	$ 1,844	(1)%	**$ 5,658**	$ 5,558	2%

(a) Includes loan syndications.

League table results – wallet share

	Three months ended September 30, 2018			Full-year 2017		
	Rank		Share	Rank		Share
Based on fees[a]						
Long-term debt[b]						
Global	**#**	**1**	**7.4%**	#	1	7.8%
U.S.		**2**	**11.2**		2	11.1
Equity and equity-related[c]						
Global		**3**	**9.2**		2	7.1
U.S.		**1**	**12.5**		1	11.6
M&A[d]						
Global		**2**	**9.0**		2	8.4
U.S.		**2**	**9.4**		2	9.1
Loan syndications						
Global		**1**	**9.6**		1	9.3
U.S.		**1**	**12.2**		1	10.9
Global investment banking fees[e]	**#**	**1**	**8.7%**	#	1	8.1%

(a) Source: Dealogic as of Oct 1, 2018. Reflects the ranking of revenue wallet and market share.
(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities ("MBS"); and exclude money market, short-term debt, and U.S. municipal securities.
(c) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.
(d) Global M&A reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S.
(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. For a description of the composition of these income statement line items, refer to Notes 5 and 6. For further information, refer to Markets revenue on page 65 of JPMorgan Chase's 2017 Annual Report.

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,		
	2018			2017		
(in millions)	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	**$ 1,849**	**$ 1,252**	**$ 3,101**	$ 1,837	$ 948	$ 2,785
Lending- and deposit-related fees	**51**	**1**	**52**	47	2	49
Asset management, administration and commissions	**96**	**446**	**542**	93	397	490
All other income	**33**	**7**	**40**	121	12	133
Noninterest revenue	**2,029**	**1,706**	**3,735**	2,098	1,359	3,457
Net interest income[(a)]	**815**	**(111)**	**704**	1,066	4	1,070
Total net revenue	**$ 2,844**	**$ 1,595**	**$ 4,439**	$ 3,164	$ 1,363	$ 4,527

	Nine months ended September 30,			Nine months ended September 30,		
	2018			2017		
(in millions)	Fixed Income Markets	Equity Markets	Total Markets	Fixed Income Markets	Equity Markets	Total Markets
Principal transactions	**$ 6,795**	**$ 4,528**	**$ 11,323**	$ 6,389	$ 3,066	$ 9,455
Lending- and deposit-related fees	**147**	**4**	**151**	144	4	148
Asset management, administration and commissions	**313**	**1,364**	**1,677**	300	1,230	1,530
All other income	**764**	**18**	**782**	505	3	508
Noninterest revenue	**8,019**	**5,914**	**13,933**	7,338	4,303	11,641
Net interest income[(a)]	**2,831**	**(343)**	**2,488**	3,257	252	3,509
Total net revenue	**$ 10,850**	**$ 5,571**	**$ 16,421**	$ 10,595	$ 4,555	$ 15,150

(a) Declines in Markets net interest income were driven by higher funding costs.

Selected metrics

(in millions, except where otherwise noted)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Assets under custody ("AUC") by asset class (period-end) (in billions):						
Fixed Income	**$ 12,339**	$ 12,878	(4)%	**$ 12,339**	$ 12,878	(4)%
Equity	**9,174**	7,439	23	**9,174**	7,439	23
Other[a]	**2,890**	2,421	19	**2,890**	2,421	19
Total AUC	**$ 24,403**	$ 22,738	7	**$ 24,403**	$ 22,738	7
Client deposits and other third party liabilities (average)[b]	**$ 434,847**	$ 421,588	3%	**$ 430,640**	$ 406,184	6%

(a) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

International metrics

(in millions, except where otherwise noted)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Total net revenue[a]						
Europe/Middle East/Africa	**$ 2,766**	$ 2,751	1%	**$ 9,842**	$ 8,974	10%
Asia/Pacific	**1,242**	1,169	6	**4,123**	3,442	20
Latin America/Caribbean	**321**	329	(2)	**1,064**	914	16
Total international net revenue	**4,329**	4,249	2	**15,029**	13,330	13
North America	**4,476**	4,366	3	**14,182**	13,809	3
Total net revenue	**$ 8,805**	$ 8,615	2	**$ 29,211**	$ 27,139	8
Loans retained (period-end)[a]						
Europe/Middle East/Africa	**$ 25,941**	$ 25,677	1	**$ 25,941**	$ 25,677	1
Asia/Pacific	**16,812**	13,398	25	**16,812**	13,398	25
Latin America/Caribbean	**4,896**	6,737	(27)	**4,896**	6,737	(27)
Total international loans	**47,649**	45,812	4	**47,649**	45,812	4
North America	**69,435**	61,143	14	**69,435**	61,143	14
Total loans retained[a]	**$ 117,084**	$ 106,955	9	**$ 117,084**	$ 106,955	9
Client deposits and other third-party liabilities (average)[a][b]						
Europe/Middle East/Africa	**$ 162,060**	$ 160,778	1	**$ 162,102**	$ 154,259	5
Asia/Pacific	**81,771**	78,334	4	**82,272**	75,284	9
Latin America/Caribbean	**26,196**	25,236	4	**26,477**	25,126	5
Total international	**$ 270,027**	$ 264,348	2	**$ 270,851**	$ 254,669	6
North America	**164,820**	157,240	5	**159,789**	151,515	5
Total client deposits and other third-party liabilities	**$ 434,847**	$ 421,588	3	**$ 430,640**	$ 406,184	6
AUC (period-end)[a] **(in billions)**						
North America	**$ 15,148**	$ 13,574	12	**$ 15,148**	$ 13,574	12
All other regions	**9,255**	9,164	1	**9,255**	9,164	1
Total AUC	**$ 24,403**	$ 22,738	7%	**$ 24,403**	$ 22,738	7%

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.
(b) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

COMMERCIAL BANKING

For a discussion of the business profile of CB, refer to pages 67–69 of JPMorgan Chase's 2017 Annual Report and Line of Business Metrics on page 181.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions)	**2018**	2017	Change	**2018**	2017	Change
Revenue						
Lending- and deposit-related fees	**$ 216**	$ 223	(3)%	**$ 666**	$ 690	(3)%
Asset management, administration and commissions	**18**	16	13	**52**	50	4
All other income[a]	**342**	353	(3)	**1,040**	1,034	1
Noninterest revenue	**576**	592	(3)	**1,758**	1,774	(1)
Net interest income	**1,695**	1,554	9	**4,995**	4,478	12
Total net revenue[b]	**2,271**	2,146	6	**6,753**	6,252	8
Provision for credit losses	**(15)**	(47)	68	**23**	(214)	NM
Noninterest expense						
Compensation expense[c]	**432**	386	12	**1,268**	1,156	10
Noncompensation expense[c]	**421**	414	2	**1,273**	1,259	1
Total noninterest expense	**853**	800	7	**2,541**	2,415	5
Income before income tax expense	**1,433**	1,393	3	**4,189**	4,051	3
Income tax expense	**344**	512	(33)	**988**	1,469	(33)
Net income	**$ 1,089**	$ 881	24%	**$ 3,201**	$ 2,582	24%

(a) Includes revenue from investment banking products and commercial card transactions.
(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income related to municipal financing activities of $107 million and $143 million for the three months ended September 30, 2018 and 2017 respectively, and $316 million and $395 million for the nine months ended September 30, 2018 and September 30, 2017, respectively. The decrease in taxable-equivalent adjustments reflects the impact of TCJA.
(c) Effective in the first quarter of 2018, certain Operations and Compliance staff were transferred from CCB and Corporate, respectively, to CB. As a result, expense for this staff is now reflected in CB's compensation expense with a corresponding adjustment for expense allocations reflected in noncompensation expense. CB's, Corporate's and CCB's previously reported headcount, compensation expense and noncompensation expense have been revised to reflect this transfer.

Quarterly results

Net income was $1.1 billion, an increase of 24%.

Net revenue was $2.3 billion, an increase of 6%. Net interest income was $1.7 billion, an increase of 9%, driven by higher deposit margins, partially offset by lower deposit balances, largely due to non-operating deposits migrating to higher yielding investments. Noninterest revenue was $576 million, 3% lower than the prior year.

Noninterest expense was $853 million, an increase of 7%, predominantly driven by investments in banker coverage and technology.

The provision for credit losses was a benefit of $15 million driven by net recoveries. The prior year was a benefit of $47 million, driven by net reductions in the allowance for credit losses, largely in the Real Estate portfolio.

Year-to-date results

Net income was $3.2 billion, an increase of 24%.

Net revenue was $6.8 billion, an increase of 8%. Net interest income was $5.0 billion, an increase of 12%, driven by higher deposit margins. Noninterest revenue was $1.8 billion, flat compared with the prior year.

Noninterest expense was $2.5 billion, an increase of 5%, driven by investments in banker coverage and technology.

The provision for credit losses was an expense of $23 million. The prior year was a benefit of $214 million, driven by net reductions in the allowance for credit losses, including in the Oil & Gas, Natural Gas Pipelines and Metals & Mining portfolios.

Selected income statement data (continued)

(in millions, except ratios)	Three months ended September 30, 2018	2017	Change	Nine months ended September 30, 2018	2017	Change
Revenue by product						
Lending	**$ 1,027**	$ 1,030	– %	**$ 3,052**	$ 3,045	–%
Treasury services	**1,021**	873	17	**3,019**	2,523	20
Investment banking[a]	**206**	196	5	**644**	601	7
Other	**17**	47	(64)	**38**	83	(54)
Total Commercial Banking net revenue	**$ 2,271**	$ 2,146	6	**$ 6,753**	$ 6,252	8
Investment banking revenue, gross[b]	**$ 581**	$ 578	1	**$ 1,889**	$ 1,777	6
Revenue by client segment						
Middle Market Banking	**$ 935**	$ 848	10	**$ 2,749**	$ 2,471	11
Corporate Client Banking	**749**	688	9	**2,243**	2,016	11
Commercial Term Lending	**339**	367	(8)	**1,035**	1,098	(6)
Real Estate Banking	**175**	157	11	**509**	438	16
Other	**73**	86	(15)	**217**	229	(5)
Total Commercial Banking net revenue	**$ 2,271**	$ 2,146	6%	**$ 6,753**	$ 6,252	8%
Financial ratios						
Return on equity	**21%**	17%		**20%**	16%	
Overhead ratio	**38**	37		**38**	39	

(a) Includes total Firm revenue from investment banking products sold to CB clients, net of revenue sharing with the CIB.
(b) Represents total Firm revenue from investment banking products sold to CB clients. As a result of the adoption of the revenue recognition guidance, prior period amounts have been revised to conform with the current period presentation. For additional information, refer to Note 1.

Selected metrics

(in millions, except headcount)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Selected balance sheet data (period-end)						
Total assets	**$ 217,194**	$ 220,064	(1)%	**$ 217,194**	$ 220,064	(1)%
Loans:						
Loans retained	**205,177**	201,463	2	**205,177**	201,463	2
Loans held-for-sale and loans at fair value	**405**	764	(47)	**405**	764	(47)
Total loans	**$ 205,582**	$ 202,227	2	**$ 205,582**	$ 202,227	2
Core loans	**205,418**	201,999	2	**205,418**	201,999	2
Equity	**20,000**	20,000	–	**20,000**	20,000	–
Period-end loans by client segment						
Middle Market Banking	**$ 57,324**	$ 56,192	2	**$ 57,324**	$ 56,192	2
Corporate Client Banking	**46,890**	47,682	(2)	**46,890**	47,682	(2)
Commercial Term Lending	**76,201**	74,349	2	**76,201**	74,349	2
Real Estate Banking	**18,013**	17,127	5	**18,013**	17,127	5
Other	**7,154**	6,877	4	**7,154**	6,877	4
Total Commercial Banking loans	**$ 205,582**	$ 202,227	2	**$ 205,582**	$ 202,227	2
Selected balance sheet data (average)						
Total assets	**$ 219,232**	$ 218,196	–	**$ 218,270**	$ 216,574	1
Loans:						
Loans retained	**205,603**	199,487	3	**203,950**	195,604	4
Loans held-for-sale and loans at fair value	**1,617**	675	140	**1,139**	931	22
Total loans	**$ 207,220**	$ 200,162	4	**$ 205,089**	$ 196,535	4
Core loans	**207,052**	199,920	4	**204,902**	196,254	4
Average loans by client segment						
Middle Market Banking	**$ 57,258**	$ 55,782	3	**$ 57,121**	$ 55,239	3
Corporate Client Banking	**49,004**	46,451	5	**47,650**	45,516	5
Commercial Term Lending	**75,919**	74,136	2	**75,393**	73,041	3
Real Estate Banking	**17,861**	16,936	5	**17,774**	16,205	10
Other	**7,178**	6,857	5	**7,151**	6,534	9
Total Commercial Banking loans	**$ 207,220**	$ 200,162	4	**$ 205,089**	$ 196,535	4
Client deposits and other third-party liabilities	**$ 168,169**	$ 176,218	(5)	**$ 171,483**	$ 175,402	(2)
Equity	**20,000**	20,000	–	**20,000**	20,000	–
Headcount[(a)]	**10,937**	10,014	9 %	**10,937**	10,014	9 %

(a) Effective in the first quarter of 2018, certain Operations and Compliance staff were transferred from CCB and Corporate, respectively, to CB. The prior period amounts have been revised to conform with the current period presentation. For a further discussion of this transfer, refer to page 32, Selected income statement data, footnote (c).

Selected metrics (continued)

(in millions, except ratios)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Credit data and quality statistics						
Net charge-offs/(recoveries)	**$ (18)**	$ 19	NM	**$ 16**	$ 17	(6)%
Nonperforming assets						
Nonaccrual loans:						
Nonaccrual loans retained[a]	**$ 452**	$ 744	(39)%	**$ 452**	$ 744	(39)%
Nonaccrual loans held-for-sale and loans at fair value	**5**	–	NM	**5**	–	NM
Total nonaccrual loans	**$ 457**	$ 744	(39)	**$ 457**	$ 744	(39)
Assets acquired in loan satisfactions	**2**	3	(33)	**2**	3	(33)
Total nonperforming assets	**$ 459**	$ 747	(39)	**$ 459**	$ 747	(39)
Allowance for credit losses:						
Allowance for loan losses	**$ 2,619**	$ 2,620	–	**$ 2,619**	$ 2,620	–
Allowance for lending-related commitments	**249**	323	(23)	**249**	323	(23)
Total allowance for credit losses	**$ 2,868**	$ 2,943	(3)%	**$ 2,868**	$ 2,943	(3)%
Net charge-off/(recovery) rate[b]	**(0.03)%**	0.04%		**0.01%**	0.01%	
Allowance for loan losses to period-end loans retained	**1.28**	1.30		**1.28**	1.30	
Allowance for loan losses to nonaccrual loans retained[a]	**579**	352		**579**	352	
Nonaccrual loans to period-end total loans	**0.22**	0.37		**0.22**	0.37	

(a) Allowance for loan losses of $105 million and $128 million was held against nonaccrual loans retained at September 30, 2018 and 2017, respectively.
(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET & WEALTH MANAGEMENT

For a discussion of the business profile of AWM, refer to pages 70–72 of JPMorgan Chase's 2017 Annual Report and Line of Business Metrics on pages 181–182.

Effective January 1, 2018, the Firm adopted several new accounting standards; the guidance which had the most significant impact on the AWM segment results was revenue recognition. The revenue recognition guidance was applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

Selected income statement data

	Three months ended September 30,			Nine months ended September 30,		
(in millions, except ratios)	**2018**	2017	Change	**2018**	2017	Change
Revenue						
Asset management, administration and commissions	**$ 2,563**	$ 2,466	4%	**$ 7,623**	$ 7,205	6%
All other income	**117**	151	(23)	**374**	472	(21)
Noninterest revenue	**2,680**	2,617	2	**7,997**	7,677	4
Net interest income	**879**	855	3	**2,640**	2,520	5
Total net revenue	**3,559**	3,472	3	**10,637**	10,197	4
Provision for credit losses	**23**	8	188	**40**	30	33
Noninterest expense						
Compensation expense	**1,391**	1,319	5	**4,112**	3,928	5
Noncompensation expense	**1,194**	1,089	10	**3,620**	3,678	(2)
Total noninterest expense	**2,585**	2,408	7	**7,732**	7,606	2
Income before income tax expense	**951**	1,056	(10)	**2,865**	2,561	12
Income tax expense	**227**	382	(41)	**616**	878	(30)
Net income	**$ 724**	$ 674	7	**$ 2,249**	$ 1,683	34
Revenue by line of business						
Asset Management	**$ 1,827**	$ 1,814	1	**$ 5,440**	$ 5,288	3
Wealth Management	**1,732**	1,658	4	**5,197**	4,909	6
Total net revenue	**$ 3,559**	$ 3,472	3%	**$ 10,637**	$ 10,197	4%
Financial ratios						
Return on equity	**31%**	29%		**32%**	24%	
Overhead ratio	**73**	69		**73**	75	
Pre-tax margin ratio:						
Asset Management	**27**	29		**27**	19	
Wealth Management	**26**	32		**27**	31	
Asset & Wealth Management	**27**	30		**27**	25	

Quarterly results

Net income was $724 million, an increase of 7%.

Net revenue was $3.6 billion, an increase of 3%. Net interest income was $879 million, up 3%, driven by deposit margin expansion and loan growth. Noninterest revenue was $2.7 billion, up 2%, driven by higher management fees on higher market levels and net long-term product inflows, partially offset by fee compression and the impact of lower market valuation gains, including on seed capital investments.

Noninterest expense was $2.6 billion, up 7%, largely driven by continued investments in advisors and technology, as well as higher external fees on revenue growth.

Year-to-date results

Net income was $2.2 billion, an increase of 34%.

Net revenue was $10.6 billion, an increase of 4%. Net interest income was $2.6 billion, up 5%, driven by deposit margin expansion and loan growth. Noninterest revenue was $8.0 billion, up 4%, driven by higher management fees on higher market levels and net long-term product inflows, partially offset by fee compression and the impact of lower market valuation gains, including on seed capital investments.

Noninterest expense was $7.7 billion, an increase of 2%, driven by higher external fees on revenue growth and investments in advisors and technology, offset by higher legal expense in the prior year.

Selected metrics

(in millions, except ranking data, headcount and ratios)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
% of JPM mutual fund assets rated as 4- or 5-star[a]	**64%**	65%		**64%**	65%	
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[b]						
1 year	**65**	61		**65**	61	
3 years	**64**	82		**64**	82	
5 years	**83**	81		**83**	81	
Selected balance sheet data (period-end)						
Total assets	**$ 166,716**	$ 149,170	12%	**$ 166,716**	$ 149,170	12%
Loans	**143,162**	128,038	12	**143,162**	128,038	12
Core loans	**143,162**	128,038	12	**143,162**	128,038	12
Deposits	**130,497**	141,409	(8)	**130,497**	141,409	(8)
Equity	**9,000**	9,000	–	**9,000**	9,000	–
Selected balance sheet data (average)						
Total assets	**$ 161,982**	$ 146,388	11	**$ 158,218**	$ 142,541	11
Loans	**140,558**	125,445	12	**136,663**	122,002	12
Core loans	**140,558**	125,445	12	**136,663**	122,002	12
Deposits	**133,021**	144,496	(8)	**138,885**	151,311	(8)
Equity	**9,000**	9,000	–	**9,000**	9,000	–
Headcount	**23,747**	22,685	5	**23,747**	22,685	5
Number of Wealth Management client advisors	**2,808**	2,581	9	**2,808**	2,581	9
Credit data and quality statistics						
Net charge-offs	**$ 11**	$ 5	120	**$ 7**	$ 10	(30)
Nonaccrual loans	**285**	337	(15)	**285**	337	(15)
Allowance for credit losses:						
Allowance for loan losses	**$ 317**	$ 285	11	**$ 317**	$ 285	11
Allowance for lending-related commitments	**15**	10	50	**15**	10	50
Total allowance for credit losses	**$ 332**	$ 295	13%	**$ 332**	$ 295	13%
Net charge-off rate	**0.03%**	0.02%		**0.01%**	0.01%	
Allowance for loan losses to period-end loans	**0.22**	0.22		**0.22**	0.22	
Allowance for loan losses to nonaccrual loans	**111**	85		**111**	85	
Nonaccrual loans to period-end loans	**0.20**	0.26		**0.20**	0.26	

(a) Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds. Includes only Asset Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(b) Quartile ranking sourced from: Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and Fund Doctor for South Korea domiciled funds. 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 and India domiciled funds.

Client assets

Client assets of $2.9 trillion and assets under management of $2.1 trillion were both up 7%, driven by net inflows into long-term and liquidity products, as well as higher market levels.

Client assets

(in billions)	September 30, 2018	2017	Change
Assets by asset class			
Liquidity	**$ 463**	$ 441	5%
Fixed income	**457**	461	(1)
Equity	**452**	405	12
Multi-asset and alternatives	**705**	638	11
Total assets under management	**2,077**	1,945	7
Custody/brokerage/administration/deposits	**790**	733	8
Total client assets	**$ 2,867**	$ 2,678	7
Memo:			
Alternatives client assets [(a)]	**$ 172**	$ 161	7
Assets by client segment			
Private Banking	**$ 576**	$ 507	14
Institutional	**945**	921	3
Retail	**556**	517	8
Total assets under management	**$ 2,077**	$ 1,945	7
Private Banking	**$ 1,339**	$ 1,217	10
Institutional	**967**	941	3
Retail	**561**	520	8
Total client assets	**$ 2,867**	$ 2,678	7%

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

Client assets (continued)

(in billions)	Three months ended September 30, 2018	2017	Nine months ended September 30, 2018	2017
Assets under management rollforward				
Beginning balance	**$ 2,028**	$ 1,876	**$ 2,034**	$ 1,771
Net asset flows:				
Liquidity	**14**	5	**10**	(1)
Fixed income	**3**	17	**(9)**	24
Equity	**1**	(5)	**8**	(12)
Multi-asset and alternatives	**4**	9	**29**	26
Market/performance/other impacts	**27**	43	**5**	137
Ending balance, September 30	**$ 2,077**	$ 1,945	**$ 2,077**	$ 1,945
Client assets rollforward				
Beginning balance	**$ 2,799**	$ 2,598	**$ 2,789**	$ 2,453
Net asset flows	**33**	25	**58**	37
Market/performance/other impacts	**35**	55	**20**	188
Ending balance, September 30	**$ 2,867**	$ 2,678	**$ 2,867**	$ 2,678

International metrics

(in millions)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Total net revenue [(a)]						
Europe/Middle East/Africa	**$ 677**	$ 697	(3)%	**$ 2,095**	$ 1,975	6%
Asia/Pacific	**377**	358	5	**1,161**	1,018	14
Latin America/Caribbean	**228**	227	–	**689**	628	10
Total international net revenue	**1,282**	1,282	–	**3,945**	3,621	9
North America	**2,277**	2,190	4	**6,692**	6,576	2
Total net revenue[(a)]	**$ 3,559**	$ 3,472	3%	**$ 10,637**	$ 10,197	4%

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

(in billions)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Assets under management						
Europe/Middle East/Africa	**$ 375**	$ 357	5%	**$ 375**	$ 357	5%
Asia/Pacific	**164**	144	14	**164**	144	14
Latin America/Caribbean	**65**	59	10	**65**	59	10
Total international assets under management	**604**	560	8	**604**	560	8
North America	**1,473**	1,385	6	**1,473**	1,385	6
Total assets under management	**$ 2,077**	$ 1,945	7	**$ 2,077**	$ 1,945	7
Client assets						
Europe/Middle East/Africa	**$ 435**	$ 411	6	**$ 435**	$ 411	6
Asia/Pacific	**228**	206	11	**228**	206	11
Latin America/Caribbean	**162**	157	3	**162**	157	3
Total international client assets	**825**	774	7	**825**	774	7
North America	**2,042**	1,904	7	**2,042**	1,904	7
Total client assets	**$ 2,867**	$ 2,678	7%	**$ 2,867**	$ 2,678	7%

CORPORATE

For a discussion of Corporate, refer to pages 73–74 of JPMorgan Chase's 2017 Annual Report.

Selected income statement and balance sheet data

(in millions, except headcount)	As of or for the three months ended September 30, 2018	2017	Change	As of or for the nine months ended September 30, 2018	2017	Change
Revenue						
Principal transactions	**$ (161)**	$ (2)	NM	**$ (222)**	$ 161	NM
Investment securities losses	**(46)**	–	NM	**(371)**	(37)	NM
All other income/(loss)[a]	**30**	111	(73)%	**373**	839	(56)%
Noninterest revenue	**(177)**	109	NM	**(220)**	963	NM
Net interest income	**74**	77	(4)%	**(35)**	2	NM
Total net revenue[b]	**(103)**	186	NM	**(255)**	965	NM
Provision for credit losses	**2**	–	NM	**(3)**	–	NM
Noninterest expense[c]	**28**	74	(62)%	**394**	355	11%
Income/(loss) before income tax expense/(benefit)	**(133)**	112	NM	**(646)**	610	NM
Income tax expense/(benefit)	**12**	34	(65)%	**18**	(73)	NM
Net income/(loss)	**$ (145)**	$ 78	NM	**$ (664)**	$ 683	NM
Total net revenue						
Treasury and CIO	**$ 186**	$ 265	(30)%	**$ 235**	$ 344	(32)%
Other Corporate	**(289)**	(79)	(266)	(490)	621	NM
Total net revenue	**$ (103)**	$ 186	NM	**$ (255)**	$ 965	NM
Net income/(loss)						
Treasury and CIO	**$ 96**	$ 75	28%	**$ (244)**	$ (6)	NM
Other Corporate	**(241)**	3	NM	**(420)**	689	NM
Total net income/(loss)	**$ (145)**	$ 78	NM	**$ (664)**	$ 683	NM
Total assets (period-end)	**$ 742,693**	$ 804,573	(8)	**$ 742,693**	$ 804,573	(8)
Loans (period-end)	**1,556**	1,614	(4)	**1,556**	1,614	(4)
Core loans[d]	**1,556**	1,614	(4)	**1,556**	1,614	(4)
Headcount[e]	**36,686**	34,012	8%	**36,686**	34,012	8%

(a) Included revenue related to a legal settlement of $645 million for the nine months ended September 30, 2017.
(b) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $94 million and $216 million for the three months ended September 30, 2018 and 2017, respectively, and $287 million and $681 million for nine months ended September 30, 2018 and 2017, respectively. The decrease in taxable-equivalent adjustments reflects the impact of the TCJA.
(c) Included legal expense/(benefit) of $(175) million and $(148) million for the three months ended September 30, 2018 and 2017, respectively, and $(225) million and $(360) million for nine months ended September 30, 2018 and 2017, respectively.
(d) Average core loans were $1.6 billion and $1.7 billion for the three months ended September 30, 2018 and 2017, respectively, and $1.7 billion and $1.6 billion for the nine months ended September 30, 2018 and 2017, respectively.
(e) Effective in the first quarter of 2018, certain Compliance staff were transferred from Corporate to CB. The prior period amounts have been revised to conform with the current period presentation. For a further discussion of this transfer, refer to CB segment results on page 32.

Quarterly results

Net loss was $145 million, compared with net income of $78 million in the prior year.

Net revenue was a loss of $103 million, largely driven by markdowns on certain legacy private equity investments of approximately $220 million.

Noninterest expense was $28 million, including a net legal benefit partially offset by higher real estate expense.

Current period income tax expense reflects a net benefit of $132 million resulting from changes in estimates under the TCJA related to the remeasurement of certain deferred taxes and the deemed repatriation tax on non-U.S. earnings, which were more than offset by changes to certain tax reserves as well as other tax adjustments.

Year-to-date results

Net loss was $664 million, compared with net income of $683 million in the prior year.

Net revenue was a loss of $255 million, compared with a gain of $965 million in the prior-year. The current period includes investment securities losses related to the repositioning of the investment securities portfolio and losses largely driven by markdowns on certain legacy private equity investments. The prior year included a $645 million benefit from a legal settlement.

Income tax expense reflects a net benefit of $305 million resulting from changes in estimates under the TCJA related to the remeasurement of certain deferred taxes and the deemed repatriation tax on non-U.S. earnings, along with other tax adjustments, which were more than offset by changes to certain tax reserves.

Treasury and CIO overview

At September 30, 2018, 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 ratings that correspond to ratings as defined by S&P and Moody's). Refer to Note 9 for further information on the Firm's investment securities portfolio.

For further information on liquidity and funding risk, refer to Liquidity Risk Management on pages 49–54. For information on interest rate, foreign exchange and other risks, refer to Market Risk Management on pages 73–77.

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)	**2018**	2017	Change	**2018**	2017	Change
Investment securities losses	**$ (46)**	$ –	NM	**$ (371)**	$ (49)	NM
Available-for-sale ("AFS") investment securities (average)	**$ 197,230**	$ 212,633	(7)%	**$ 200,569**	$ 224,094	(10)%
Held-to-maturity ("HTM") investment securities (average)	**31,232**	47,034	(34)	**31,842**	48,201	(34)
Investment securities portfolio (average)	**$ 228,462**	$ 259,667	(12)	**$ 232,411**	$ 272,295	(15)
AFS investment securities (period-end)	**$ 198,523**	$ 214,257	(7)	**$ 198,523**	$ 214,257	(7)
HTM investment securities (period-end)	**31,368**	47,079	(33)	**31,368**	47,079	(33)
Investment securities portfolio (period-end)	**$ 229,891**	$ 261,336	(12)%	**$ 229,891**	$ 261,336	(12)%

As permitted by the new hedge accounting guidance, the Firm elected to transfer certain investment securities from HTM to AFS in the first quarter of 2018. For additional information, refer to Notes 1 and 9.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers 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:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk identification, assessment, data and management by each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm strives for continual improvement through 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 Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's approach to risk management involves understanding drivers of risks, risk types, and impacts of risks.

Drivers of risk include, but are not limited to, the economic environment, regulatory or government policy, competitor or market evolution, business decisions, process or judgment error, deliberate wrongdoing, dysfunctional markets, and natural disasters.

The Firm's risks are generally categorized in the following four risk types:

- Strategic risk is the risk associated with the Firm's current and future business plans and objectives, including capital risk, liquidity risk, and the impact to the Firm's reputation.
- Credit and investment risk is the risk associated with the default or change in credit profile of a client, counterparty or customer; or loss of principal or a reduction in expected returns on investments, including consumer credit risk, wholesale credit risk, and investment portfolio risk.
- Market risk is the risk associated with the effect of changes in market factors, such as interest and foreign exchange rates, equity and commodity prices, credit spreads or implied volatilities, on the value of assets and liabilities held for both the short and long term.
- Operational risk is the risk associated with inadequate or failed internal processes, people and systems, or from external events and includes compliance risk, conduct risk, legal risk, and estimations and model risk.

There may be many consequences of risks manifesting, including quantitative impacts such as reduction in earnings and capital, liquidity outflows, and fines or penalties, or qualitative impacts, such as reputation damage, loss of clients, and regulatory and enforcement actions.

The Firm has established Firmwide risk management functions to manage different risk types. The scope of a particular risk management function may include multiple risk types. For example, the Firm's Country Risk Management function oversees country risk which may be a driver of risk or an aggregation of exposures that could give rise to multiple risk types such as credit or market risk. The following provides an index of where in this Form 10-Q and in JPMorgan Chase's 2017 Annual Report information about the Firm's management of its key risks can be found.

Risk disclosures	Form 10-Q page reference	Annual Report page reference
Enterprise-wide risk management	42-43	75-80
Strategic risk management		81
Capital risk management	44-48	82-91
Liquidity risk management	49-54	92-97
Reputation risk management		98
Consumer credit portfolio	57-61	102-107
Wholesale credit portfolio	62-68	108-116
Investment portfolio risk management	72	120
Market risk management	73-77	121-128
Country risk management	78	129-130
Operational risk management		131-133
Compliance risk management		134
Conduct risk management		135
Legal risk management		136
Estimations and Model risk management		137

CAPITAL RISK MANAGEMENT

Capital risk is the risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and under stressed conditions.

The Firm's capital risk management strategy focuses on maintaining long-term stability to enable it to build and invest in market-leading businesses, even in a highly stressed environment. Senior management considers the implications on the Firm's capital prior to making decisions that could impact future business activities. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to ensuring the Firm's capital strength.

The Firm's capital risk management objectives are achieved through the establishment of minimum capital targets and a strong capital governance framework. Capital risk management is intended to be flexible in order to react to a range of potential events. The Firm's minimum capital targets are based on the most binding of three pillars: an internal assessment of the Firm's capital needs; an estimate of required capital under the CCAR and Dodd-Frank Act stress testing requirements; and Basel III Fully Phased-In regulatory minimums. Where necessary, each pillar may include a management-established buffer.

For a further discussion of the Firm's Capital Risk Management, refer to pages 82–91 of JPMorgan Chase's 2017 Annual Report, Note 19 of this Form 10-Q, and the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (https://jpmorganchaseco.gcs-web.com/financial-information/basel-pillar-3-us-lcr-disclosures).

The Firm and its insured depository institution ("IDI") subsidiaries are subject to Basel III capital rules which include minimum capital ratio requirements that are subject to phase-in periods ("transitional period") through the end of 2018. While the required capital remains subject to the transitional rules during 2018, the Firm's capital ratios as of September 30, 2018 were equivalent whether calculated on a transitional basis or on a fully phased-in basis.

The capital adequacy of the Firm and its IDI subsidiaries, both during the transitional period and upon full phase-in, is evaluated against the lower of the two ratios as calculated under the Basel III approaches (Standardized or Advanced) . The Basel III Standardized Fully Phased-In CET1 ratio is the Firm's current binding constraint, and the Firm expects that this will remain its binding constraint for the foreseeable future.

The Firm and its IDI subsidiaries, as appropriate, are subject to minimum capital ratios under Basel III rules and well-capitalized ratios under the regulations issued by the Federal Reserve and the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"), respectively. For additional information, refer to Note 19.

The following tables present the Firm's Transitional and Fully Phased-In risk-based and leverage-based capital metrics under both the Basel III Standardized and Advanced Approaches. The Firm's Basel III ratios exceeded both the Transitional and Fully Phased-In regulatory minimums as of September 30, 2018 and December 31, 2017. For a further discussion of these capital metrics, including regulatory minimums, and the Standardized and Advanced Approaches, refer to Strategy and Governance on pages 84–88 of JPMorgan Chase's 2017 Annual Report.

	Transitional			Fully Phased-In		
September 30, 2018 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios	Standardized	Advanced	Minimum capital ratios
Risk-based capital metrics:						
CET1 capital	**$ 184,972**	**$ 184,972**		**$ 184,972**	**$ 184,972**	
Tier 1 capital	**210,589**	**210,589**		**210,589**	**210,589**	
Total capital	**238,303**	**228,574**		**238,303**	**228,574**	
Risk-weighted assets	**1,545,326**	**1,438,529**		**1,545,326**	**1,438,529**	
CET1 capital ratio	**12.0%**	**12.9%**	**9.0%**	**12.0%**	**12.9%**	**10.5%**
Tier 1 capital ratio	**13.6**	**14.6**	**10.5**	**13.6**	**14.6**	**12.0**
Total capital ratio	**15.4**	**15.9**	**12.5**	**15.4**	**15.9**	**14.0**
Leverage-based capital metrics:						
Adjusted average assets[a]	**$ 2,552,612**	**$ 2,552,612**		**$ 2,552,612**	**$ 2,552,612**	
Tier 1 leverage ratio	**8.2%**	**8.2%**	**4.0%**	**8.2%**	**8.2%**	**4.0%**
Total leverage exposure	**NA**	**NA**		**NA**	**$ 3,235,518**	
SLR[b]	**NA**	**NA**	**NA**	**NA**	**6.5%**	**5.0%** [b]

	Transitional			Fully Phased-In		
December 31, 2017 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios	Standardized	Advanced	Minimum capital ratios
Risk-based capital metrics:						
CET1 capital	$ 183,300	$ 183,300		$ 183,244	$ 183,244	
Tier 1 capital	208,644	208,644		208,564	208,564	
Total capital	238,395	227,933		237,960	227,498	
Risk-weighted assets	1,499,506	1,435,825		1,509,762	1,446,696	
CET1 capital ratio	12.2%	12.8%	7.5%	12.1%	12.7%	10.5%
Tier 1 capital ratio	13.9	14.5	9.0	13.8	14.4	12.0
Total capital ratio	15.9	15.9	11.0	15.8	15.7	14.0
Leverage-based capital metrics:						
Adjusted average assets[a]	$ 2,514,270	$ 2,514,270		$ 2,514,822	$ 2,514,822	
Tier 1 leverage ratio	8.3%	8.3%	4.0%	8.3%	8.3%	4.0%
Total leverage exposure	NA	$ 3,204,463		NA	$ 3,205,015	
SLR[b]	NA	6.5%	NA	NA	6.5%	5.0% [b]

(a) Adjusted average assets, for purposes of calculating the Tier 1 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.
(b) Effective January 1, 2018, the SLR was fully phased-in under Basel III. The December 31, 2017 amounts were calculated under the Basel III Transitional rules.

Capital components

The following table presents reconciliations of total stockholders' equity to Basel III Fully Phased-In CET1 capital, Tier 1 capital and Total capital as of September 30, 2018 and December 31, 2017.

(in millions)	September 30, 2018	December 31, 2017
Total stockholders' equity	**$ 258,956**	$ 255,693
Less: Preferred stock[a]	27,764	26,068
Common stockholders' equity	**231,192**	229,625
Less:		
Goodwill	47,483	47,507
Other intangible assets	781	855
Add:		
Deferred tax liabilities[b]	2,239	2,204
Less: Other CET1 capital adjustments	195	223
Standardized/Advanced Fully Phased-In CET1 capital	**184,972**	183,244
Preferred stock[a]	27,764	26,068
Less: Other Tier 1 adjustments[a]	2,147	748
Standardized/Advanced Fully Phased-In Tier 1 capital	**$ 210,589**	$ 208,564
Long-term debt and other instruments qualifying as Tier 2 capital	$ 13,342	$ 14,827
Qualifying allowance for credit losses	14,225	14,672
Other	147	(103)
Standardized Fully Phased-In Tier 2 capital	**$ 27,714**	$ 29,396
Standardized Fully Phased-In Total capital	**$ 238,303**	$ 237,960
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital	(9,729)	(10,462)
Advanced Fully Phased-In Tier 2 capital	**$ 17,985**	$ 18,934
Advanced Fully Phased-In Total capital	**$ 228,574**	$ 227,498

(a) As of September 30, 2018, Preferred stock includes the issuance of $1.7 billion of Series DD preferred stock, and other Tier 1 adjustments includes $1.7 billion of Series I preferred stock called for redemption and subsequently redeemed on October 30, 2018. Tier 1 capital as of September 30, 2018 reflects both the issuance and the redemption.

(b) Represents certain deferred tax liabilities related to tax-deductible goodwill and identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CET1 capital, Tier 1 capital and Tier 2 capital for the nine months ended September 30, 2018.

Nine months ended September 30, (in millions)	**2018**
Standardized/Advanced CET1 capital at December 31, 2017	$ 183,244
Net income applicable to common equity	24,241
Dividends declared on common stock	(6,554)
Net purchase of treasury stock	(12,385)
Changes in additional paid-in capital	(1,246)
Changes related to AOCI	(1,995)
Adjustment related to DVA[a]	(148)
Changes related to other CET1 capital adjustments	(185)
Change in Standardized/Advanced CET1 capital	1,728
Standardized/Advanced CET1 capital at September 30, 2018	**$ 184,972**
Standardized/Advanced Tier 1 capital at December 31, 2017	$ 208,564
Change in CET1 capital	1,728
Net issuance of noncumulative perpetual preferred stock[b]	–
Other	297
Change in Standardized/Advanced Tier 1 capital	2,025
Standardized/Advanced Tier 1 capital at September 30, 2018	**$ 210,589**
Standardized Tier 2 capital at December 31, 2017	$ 29,396
Change in long-term debt and other instruments qualifying as Tier 2	(1,485)
Change in qualifying allowance for credit losses	(448)
Other	251
Change in Standardized Tier 2 capital	(1,682)
Standardized Tier 2 capital at September 30, 2018	**$ 27,714**
Standardized Total capital at September 30, 2018	**$ 238,303**
Advanced Tier 2 capital at December 31, 2017	$ 18,934
Change in long-term debt and other instruments qualifying as Tier 2	(1,485)
Change in qualifying allowance for credit losses	285
Other	251
Change in Advanced Tier 2 capital	(949)
Advanced Tier 2 capital at September 30, 2018	**$ 17,985**
Advanced Total capital at September 30, 2018	**$ 228,574**

(a) Includes DVA related to structured notes recorded in AOCI

(b) Includes the net effect of $1.7 billion of preferred stock that was issued on September 21, 2018 and $1.7 billion of preferred stock that was called for redemption on September 27, 2018 and redeemed on October 30, 2018.

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the nine months ended September 30, 2018. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

Nine months ended September 30, 2018 (in millions)	Standardized			Advanced			
	Credit risk RWA	Market risk RWA	**Total RWA**	Credit risk RWA	Market risk RWA	Operational risk RWA	Total RWA
At December 31, 2017	$ 1,386,060	$ 123,702	**$ 1,509,762**	$ 922,905	$ 123,791	$ 400,000	**$ 1,446,696**
Model & data changes[a]	(5,282)	(3,550)	**(8,832)**	4,446	(3,550)	–	**896**
Portfolio runoff[b]	(7,073)	–	**(7,073)**	(8,984)	–	–	**(8,984)**
Movement in portfolio levels[c]	52,456	(987)	**51,469**	9,534	(1,014)	(8,599)	**(79)**
Changes in RWA	40,101	(4,537)	**35,564**	4,996	(4,564)	(8,599)	**(8,167)**
September 30, 2018	**$ 1,426,161**	**$ 119,165**	**$ 1,545,326**	**$ 927,901**	**$ 119,227**	**$ 391,401**	**$ 1,438,529**

(a) Model & data changes refer to 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; and updates to cumulative losses for operational risk RWA.

Supplementary leverage ratio

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. For additional information, refer to Capital Risk Management on page 88 of JPMorgan Chase's 2017 Annual Report.

The following table presents the components of the Firm's Fully Phased-In SLR as of September 30, 2018 and December 31, 2017.

(in millions, except ratio)	**September 30, 2018**	December 31, 2017
Tier 1 capital	**$ 210,589**	$ 208,564
Total average assets	2,599,621	2,562,155
Less: Adjustments for deductions from Tier 1 capital	47,009	47,333
Total adjusted average assets[a]	2,552,612	2,514,822
Off-balance sheet exposures[b]	682,906	690,193
Total leverage exposure	**$ 3,235,518**	$ 3,205,015
SLR	**6.5%**	6.5%

(a) Adjusted average assets, 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.
(b) Off-balance sheet exposures are calculated as the average of the three month-end spot balances during the quarter.

For JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s SLR ratios, refer to Note 19.

Line of business equity

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons and regulatory capital requirements. For additional information, refer to page 88 of JPMorgan Chase's 2017 Annual Report.

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

(in billions)	**September 30, 2018**	December 31, 2017
Consumer & Community Banking	**$ 51.0**	$ 51.0
Corporate & Investment Bank	**70.0**	70.0
Commercial Banking	**20.0**	20.0
Asset & Wealth Management	**9.0**	9.0
Corporate	**81.2**	79.6
Total common stockholders' equity	**$ 231.2**	$ 229.6

Planning and stress testing

Comprehensive Capital Analysis and Review

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. Through the CCAR process, the Federal Reserve evaluates each bank holding company's ("BHC") capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On June 28, 2018, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2018 capital plan.

Capital actions

Preferred stock

Preferred stock dividends declared were $379 million and $1.2 billion for the three and nine months ended September 30, 2018.

On September 21, 2018, the Firm issued $1.7 billion of fixed rate 5.75% non-cumulative preferred stock, Series DD. On October 30, 2018, the Firm redeemed $1.7 billion of its fixed-to-floating rate non-cumulative perpetual preferred stock, Series I. For additional information on the Firm's preferred stock, refer to Note 20 of JPMorgan Chase's 2017 Annual Report.

Common stock dividends

On September 18, 2018, the Firm announced that its Board of Directors had declared a quarterly common stock dividend of $0.80 per share, effective with the dividend paid on October 31, 2018. The Firm's dividends are subject to the Board of Directors' approval on a quarterly basis.

Common equity

Effective as of June 28, 2018, the Firm's Board of Directors authorized the repurchase of up to $20.7 billion of common equity (common stock and warrants) between July 1, 2018 and June 30, 2019, as part of its annual capital plan.

The following table sets forth the Firm's repurchases of common equity for the three and nine months ended September 30, 2018 and 2017. There were no repurchases of warrants during the three and nine months ended September 30, 2018 and 2017.

	Three months ended September 30,		Nine months ended September 30, (in millions)	
(in millions)	**2018**	2017	**2018**	2017
Total shares of common stock repurchased	**39.3**	51.7	**126.0**	118.8
Aggregate common stock repurchases	**$ 4,416**	$ 4,763	**$14,055**	$10,602

For additional information regarding repurchases of the Firm's equity securities, 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 183 of this Form 10-Q and page 28 of JPMorgan Chase's 2017 Form 10-K, respectively.

There were 7.7 million and 15.0 million warrants outstanding at September 30, 2018 and December 31, 2017, respectively. All outstanding warrants that were not exercised on or before October 29, 2018 have expired.

Other capital requirements

TLAC

The Federal Reserve's TLAC rule requires the top-tier U.S. GSIB holding companies, including the Firm, to maintain minimum levels of external TLAC and eligible LTD effective January 1, 2019.

As of September 30, 2018, the Firm was compliant with the requirements of the rule to which it will be subject on January 1, 2019. For additional information, refer to page 90 of JPMorgan Chase's 2017 Annual Report.

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 Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

J.P. Morgan Securities has elected to compute its minimum net capital requirements under the "Alternative Net Capital Requirements" of the Net Capital Rule.

Under the market and credit risk standards of Appendix E of the Net Capital Rule, J.P. Morgan Securities is eligible to use the alternative method of computing net capital if, in addition to meeting its minimum net capital requirement, it maintains tentative net capital of at least $1.0 billion. J.P. Morgan Securities is required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion. As of September 30, 2018, J.P. Morgan Securities maintained tentative net capital in excess of the minimum and notification requirements.

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

September 30, 2018	Net Capital	
(in millions)	Actual	Minimum
J.P. Morgan Securities	**$ 18,258**	**$ 2,903**

J.P. Morgan Securities plc

J.P. Morgan Securities plc is a wholly-owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It 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 Regulatory Authority ("PRA") and the Financial Conduct Authority ("FCA"). J.P. Morgan Securities plc is subject to the European Union Capital Requirements Regulation and the U.K. PRA capital rules, each of which implemented Basel III and thereby subject J.P. Morgan Securities plc to its requirements.

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

September 30, 2018	Total capital	CET1 ratio		Total capital ratio	
(in millions, except ratios)	Estimated	Estimated	Minimum	Estimated	Minimum
J.P. Morgan Securities plc	**$41,284**	**16.8%**	**4.5%**	**16.8%**	**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. For a further discussion of the Firm's Liquidity Risk Management, refer to pages 92–97 of JPMorgan Chase's 2017 Annual Report and the Firm's US LCR Disclosure reports, which are available on the Firm's website at: (https://jpmorganchaseco.gcs-web.com/financial-information/basel-pillar-3-us-lcr-disclosures).

LCR and HQLA

The LCR rule requires the Firm to 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. HQLA is the amount of liquid assets that qualify for inclusion in the LCR. HQLA primarily consist of unencumbered cash and certain high quality liquid securities as defined in the LCR rule.

Under the LCR rule, the amount of HQLA held by JPMorgan Chase Bank N.A. and Chase Bank USA, N.A that are in excess of each entity's standalone 100% minimum LCR requirement, and that are 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%.

On August 22, 2018, the U.S. banking regulators published a final rule permitting investment-grade municipal obligations that meet certain criteria to qualify as HQLA for purposes of the U.S. LCR rule. The final rule went into effect on August 30, 2018, and did not have a material impact on the Firm's HQLA or LCR for the three months ended September 30, 2018.

The following table summarizes the Firm's average LCR for the three months ended September 30, 2018, June 30, 2018 and September 30, 2017 based on the Firm's current interpretation of the finalized LCR framework.

	Three months ended		
Average amount (in billions)	**September 30, 2018**	June 30, 2018	September 30, 2017
HQLA			
Eligible cash[a]	**$ 345**	$ 363	$ 390
Eligible securities[b][c]	**190**	166	179
Total HQLA[d]	**$ 535**	$ 529	$ 568
Net cash outflows	**$ 467**	$ 458	$ 475
LCR	**115%**	115%	120%
Net excess HQLA [d]	**$ 68**	$ 71	$ 93

(a) Represents cash on deposit at central banks, primarily Federal Reserve Banks.
(b) Predominantly U.S. Treasuries, U.S. Agency MBS, and sovereign bonds net of applicable haircuts under the LCR rules.
(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. and Chase Bank USA, N.A. that are not transferable to non-bank affiliates.

The Firm's average LCR was 115% for the three months ended September 30, 2018 and June 30, 2018.

The Firm's average LCR decreased during the three months ended September 30, 2018, compared with the prior year period due to a reduction in cash primarily driven by long-term debt maturities and CIB client-driven markets activities.

The Firm's average LCR may fluctuate from period to period, due to changes in its HQLA and estimated net cash outflows under the LCR as a result of ongoing business activity. The Firm's HQLA are expected to be available to meet its liquidity needs in a time of stress.

Other liquidity sources

As of September 30, 2018, in addition to assets reported in the Firm's HQLA under the LCR rule, the Firm had approximately $225 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. This includes HQLA-eligible securities included as part of the excess liquidity at JPMorgan Chase Bank, N.A. that are not transferable to non-bank affiliates.

As of September 30, 2018, the Firm also had approximately $298.9 billion of available borrowing capacity at various FHLBs, discount windows at Federal Reserve Banks and various other central banks as a result of collateral pledged by the Firm to such banks. This borrowing capacity excludes the benefit of securities reported in the Firm's HQLA or other unencumbered securities that are currently pledged at Federal Reserve Bank discount windows. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount windows and the various other central banks as a primary source of liquidity.

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 a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio is funded with a portion of the Firm's deposits, through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested 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. Securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities-debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. Refer to the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

The table below summarizes, by line of business, the deposit balances as of September 30, 2018, and December 31, 2017, and the average deposit balances for the three and nine months ended September 30, 2018 and 2017, respectively.

Deposits (in millions)	September 30, 2018	December 31, 2017	Three months ended September 30, Average 2018	Three months ended September 30, Average 2017	Nine months ended September 30, Average 2018	Nine months ended September 30, Average 2017
Consumer & Community Banking	**$ 677,260**	$ 659,885	**$ 674,211**	$ 645,732	**$ 669,244**	$ 636,257
Corporate & Investment Bank	**482,490**	455,883	**476,995**	461,961	**472,879**	444,064
Commercial Banking	**168,112**	181,512	**168,102**	176,095	**171,403**	175,265
Asset & Wealth Management	**130,497**	146,407	**133,021**	144,496	**138,885**	151,311
Corporate	**403**	295	**533**	2,739	**736**	4,152
Total Firm	**$ 1,458,762**	$ 1,443,982	**$ 1,452,862**	$ 1,431,023	**$ 1,453,147**	**$ 1,411,049**

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. A significant portion of the Firm's deposits are consumer 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, 2018 and December 31, 2017.

(in billions except ratios)	September 30, 2018	December 31, 2017
Deposits	**$ 1,458.8**	$ 1,444.0
Deposits as a % of total liabilities	**62%**	63%
Loans	**$ 954.3**	$ 930.7
Loans-to-deposits ratio	**65%**	64%

The Firm believes that average deposit balances are generally more representative of deposit trends than period-end deposit balances.

Average deposits increased for the three months ended September 30, 2018 in CCB and CIB, partially offset by declines in AWM, CB and Corporate.

- The increase in CCB reflects the continuation of growth from new customers, partially offset by balance migration into investment-related products, and in CIB reflects growth in operating deposits in Treasury Services driven by growth in client activity.
- The decline in AWM was driven by balance migration predominantly into the Firm's investment-related products, and in CB was primarily driven by the migration of non-operating deposits into higher-yielding investment products . The decline in Corporate was predominantly due to maturities of wholesale non-operating deposits, consistent with the Firm's efforts to reduce such deposits.

Average deposits increased for the nine months ended September 30, 2018 in CCB and CIB, partially offset by declines in AWM, CB and Corporate.

- The increase in CCB reflects the continuation of growth from new customers, partially offset by balance migration into investment-related products, and in CIB reflects growth in operating deposits in Treasury Services and Securities Services driven by growth in client activity.
- The decline in AWM was driven by balance migration predominantly into the Firm's investment-related products, and in CB was primarily driven by the migration of non-operating deposits into higher-yielding investment products. The decline in Corporate was predominantly due to maturities of wholesale non-operating deposits, consistent with the Firm's efforts to reduce such deposits.

For further information on deposit and liability balance trends, refer to the discussion of the Firm's Business Segment Results and the Consolidated Balance Sheets Analysis on pages 19-41 and pages 12–14, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of September 30, 2018, and December 31, 2017, and average balances for the three and nine months ended September 30, 2018 and 2017, respectively. For additional information, refer to the Consolidated Balance Sheets Analysis on pages 12–14 and Note 10.

Sources of funds (excluding deposits) (in millions)	September 30, 2018	December 31, 2017	Three months ended September 30, Average 2018	Three months ended September 30, Average 2017	Nine months ended September 30, Average 2018	Nine months ended September 30, Average 2017
Commercial paper	**$ 29,313**	$ 24,186	**$ 28,702**	$ 23,022	**$ 27,289**	$ 18,653
Other borrowed funds[a]	**10,857**	10,727	**11,172**	10,469	**11,716**	10,484
Total short-term unsecured funding[a]	**$ 40,170**	$ 34,913	**$ 39,874**	$ 33,491	**$ 39,005**	$ 29,137
Securities sold under agreements to repurchase[a][b]	**$ 168,450**	$ 147,713	**$ 174,436**	$ 169,638	**$ 178,929**	$ 174,777
Securities loaned[a][b]	**12,357**	9,211	**9,131**	10,946	**10,900**	13,370
Other borrowed funds[a]	**24,465**	16,889	**21,169**	19,467	**21,336**	15,136
Obligations of Firm-administered multi-seller conduits[c]	**$ 4,304**	$ 3,045	**$ 3,102**	$ 2,947	**$ 3,070**	$ 3,351
Total short-term secured funding[a]	**$ 209,576**	$ 176,858	**$ 207,838**	$ 202,998	**$ 214,235**	$ 206,634
Senior notes	**$ 155,099**	$ 155,852	**$ 154,820**	$ 159,270	**$ 152,046**	$ 154,148
Trust preferred securities[d]	**–**	690	**517**	2,336	**629**	2,340
Subordinated debt[d]	**16,426**	16,553	**16,079**	18,399	**16,106**	20,029
Structured notes[e]	**52,187**	45,727	**50,905**	44,157	**48,874**	42,025
Total long-term unsecured funding	**$ 223,712**	$ 218,822	**$ 222,321**	$ 224,162	**$ 217,655**	$ 218,542
Credit card securitization[c]	**$ 14,142**	$ 21,278	**$ 15,052**	$ 24,709	**$ 16,620**	$ 27,041
Other securitizations[c][f]	**–**	–	**–**	–	**–**	837
Federal Home Loan Bank ("FHLB") advances	**41,457**	60,617	**48,645**	67,288	**54,378**	72,504
Other long-term secured funding[g]	**4,955**	4,641	**5,013**	3,176	**4,832**	3,202
Total long-term secured funding	**$ 60,554**	$ 86,536	**$ 68,710**	$ 95,173	**$ 75,830**	$ 103,584
Preferred stock[h]	**$ 27,764**	$ 26,068	**$ 26,252**	$ 26,068	**$ 26,130**	$ 26,068
Common stockholders' equity[h]	**$ 231,192**	$ 229,625	**$ 230,439**	$ 231,861	**$ 228,995**	$ 229,937

(a) The prior period amounts have been revised to conform with the current period presentation.
(b) Primarily consists of short-term securities loaned or sold under agreements to repurchase.
(c) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(d) Subordinated debt includes $1.6 billion and $664 million of junior subordinated debentures distributed pro rata to the holders of trust preferred securities which were cancelled on December 18, 2017 and September 10, 2018, respectively. For further information refer to Note 19 of JPMorgan Chase's 2017 Annual Report.
(e) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.
(f) Other securitizations include securitizations of student loans. The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio. The Firm's wholesale businesses also securitize loans for client-driven transactions, which are not considered to be a source of funding for the Firm and are not included in the table.
(g) Includes long-term structured notes which are secured.
(h) For additional information on preferred stock and common stockholders' equity refer to Capital Risk Management on pages 44-48, Consolidated statements of changes in stockholders' equity, and Note 20 and Note 21 of JPMorgan Chase's 2017 Annual Report.

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 agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets. The increase at September 30, 2018, from December 31, 2017, reflected higher secured financing of trading assets-debt and equity instruments and client-driven market-making activities in CIB.

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.

The Firm's sources of short-term unsecured funding primarily consist of issuance of wholesale commercial paper. The increase in commercial paper was due to higher net issuance.

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 maximum flexibility in support of both bank and nonbank subsidiary funding needs. The Parent Company advances substantially all net funding proceeds to its subsidiary, the Intermediate Holding Company ("IHC"). The IHC does not issue debt to external counterparties. The presentation in the following table has been revised to provide the notional value of the long-term unsecured issuance and maturities or redemptions by the Parent Company and subsidiaries for the three and nine months ended September 30, 2018 and 2017. For additional information on the IHC and long-term debt, refer to Liquidity Risk Management and Note 19 of JPMorgan Chase's 2017 Annual Report.

Long-term unsecured funding

	Three months ended September 30,		Nine months ended September 30,		Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017
(Notional in millions)	Parent Company[b]				Subsidiaries[b]			
Issuance								
Senior notes issued in the U.S. market	**$ 6,000**	$ 4,000	**$ 17,000**	$ 18,750	**$ 1,250**	$ –	**$ 8,761**	$ –
Senior notes issued in non-U.S. markets	**–**	–	**1,175**	2,220	**–**	–	**–**	–
Total senior notes	**6,000**	4,000	**18,175**	20,970	**1,250**	–	**8,761**	–
Subordinated debt	**–**	–	**–**	–	**–**	–	**–**	–
Structured notes[a]	**387**	337	**2,047**	2,046	**5,934**	6,250	**20,159**	21,135
Total long-term unsecured funding – issuance	**$ 6,387**	$ 4,337	**$ 20,222**	$ 23,016	**$ 7,184**	$ 6,250	**$ 28,920**	$ 21,135
Maturities/redemptions								
Senior notes	**$ 646**	$ 4,000	**$ 18,633**	$ 16,826	**$ 1,503**	$ 152	**$ 4,466**	$ 1,368
Subordinated debt	**15**	395	**15**	3,401	**–**	500	**–**	500
Structured notes	**582**	1,505	**2,465**	4,785	**3,474**	4,152	**12,104**	13,245
Total long-term unsecured funding – maturities/ redemptions	**$ 1,243**	$ 5,900	**$ 21,113**	$ 25,012	**$ 4,977**	$ 4,804	**$ 16,570**	$ 15,113

(a) Includes certain TLAC-eligible long-term unsecured debt issued by the Parent Company.
(b) The prior period amounts have been revised to conform with the current period presentation.

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs. 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, 2018 and 2017, respectively.

Long-term secured funding

	Three months ended September 30,				Nine months ended September 30,			
	Issuance		Maturities/Redemptions		Issuance		Maturities/Redemptions	
(in millions)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Credit card securitization	**$ –**	$ –	**$ 2,375**	$ 2,264	**$ 1,396**	$ 1,545	**$ 8,500**	$ 9,270
Other securitizations[a]	**–**	–	**–**	–	**–**	–	**–**	55
FHLB advances	**–**	–	**10,704**	4,694	**4,000**	–	**23,157**	15,748
Other long-term secured funding[b][c]	**117**	189	**139**	516	**312**	726	**161**	640
Total long-term secured funding	**$ 117**	$ 189	**$ 13,218**	$ 7,474	**$ 5,708**	$ 2,271	**$ 31,818**	$ 25,713

(a) Other securitizations includes securitizations of student loans. The Firm deconsolidated the student loan securitization entities in the second quarter of 2017 as it no longer had a controlling financial interest in these entities as a result of the sale of the student loan portfolio.
(b) Includes long-term structured notes which are secured.
(c) The prior period amounts have been revised to conform with the current period presentation.

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. For further description of the client-driven loan securitizations, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

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.

Additionally, the Firm's funding requirements for VIEs and other third-party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, refer to SPEs on page 15, and Liquidity risk and credit-related contingent features in Note 4.

The credit ratings of the Parent Company and the Firm's principal bank and nonbank subsidiaries as of September 30, 2018, except as noted below, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC J.P. Morgan Securities plc		
September 30, 2018	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service[(a)]	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	AA-	F1+	Stable	AA	F1+	Stable	AA	F1+	Stable

(a) Moody's ratings as of October 25, 2018

On October 25, 2018, Moody's upgraded the Parent Company's long-term issuer rating to A2 (previously A3) and short-term issuer rating to P-1 (previously P-2). The long-term issuer ratings were also upgraded for JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. to Aa2 (previously Aa3), and for J.P. Morgan Securities LLC and J.P. Morgan Securities plc to Aa3 (previously A1).

On June 21, 2018, Fitch upgraded the Parent Company's long-term issuer rating to AA- (previously A+) and short-term issuer rating to F1+ (previously F1). The long-term issuer ratings were also upgraded to AA for JPMorgan Chase Bank, N.A, Chase Bank USA, N.A., J.P. Morgan Securities LLC and J.P. Morgan Securities plc (all previously AA-).

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced. 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.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital and liquidity ratios, strong credit quality and risk management controls, and diverse funding sources. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

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. For a further discussion of Credit Risk refer to pages 55-72. For a further discussion on Investment Portfolio Risk, refer to page 72. For a further discussion of the Firm's Credit and Investment Risk Management framework and organization, and the identification, monitoring and management, refer to Credit and Investment Risk Management on pages 99–120 of JPMorgan Chase's 2017 Annual Report.

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

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. For further information regarding these loans, refer to Notes 2 and 3. For additional information on the Firm's loans, lending-related commitments and derivative receivables, including the Firm's accounting policies, refer to Notes 11, 20, and 4, respectively.

For further information regarding the credit risk inherent in the Firm's cash placed with banks, refer to Wholesale credit exposure – industry exposures on pages 64–66; for information regarding the credit risk inherent in the Firm's investment securities portfolio, refer to Note 9 of this Form 10-Q, and Note 10 of JPMorgan Chase's 2017 Annual Report; and for information regarding the credit risk inherent in the securities financing portfolio, refer to Note 10 of this Form 10-Q, and Note 11 of JPMorgan Chase's 2017 Annual Report.

For a further discussion of the consumer credit environment and consumer loans, refer to Consumer Credit Portfolio on pages 102-107 of JPMorgan Chase's 2017 Annual Report and Note 11 of this Form 10-Q. For a further discussion of the wholesale credit environment and wholesale loans, refer to Wholesale Credit Portfolio on pages 108–116 of JPMorgan Chase's 2017 Annual Report and Note 11 of this Form 10-Q.

Total credit portfolio

(in millions)	Credit exposure		Nonperforming[d][e]	
	Sep 30, 2018	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Loans retained	**$ 947,651**	$ 924,838	**$ 4,630**	$ 5,943
Loans held-for-sale	**3,680**	3,351	**14**	–
Loans at fair value	**2,987**	2,508	**–**	–
Total loans – reported	**954,318**	930,697	**4,644**	5,943
Derivative receivables	**60,062**	56,523	**90**	130
Receivables from customers and other[a]	**26,137**	26,272	**–**	–
Total credit-related assets	**1,040,517**	1,013,492	**4,734**	6,073
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**268**	311
Other	**NA**	NA	**32**	42
Total assets acquired in loan satisfactions	**NA**	NA	**300**	353
Lending-related commitments	**1,048,674**	991,482	**252**	731
Total credit portfolio	**$ 2,089,191**	$ 2,004,974	**$ 5,286**	$ 7,157
Credit derivatives used in credit portfolio management activities[b]	**$ (14,206)**	$ (17,609)	**$ –**	$ –
Liquid securities and other cash collateral held against derivatives[c]	**(16,943)**	(16,108)	**NA**	NA

(in millions, except ratios)	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017
Net charge-offs[f]	**$ 1,033**	$ 1,265	**$ 3,620**	$ 4,123
Average retained loans				
Loans	**942,583**	903,892	**931,766**	894,170
Loans – excluding residential real estate PCI loans	**916,205**	871,465	**903,377**	860,443
Net charge-off rates[f]				
Loans	**0.43%**	0.56%	**0.52%**	0.62%
Loans – excluding PCI	**0.45**	0.58	**0.54**	0.64

(a) Receivables from customers and other primarily represents held-for-investment margin loans to brokerage customers.
(b) 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. For additional information, refer to Credit derivatives on page 68 and Note 4.
(c) Includes collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.
(d) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.
(e) At September 30, 2018, and December 31, 2017, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $2.9 billion and $4.3 billion, respectively, and real estate owned ("REO") insured by U.S. government agencies of $78 million and $95 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").
(f) For the nine months ended September 30, 2017, excluding net charge-offs of $467 million related to the student loan portfolio transfer, the net charge-off rate for Loans would have been 0.55% and for Loans – excluding PCI would have been 0.57%.

CONSUMER CREDIT PORTFOLIO

The Firm's retained consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, 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. For further information on consumer loans, refer to Note 11 of this Form 10-Q and Consumer Credit Portfolio on pages 102-107 and Note 12 of JPMorgan Chase's 2017 Annual Report. For further information on lending-related commitments, refer to Note 20 of this Form 10-Q and Note 27 of JPMorgan Chase's 2017 Annual Report.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AWM, and prime mortgage loans held by Corporate. For further information about the Firm's nonaccrual and charge-off accounting policies, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

Consumer credit portfolio

					Three months ended September 30,				Nine months ended September 30,			
	Credit exposure		Nonaccrual loans[i][j]		Net charge-offs/ (recoveries)[k][l]		Average annual net charge-off/ (recoveries) rate[k][l][m]		Net charge-offs/ (recoveries)[d][k]		Average annual net charge-off/ (recoveries) rate[d][k][m]	
(in millions, except ratios)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Consumer, excluding credit card												
Loans, excluding PCI loans and loans held-for-sale												
Residential mortgage	**$ 231,361**	$ 216,496	**$ 1,880**	$ 2,175	**$ (105)**	$ 3	**(0.18)%**	0.01%	**$ (256)**	$ 3	**(0.15)%**	–%
Home equity	**29,318**	33,450	**1,382**	1,610	**(12)**	13	**(0.16)**	0.15	**(2)**	71	**(0.01)**	0.26
Auto[a][b]	**63,619**	66,242	**137**	141	**56**	116	**0.35**	0.71	**182**	245	**0.37**	0.50
Consumer & Business Banking[b][c]	**26,451**	25,789	**237**	283	**68**	71	**1.02**	1.12	**171**	184	**0.88**	0.99
Student[d]	**–**	–	**–**	–	**–**	–	**–**	–	**–**	498	**–**	NM
Total loans, excluding PCI loans and loans held-for-sale	**350,749**	341,977	**3,636**	4,209	**7**	203	**0.01**	0.24	**95**	1,001	**0.04**	0.40
Loans – PCI												
Home equity	**9,393**	10,799	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Prime mortgage	**4,931**	6,479	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Subprime mortgage	**2,072**	2,609	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Option ARMs[e]	**8,813**	10,689	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – PCI	**25,209**	30,576	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA	**NA**	NA
Total loans – retained	**375,958**	372,553	**3,636**	4,209	**7**	203	**0.01**	0.22	**95**	1,001	**0.03**	0.37
Loans held-for-sale	**104**	128	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Total consumer, excluding credit card loans	**376,062**	372,681	**3,636**	4,209	**7**	203	**0.01**	0.22	**95**	1,001	**0.03**	0.37
Lending-related commitments[f]	**50,630**	48,553										
Receivables from customers[g]	**155**	133										
Total consumer exposure, excluding credit card	**426,847**	421,367										
Credit card												
Loans retained[h]	**147,856**	149,387	**–**	–	**1,073**	1,019	**2.91**	2.87	**3,407**	3,049	**3.16**	2.94
Loans held-for-sale	**25**	124	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Total credit card loans	**147,881**	149,511	**–**	–	**1,073**	1,019	**2.91**	2.87	**3,407**	3,049	**3.16**	2.94
Lending-related commitments[f]	**600,728**	572,831										
Total credit card exposure	**748,609**	722,342										
Total consumer credit portfolio	**$ 1,175,456**	$ 1,143,709	**$ 3,636**	$ 4,209	**$ 1,080**	$ 1,222	**0.82 %**	0.95%	**$3,502**	$4,050	**0.90 %**	1.07%
Memo: Total consumer credit portfolio, excluding PCI	**$ 1,150,247**	$ 1,113,133	**$ 3,636**	$ 4,209	**$ 1,080**	$ 1,222	**0.86 %**	1.02%	**$3,502**	$4,050	**0.96 %**	1.15%

(a) At September 30, 2018, and December 31, 2017, excluded operating lease assets of $19.6 billion and $17.1 billion, respectively. These operating lease assets are included in other assets on the Firm's Consolidated balance sheets. The risk of loss on these assets relates to the residual value of the leased vehicles, which is managed through projection of the lease residual value at lease origination, periodic review of residual values, and through arrangements with certain auto manufacturers that mitigates this risk.

(b) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included within the consumer portfolio.

(c) Predominantly includes Business Banking loans.

(d) For the nine months ended September 30, 2017, excluding net charge-offs of $467 million related to the student loan portfolio sale, the net charge-off rate for Total consumer, excluding credit card and PCI loans and loans held-for-sale would have been 0.22%; Total consumer – retained excluding credit card loans would have been 0.20%; Total consumer credit portfolio would have been 0.95%; and Total consumer credit portfolio, excluding PCI loans would have been 1.02%.

(e) At both September 30, 2018, and December 31, 2017, approximately 68% of the PCI option adjustable rate mortgage ("ARM") portfolio has been modified into fixed-rate, fully amortizing loans.

(f) Credit card and home equity 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, 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. For further information, refer to Note 20.
(g) Receivables from customers represent held-for-investment margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.
(h) Includes billed interest and fees net of an allowance for uncollectible interest and fees.
(i) At September 30, 2018 and December 31, 2017, nonaccrual loans excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $2.9 billion and $4.3 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status, as permitted by regulatory guidance issued by the FFIEC.
(j) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.
(k) Net charge-offs and the net charge-off rates excluded write-offs in the PCI portfolio of $58 million and $20 million for the three months ended September 30, 2018 and 2017, respectively, and $151 million and $66 million for the nine months ended September 30, 2018 and 2017, respectively. These write-offs decreased the allowance for loan losses for PCI loans. Refer to Allowance for Credit Losses on pages 69–71 for further information.
(l) Net charge-offs and net charge-off rates for the three months ended September 30, 2017 included $63 million of incremental charge-offs recorded in accordance with regulatory guidance regarding the timing of loss recognition for certain auto and residential real estate loans in bankruptcy and auto loans where assets were acquired in loan satisfaction.
(m) Average consumer loans held-for-sale were $196 million and $339 million for the three months ended September 30, 2018 and 2017, respectively, and $240 million and $1.9 billion for the nine months ended September 30, 2018 and 2017, respectively. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased from December 31, 2017 predominantly due to originations of high-quality prime mortgage loans that have been retained on the balance sheet, largely offset by paydowns and the charge-off or liquidation of delinquent loans.

PCI loans are excluded from the following discussions of individual loan products and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, refer to Note 11 of this Form 10-Q.

Residential mortgage: The residential mortgage portfolio predominantly consists of high-quality prime mortgage loans, with approximately 1% consisting of subprime mortgage loans. These subprime mortgage loans continue to run off and are performing in line with expectations. The residential mortgage portfolio, including loans held-for-sale, increased from December 31, 2017 as the amount of retained originations of primarily high-quality prime mortgage loans exceeded paydowns. Residential mortgage 30+ day delinquencies decreased from December 31, 2017. Nonaccrual loans decreased from December 31, 2017 due to lower delinquencies. Net recoveries for the three and nine months ended September 30, 2018 improved when compared with the same period in the prior year reflecting loan sales as well as continued improvement in home prices and lower delinquencies.

At September 30, 2018, and December 31, 2017, the Firm's residential mortgage portfolio included $21.3 billion and $20.2 billion, respectively, of interest-only loans. 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. To date, losses on this portfolio generally have been consistent with the broader residential mortgage portfolio. The Firm continues to monitor the risks associated with these loans.

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. 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, 2018**	December 31, 2017
Current	**$ 2,741**	$ 2,401
30-89 days past due	**1,563**	1,958
90 or more days past due	**2,896**	4,264
Total government guaranteed loans	**$ 7,200**	$ 8,623

Home equity: The home equity portfolio declined from December 31, 2017 primarily reflecting loan paydowns. The amount of 30+ day delinquencies decreased from December 31, 2017. Nonaccrual loans decreased from December 31, 2017 due to lower delinquencies. Net recoveries for the three and nine months ended September 30, 2018 improved when compared with the same period in the prior year, as a result of continued improvement in home prices and lower delinquencies.

At September 30, 2018, approximately 90% of the Firm's home equity portfolio consisted of home equity lines of credit ("HELOCs") and the remainder consisted of home equity loans ("HELOANs"). The carrying value of HELOCs outstanding was $26 billion at September 30, 2018. This amount included $12 billion of HELOCs that have recast from interest-only to fully amortizing payments or have been modified and $4 billion of interest-only balloon HELOCs, which primarily mature after 2030. The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile.

The Firm monitors risks associated with junior lien loans where the borrower has a senior lien loan that is either delinquent or has been modified. These loans are considered "high-risk seconds" and are classified as nonaccrual as they are considered to pose a higher risk of default than other junior lien loans. The carrying value of high-risk seconds declined from December 31, 2017.

For further information on the Firm's home equity portfolio, refer to Note 11 of this Form 10-Q and Consumer Credit Portfolio on pages 102-107 of JPMorgan Chase's 2017 Annual Report.

Auto: The auto loan portfolio, which predominantly consists of prime-quality loans, declined when compared with December 31, 2017, as paydowns and the charge-off or liquidation of delinquent loans were predominantly offset by new originations. Nonaccrual loans decreased from December 31, 2017. Net charge-offs for the three and nine months ended September 30, 2018 declined when compared with the same period in the prior year primarily as a result of an incremental $49 million recorded in the prior year in accordance with regulatory guidance regarding the timing of loss recognition for certain loans in bankruptcy and loans where assets were acquired in loan satisfaction.

Consumer & Business Banking: Consumer & Business Banking loans increased when compared with December 31, 2017 due to higher loan originations, predominantly offset by paydowns and charge-offs of delinquent loans. Nonaccrual loans decreased from December 31, 2017. Net charge-offs for the three and nine months ended September 30, 2018 decreased when compared with the same period in the prior year.

Purchased credit-impaired loans: PCI loans decreased from December 31, 2017 due to portfolio run off and loan sales. As of September 30, 2018, approximately 11% of the option ARM PCI loans were delinquent and approximately 68% of the portfolio had been modified into fixed-rate, fully amortizing loans. The borrowers for substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Summary of PCI loans lifetime principal loss estimates

	Lifetime loss estimates[a]		Life-to-date liquidation losses[b]	
(in billions)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Home equity	**$ 14.1**	$ 14.2	**$ 13.0**	$ 12.9
Prime mortgage	**4.0**	4.0	**3.8**	3.8
Subprime mortgage	**3.3**	3.3	**3.1**	3.1
Option ARMs	**10.2**	10.0	**9.9**	9.7
Total	**$ 31.6**	$ 31.5	**$ 29.8**	$ 29.5

(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $556 million and $842 million at September 30, 2018, and December 31, 2017, respectively.

(b) Represents both realization of loss upon loan resolution and any principal forgiven upon modification.

Geographic composition of residential real estate loans

For information on the geographic composition of the Firm's residential real estate loans, refer to Note 11.

Current estimated loan-to-value ratio of residential real estate loans

Average current estimated loan-to-value ("LTV") ratios have declined consistent with recent improvements in home prices, customer paydowns, and charge-offs or liquidations of higher LTV loans. For further information on current estimated LTVs on residential real estate loans, refer to Note 11.

Loan modification activities for residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. The performance of modifications to the residential real estate portfolios as measured through cumulative redefault rates, were not materially different from December 31, 2017. For further information on the Firm's cumulative redefault rates refer to Consumer Credit Portfolio on pages 102-107 of JPMorgan Chase's 2017 Annual Report.

Certain loans that were modified under the U.S. Government's Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans generally began to increase commencing in 2014 by 1% per year, and will continue to do so, until the rate reaches a specified cap. The cap on these loans is typically at a prevailing market interest rate for a fixed-rate mortgage loan as of the modification date. At September 30, 2018, the carrying value of non-PCI loans and the unpaid principal balance of PCI loans modified in step-rate modifications, which have not yet met their specified caps, were $2 billion and $4 billion, respectively. The Firm continues to monitor this risk exposure and the impact of these potential interest rate

increases is considered in the Firm's allowance for loan losses.

The following table presents information as of September 30, 2018, and December 31, 2017, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. For further information on modifications for the three and nine months ended September 30, 2018 and 2017, refer to Note 11.

Modified residential real estate loans

(in millions)	September 30, 2018		December 31, 2017	
	Retained loans	Non-accrual retained loans[d]	Retained loans	Non-accrual retained loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Residential mortgage	**$ 4,722**	**$ 1,536**	$ 5,620	$ 1,743
Home equity	**2,056**	**993**	2,118	1,032
Total modified residential real estate loans, excluding PCI loans	**$ 6,778**	**$ 2,529**	$ 7,738	$ 2,775
Modified PCI loans[c]				
Home equity	**$ 2,135**	**NA**	$ 2,277	NA
Prime mortgage	**3,296**	**NA**	4,490	NA
Subprime mortgage	**2,162**	**NA**	2,678	NA
Option ARMs	**6,660**	**NA**	8,276	NA
Total modified PCI loans	**$ 14,253**	**NA**	$ 17,721	NA

(a) Amounts represent the carrying value of modified residential real estate loans.
(b) At September 30, 2018, and December 31, 2017, $4.0 billion and $3.8 billion, 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. For additional information about sales of loans in securitization transactions with Ginnie Mae, refer to Note 13.
(c) Amounts represent the unpaid principal balance of modified PCI loans.
(d) At September 30, 2018, and December 31, 2017, nonaccrual loans included $2.0 billion and $2.2 billion, respectively, of troubled debt restructurings ("TDRs") for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, refer to Note 11.

Nonperforming assets

The following table presents information as of September 30, 2018, and December 31, 2017, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

(in millions)	September 30, 2018	December 31, 2017
Nonaccrual loans[b]		
Residential real estate	**$ 3,262**	$ 3,785
Other consumer	**374**	424
Total nonaccrual loans	**3,636**	4,209
Assets acquired in loan satisfactions		
Real estate owned	**205**	225
Other	**32**	40
Total assets acquired in loan satisfactions	**237**	265
Total nonperforming assets	**$ 3,873**	$ 4,474

(a) At September 30, 2018, and December 31, 2017, nonperforming assets excluded mortgage loans 90 or more days past due and insured by U.S. government agencies of $2.9 billion and $4.3 billion, respectively, and REO insured by U.S. government agencies of $78 million and $95 million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Excludes PCI loans, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. The Firm is recognizing interest income on each pool of loans as each of the pools is performing.

Nonaccrual loans in the residential real estate portfolio at September 30, 2018 decreased to $3.3 billion from $3.8 billion at December 31, 2017, of which 25% and 26% were greater than 150 days past due, respectively. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 33% and 40% to the estimated net realizable value of the collateral at September 30, 2018, and December 31, 2017, respectively.

Nonaccrual loans: The following table presents changes in consumer, excluding credit card, nonaccrual loans for the nine months ended September 30, 2018 and 2017.

Nonaccrual loan activity

Nine months ended September 30, (in millions)	2018	2017
Beginning balance	**$ 4,209**	$ 4,820
Additions	**2,174**	2,553
Reductions:		
Principal payments and other[a]	**1,119**	1,245
Charge-offs	**354**	561
Returned to performing status	**1,057**	1,121
Foreclosures and other liquidations	**217**	285
Total reductions	**2,747**	3,212
Net changes	**(573)**	(659)
Ending balance	**$ 3,636**	$ 4,161

(a) Other reductions includes loan sales.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, refer to Note 11.

Credit card

Total credit card loans decreased from December 31, 2017 due to seasonality. The September 30, 2018 30+ day delinquency rate seasonally decreased to 1.75% from 1.80% at December 31, 2017, and the September 30, 2018 90+ day delinquency rate decreased to 0.85% from 0.92% at December 31, 2017, in line with expectations. Net charge-offs increased for the three and nine months ended September 30, 2018 when compared with the same periods in the prior year, as expected, primarily due to the seasoning of more recent vintages with higher loss rates, as anticipated given underwriting standards at the time of origination.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued and billed interest and fee income.

Geographic and FICO composition of credit card loans

For information on the geographic and FICO composition of the Firm's credit card loans, refer to Note 11.

Modifications of credit card loans

At September 30, 2018 and December 31, 2017, the Firm had $1.3 billion and $1.2 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms.

For additional information about loan modification programs to borrowers, refer to Note 11.

WHOLESALE CREDIT PORTFOLIO

In its wholesale businesses, the Firm is exposed to credit risk primarily through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services (such as cash management and clearing activities), securities financing activities and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans that it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The credit quality of the wholesale portfolio was stable for the nine months ended September 30, 2018, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. Refer to the industry discussion on pages 64–66 for further information. Retained loans increased across all wholesale lines of business, predominantly driven by CIB, including loans to financial institution and commercial and industrial clients, and in AWM due to an increase in loans to Wealth Management clients globally. 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.

In the following tables, the Firm's wholesale credit portfolio includes exposure held in CIB, CB, AWM and Corporate, and excludes all exposure managed by CCB.

Wholesale credit portfolio

	Credit exposure		Nonperforming[c]	
(in millions)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Loans retained	**$ 423,837**	$ 402,898	**$ 994**	$ 1,734
Loans held-for-sale	**3,551**	3,099	**14**	–
Loans at fair value	**2,987**	2,508	**–**	–
Loans	**430,375**	408,505	**1,008**	1,734
Derivative receivables	**60,062**	56,523	**90**	130
Receivables from customers and other[a]	**25,982**	26,139	–	–
Total wholesale credit-related assets	**516,419**	491,167	**1,098**	1,864
Lending-related commitments	**397,316**	370,098	**252**	731
Total wholesale credit exposure	**$ 913,735**	$ 861,265	**$ 1,350**	$ 2,595
Credit derivatives used in credit portfolio management activities[b]	**$ (14,206)**	$ (17,609)	**$ –**	$ –
Liquid securities and other cash collateral held against derivatives	**(16,943)**	(16,108)	**NA**	NA

(a) Receivables from customers and other include $26.0 billion of held-for-investment margin loans at both September 30, 2018, and December 31, 2017, to prime brokerage customers in CIB and AWM; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.

(b) 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. For additional information, refer to Credit derivatives on page 68, and Note 4.

(c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of September 30, 2018, and December 31, 2017. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings assigned by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[d]				Ratings profile			
					Investment-grade	Noninvestment-grade		
September 30, 2018 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 136,832**	**$ 184,166**	**$ 102,839**	**$ 423,837**	**$ 324,343**	**$ 99,494**	**$ 423,837**	**77%**
Derivative receivables				**60,062**			**60,062**	
Less: Liquid securities and other cash collateral held against derivatives				**(16,943)**			**(16,943)**	
Total derivative receivables, net of all collateral	**11,650**	**12,637**	**18,832**	**43,119**	**34,602**	**8,517**	**43,119**	**80**
Lending-related commitments	**92,332**	**291,650**	**13,334**	**397,316**	**297,286**	**100,030**	**397,316**	**75**
Subtotal	**240,814**	**488,453**	**135,005**	**864,272**	**656,231**	**208,041**	**864,272**	**76**
Loans held-for-sale and loans at fair value[a]				**6,538**			**6,538**	
Receivables from customers and other				**25,982**			**25,982**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 896,792**			**$ 896,792**	
Credit derivatives used in credit portfolio management activities[b][c]	**$ (1,586)**	**$ (7,053)**	**$ (5,567)**	**$ (14,206)**	**$ (12,537)**	**$ (1,669)**	**$ (14,206)**	**88%**

	Maturity profile[d]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2017 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	$ 121,643	$ 177,033	$ 104,222	$ 402,898	$ 311,681	$ 91,217	$ 402,898	77%
Derivative receivables				56,523			56,523	
Less: Liquid securities and other cash collateral held against derivatives				(16,108)			(16,108)	
Total derivative receivables, net of all collateral	9,882	10,463	20,070	40,415	32,373	8,042	40,415	80
Lending-related commitments	80,273	275,317	14,508	370,098	274,127	95,971	370,098	74
Subtotal	211,798	462,813	138,800	813,411	618,181	195,230	813,411	76
Loans held-for-sale and loans at fair value[a]				5,607			5,607	
Receivables from customers and other				26,139			26,139	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 845,157			$ 845,157	
Credit derivatives used in credit portfolio management activities[b][c]	$ (1,807)	$ (11,011)	$ (4,791)	$ (17,609)	$ (14,984)	$ (2,625)	$ (17,609)	85%

(a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not qualify for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased. Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection used in credit portfolio management activities are executed with investment-grade counterparties.
(d) 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, 2018, 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. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was $11.2 billion at September 30, 2018, compared with $15.6 billion at December 31, 2017. The decrease was largely driven by select names within Oil & Gas, including a loan sale.

Below are summaries of the Firm's exposures as of September 30, 2018, and December 31, 2017. The industry of risk category is generally based on the client or counterparty's primary business activity. For additional information on industry concentrations, refer to Note 4 of JPMorgan Chase's 2017 Annual Report.

Wholesale credit exposure – industries[a]

As of or for the nine months ended September 30, 2018 (in millions)	Credit exposure[e]	Investment - grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 141,053	$ 117,770	$ 22,312	$ 841	$ 130	$ 68	$ (19)	$ –	$ (3)
Consumer & Retail	89,751	58,429	29,438	1,769	115	41	49	(252)	(4)
Technology, Media & Telecommunications	74,286	48,676	23,560	2,005	45	9	–	(723)	(17)
Industrials	57,810	38,374	18,202	1,052	182	118	–	(146)	(24)
Healthcare	53,952	37,912	15,223	788	29	22	(4)	–	(134)
Banks & Finance Cos	52,194	37,491	14,376	323	4	27	–	(622)	(3,794)
Oil & Gas	45,205	24,985	18,236	1,641	343	–	33	(349)	(5)
Asset Managers	41,951	36,286	5,646	5	14	11	–	–	(5,752)
Utilities	28,944	24,312	4,321	158	153	–	38	(199)	(74)
State & Municipal Govt[b]	26,381	25,772	609	–	–	16	(1)	(20)	(16)
Central Govt	18,935	18,778	104	53	–	3	–	(8,688)	(1,972)
Automotive	17,385	9,677	7,398	300	10	1	–	(226)	–
Chemicals & Plastics	17,353	11,108	6,227	18	–	1	–	(25)	–
Transportation	16,225	10,058	5,622	482	63	45	6	(32)	(51)
Metals & Mining	14,320	7,262	6,768	247	43	5	–	(278)	(3)
Insurance	13,704	10,323	3,342	–	39	–	–	(37)	(2,513)
Financial Markets Infrastructure	5,697	5,555	142	–	–	–	–	–	(26)
Securities Firms	4,599	3,129	1,470	–	–	–	–	(230)	(674)
All other[c]	161,470	144,967	16,124	213	166	1,111	17	(2,379)	(1,881)
Subtotal	$ 881,215	$ 670,864	$ 199,120	$ 9,895	$ 1,336	$ 1,478	$ 119	$ (14,206)	$ (16,943)
Loans held-for-sale and loans at fair value	6,538								
Receivables from customers and other	25,982								
Total[d]	$ 913,735								

(continued from previous page)

As of or for the year ended December 31, 2017 (in millions)	Credit exposure[e]	Investment - grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 139,409	$ 115,401	$ 23,012	$ 859	$ 137	$ 254	$ (4)	$ –	$ (2)
Consumer & Retail	87,679	55,737	29,619	1,791	532	30	34	(275)	(9)
Technology, Media & Telecommunications	59,274	36,510	20,453	2,258	53	14	(12)	(910)	(19)
Industrials	55,272	37,198	16,770	1,159	145	150	(1)	(196)	(21)
Healthcare	55,997	42,643	12,731	585	38	82	(1)	–	(207)
Banks & Finance Cos	49,037	34,654	13,767	612	4	1	6	(1,216)	(3,174)
Oil & Gas	41,317	21,430	14,854	4,046	987	22	71	(747)	(1)
Asset Managers	32,531	28,029	4,484	4	14	27	–	–	(5,290)
Utilities	29,317	24,486	4,383	227	221	–	11	(160)	(56)
State & Municipal Govt[b]	28,633	27,977	656	–	–	12	5	(130)	(524)
Central Govt	19,182	18,741	376	65	–	4	–	(10,095)	(2,520)
Automotive	14,820	9,321	5,278	221	–	10	1	(284)	–
Chemicals & Plastics	15,945	11,107	4,764	74	–	4	–	–	–
Transportation	15,797	9,870	5,302	527	98	9	14	(32)	(131)
Metals & Mining	14,171	6,989	6,822	321	39	3	(13)	(316)	(1)
Insurance	14,089	11,028	2,981	–	80	1	–	(157)	(2,195)
Financial Markets Infrastructure	5,036	4,775	261	–	–	–	–	–	(23)
Securities Firms	4,113	2,559	1,553	1	–	–	–	(274)	(335)
All other[c]	147,900	134,110	13,283	260	247	901	8	(2,817)	(1,600)
Subtotal	$ 829,519	$ 632,565	$ 181,349	$ 13,010	$ 2,595	$ 1,524	$ 119	$ (17,609)	$ (16,108)
Loans held-for-sale and loans at fair value	5,607								
Receivables from customers and other	26,139								
Total[d]	$ 861,265								

(a) The industry rankings presented in the table as of December 31, 2017, are based on the industry rankings of the corresponding exposures at September 30, 2018, not actual rankings of such exposures at December 31, 2017.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at September 30, 2018, and December 31, 2017, noted above, the Firm held: $9.5 billion and $9.8 billion, respectively, of trading securities; $38.1 billion and $32.3 billion, respectively, of AFS securities; and $4.8 billion and $14.4 billion, respectively, of held-to-maturity ("HTM") securities, issued by U.S. state and municipal governments. For further information, refer to Note 2 and Note 9.

(c) All other includes: individuals (predominantly Wealth Management clients within AWM), SPEs, and private education and civic organizations, representing approximately 59%, 38%, and 3%, respectively, at September 30, 2018, and 59%, 37%, and 4%, respectively, at December 31, 2017.

(d) Excludes cash placed with banks of $410.5 billion and $421.0 billion, at September 30, 2018, and December 31, 2017, respectively, which is predominantly placed with various central banks, primarily Federal Reserve Banks.

(e) Credit exposure is net of risk participations and excludes the benefit of credit derivatives used in credit portfolio management activities held against derivative receivables or loans and liquid securities and other cash collateral held against derivative receivables.

(f) 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.

Real Estate

Presented below is additional information on the Real Estate industry to which the Firm has significant exposure.

Real Estate exposure increased $1.6 billion to $141.1 billion during the nine months ended September 30, 2018, while the investment-grade percentage of the portfolio remained flat at 83%. For further information on Real Estate loans, refer to Note 11.

	September 30, 2018				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Multifamily[a]	**$ 85,410**	**$ 14**	**$ 85,424**	**89%**	**93%**
Other	**55,527**	**102**	**55,629**	**75**	**65**
Total Real Estate Exposure[b]	**140,937**	**116**	**141,053**	**83**	**82**

	December 31, 2017				
(in millions, except ratios)	Loans and Lending-related Commitments	Derivative Receivables	Credit exposure	% Investment-grade	% Drawn[c]
Multifamily[a]	$ 84,635	$ 34	$ 84,669	89%	92%
Other	54,620	120	54,740	74	66
Total Real Estate Exposure[b]	139,255	154	139,409	83	82

(a) Multifamily exposure is largely in California.
(b) Real Estate exposure is predominantly secured; unsecured exposure is predominantly investment-grade.
(c) Represents drawn exposure as a percentage of credit exposure.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of clients, ranging from large corporate and institutional clients to high-net-worth individuals. For a further discussion on loans, including information on credit quality indicators and sales of loans, refer to Note 11.

The following table presents the change in the nonaccrual loan portfolio for the nine months ended September 30, 2018 and 2017.

Wholesale nonaccrual loan activity

Nine months ended September 30, (in millions)	**2018**	2017
Beginning balance	**$ 1,734**	$ 2,063
Additions	**570**	993
Reductions:		
Paydowns and other	**541**	997
Gross charge-offs	**251**	155
Returned to performing status	**217**	184
Sales	**287**	248
Total reductions	**1,296**	1,584
Net changes	**(726)**	(591)
Ending balance	**$ 1,008**	$ 1,472

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, 2018 and 2017. 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,	
	2018	2017	**2018**	2017
Loans – reported				
Average loans retained	**$420,597**	$ 395,420	**$ 413,537**	$ 390,062
Gross charge-offs	**23**	55	**264**	154
Gross recoveries	**(70)**	(12)	**(146)**	(81)
Net charge-offs/ (recoveries)	**(47)**	43	**118**	73
Net charge-off/ (recovery) rate	**(0.04)%**	0.04%	**0.04%**	0.03%

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to address the financing needs of its clients. The contractual amounts of these financial instruments represent the maximum possible credit risk should the clients draw down on these commitments or 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 are refinanced, extended, cancelled, or expire without being drawn upon or a default occurring. In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's expected future credit exposure or funding requirements. For further information on wholesale lending-related commitments, refer to Note 20 .

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 and other market risk exposure. For a further discussion of derivative contracts, refer to Note 4.

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

Derivative receivables

(in millions)	Derivative receivables	
	September 30, 2018	December 31, 2017
Interest rate	**$ 23,397**	$ 24,673
Credit derivatives	**582**	869
Foreign exchange	**17,043**	16,151
Equity	**10,104**	7,882
Commodity	**8,936**	6,948
Total, net of cash collateral	**60,062**	56,523
Liquid securities and other cash collateral held against derivative receivables[(a)]	**(16,943)**	(16,108)
Total, net of collateral	**$ 43,119**	$ 40,415

(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 $60.1 billion and $56.5 billion at September 30, 2018, and December 31, 2017, respectively.

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 cash collateral held by the Firm aggregating $16.9 billion and $16.1 billion at September 30, 2018, and December 31, 2017, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor.

In addition to the collateral described in the preceding paragraph, 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 transactions move in the Firm's favor.

The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, refer to Note 4.

The following table summarizes the ratings profile of the Firm's derivative receivables, including credit derivatives, net of all collateral, at the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as assigned by S&P and Moody's.

Ratings profile of derivative receivables

Rating equivalent (in millions, except ratios)	**September 30, 2018**		December 31, 2017	
	Exposure net of collateral	% of exposure net of collateral	Exposure net of collateral	% of exposure net of collateral
AAA/Aaa to AA-/Aa3	**$ 13,208**	**31%**	$ 11,529	29%
A+/A1 to A-/A3	**7,568**	**17**	6,919	17
BBB+/Baa1 to BBB-/Baa3	**13,826**	**32**	13,925	34
BB+/Ba1 to B-/B3	**7,744**	**18**	7,397	18
CCC+/Caa1 and below	**773**	**2**	645	2
Total	**$ 43,119**	**100%**	$ 40,415	100%

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's over-the-counter derivatives transactions subject to collateral agreements — excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity and centrally cleared trades that are settled daily — was approximately 90% at both September 30, 2018, and December 31, 2017.

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 unfunded 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

(in millions)	Notional amount of protection purchased and sold[(a)]	
	September 30, 2018	December 31, 2017
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 1,060**	$ 1,867
Derivative receivables	**13,146**	15,742
Credit derivatives used in credit portfolio management activities	**$ 14,206**	$ 17,609

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

For further information on credit derivatives and derivatives used in credit portfolio management activities, refer to Credit derivatives in Note 4 of this Form 10-Q, and Note 5 of JPMorgan Chase's 2017 Annual Report.

ALLOWANCE FOR CREDIT LOSSES

The Firm's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments.

For further information on the components of the allowance for credit losses and related management judgments, refer to Critical Accounting Estimates Used by the Firm on pages 79–81 and Note 12 of this Form 10-Q, and Critical Accounting Estimates Used by the Firm on pages 138–140 and Note 13 of JPMorgan Chase's 2017 Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the CRO, the CFO and the Controller of the Firm. As of September 30, 2018, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The consumer allowance for credit losses decreased compared with December 31, 2017 reflecting:

- a $250 million reduction in the CCB allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies, as well as a $151 million reduction in the allowance for write-offs of PCI loans partially due to loan sales. These reductions were partially offset by a $150 million addition in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, and
- a reduction in the wholesale allowance primarily driven by loan sales related to a single name in the Oil & Gas portfolio in the first quarter of 2018 and other net portfolio activity.

For additional information on the consumer and wholesale credit portfolios, refer to Consumer Credit Portfolio on pages 57–61 and Note 11, and Wholesale Credit Portfolio on pages 62–68.

Summary of changes in the allowance for credit losses

Nine months ended September 30, (in millions, except ratios)	2018 Consumer, excluding credit card	2018 Credit card	2018 Wholesale	2018 Total	2017 Consumer, excluding credit card	2017 Credit card	2017 Wholesale	2017 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 4,579**	**$ 4,884**	**$ 4,141**	**$ 13,604**	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Gross charge-offs	**776**	**3,777**	**264**	**4,817**	1,479	3,344	154	4,977
Gross recoveries	**(681)**	**(370)**	**(146)**	**(1,197)**	(478)	(295)	(81)	(854)
Net charge-offs[a]	**95**	**3,407**	**118**	**3,620**	1,001	3,049	73	4,123
Write-offs of PCI loans[b]	**151**	**–**	**–**	**151**	66	–	–	66
Provision for loan losses	**(152)**	**3,557**	**(111)**	**3,294**	653	3,699	(401)	3,951
Other	**1**	**–**	**–**	**1**	(2)	–	3	1
Ending balance at September 30,	**$ 4,182**	**$ 5,034**	**$ 3,912**	**$ 13,128**	$ 4,782	$ 4,684	$ 4,073	$ 13,539
Impairment methodology								
Asset-specific[c]	**$ 204**	**$ 421**	**$ 280**	**$ 905**	$ 271	$ 376	$ 363	$ 1,010
Formula-based	**2,154**	**4,613**	**3,632**	**10,399**	2,266	4,308	3,710	10,284
PCI	**1,824**	**–**	**–**	**1,824**	2,245	–	–	2,245
Total allowance for loan losses	**$ 4,182**	**$ 5,034**	**$ 3,912**	**$ 13,128**	$ 4,782	$ 4,684	$ 4,073	$ 13,539
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 33**	**$ –**	**$ 1,035**	**$ 1,068**	$ 26	$ –	$ 1,052	$ 1,078
Provision for lending-related commitments	**–**	**–**	**29**	**29**	7	–	24	31
Other	**–**	**–**	**–**	**–**	–	–	–	–
Ending balance at September 30,	**$ 33**	**$ –**	**$ 1,064**	**$ 1,097**	$ 33	$ –	$ 1,076	$ 1,109
Impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 71**	**$ 71**	$ –	$ –	$ 220	$ 220
Formula-based	**33**	**–**	**993**	**1,026**	33	–	856	889
Total allowance for lending-related commitments[d]	**$ 33**	**$ –**	**$ 1,064**	**$ 1,097**	$ 33	$ –	$ 1,076	$ 1,109
Total allowance for credit losses	**$ 4,215**	**$ 5,034**	**$ 4,976**	**$ 14,225**	$ 4,815	$ 4,684	$ 5,149	$ 14,648
Memo:								
Retained loans, end of period	**$ 375,958**	**$ 147,856**	**$ 423,837**	**$ 947,651**	$ 369,413	$ 141,200	$ 398,569	$ 909,182
Retained loans, average	**374,298**	**143,931**	**413,537**	**931,766**	365,359	138,749	390,062	894,170
PCI loans, end of period	**25,209**	**–**	**3**	**25,212**	31,821	–	3	31,824
Credit ratios								
Allowance for loan losses to retained loans	**1.11%**	**3.40%**	**0.92%**	**1.39%**	1.29%	3.32%	1.02%	1.49%
Allowance for loan losses to retained nonaccrual loans[e]	**115**	**NM**	**394**	**284**	115	NM	277	241
Allowance for loan losses to retained nonaccrual loans excluding credit card	**115**	**NM**	**394**	**175**	115	NM	277	157
Net charge-off rates[a]	**0.03**	**3.16**	**0.04**	**0.52**	0.37	2.94	0.03	0.62
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	**0.67**	**3.40**	**0.92**	**1.23**	0.75	3.32	1.02	1.29
Allowance for loan losses to retained nonaccrual loans[e]	**65**	**NM**	**394**	**244**	61	NM	277	201
Allowance for loan losses to retained nonaccrual loans excluding credit card	**65**	**NM**	**394**	**135**	61	NM	277	117
Net charge-off rates[a]	**0.04%**	**3.16%**	**0.04%**	**0.54%**	0.40%	2.94%	0.03%	0.64%

Note: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures.

(a) For the nine months ended September 30, 2017, excluding net charge-offs of $467 million related to the student loan portfolio transfer, the net charge-off rate for Consumer, excluding credit card would have been 0.20%; total Firm would have been 0.55%; Consumer, excluding credit card and PCI loans would have been 0.22%; and total Firm, excluding PCI would have been 0.57%.

(b) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool.

(c) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR. The asset-specific credit card allowance for loan losses modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) The allowance for lending-related commitments is reported in accounts payable and other liabilities on the Consolidated balance sheets.

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

Provision for credit losses

The following table presents the components of the Firm's provision for credit losses:

	Three months ended September 30,						Nine months ended September 30,					
	Provision for loan losses		Provision for lending-related commitments		Total provision for credit losses		Provision for loan losses		Provision for lending-related commitments		Total provision for credit losses	
(in millions)	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Consumer, excluding credit card	**$ (242)**	$ 205	**$ –**	$ 1	**$ (242)**	$ 206	**$ (152)**	$ 653	**$ –**	$ 7	**$ (152)**	$ 660
Credit card	**1,223**	1,319	**–**	–	**1,223**	1,319	**3,557**	3,699	**–**	–	**3,557**	3,699
Total consumer	**981**	1,524	**–**	1	**981**	1,525	**3,405**	4,352	**–**	7	**3,405**	4,359
Wholesale	**(13)**	(64)	**(20)**	(9)	**(33)**	(73)	**(111)**	(401)	**29**	24	**(82)**	(377)
Total	**$ 968**	$ 1,460	**$ (20)**	$ (8)	**$ 948**	$ 1,452	**$ 3,294**	$ 3,951	**$ 29**	$ 31	**$ 3,323**	$ 3,982

Quarterly discussion

The **provision for credit losses** decreased as a result of:

- a decrease in the consumer provision in CCB due to
  - a $250 million reduction in the allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies,
  - a $150 million addition to the allowance for loan losses in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, compared to a $300 million addition in the prior year
  - lower net charge-offs in the residential real estate portfolio, largely driven by a recovery of approximately $80 million from a loan sale, and
  - lower net charge-offs in the auto portfolio as the prior year included $49 million of incremental charge-offs recorded in accordance with regulatory guidance

  partially offset by
  - higher net charge-offs in the credit card portfolio due to seasoning of more recent vintages, as anticipated
- the decrease in the consumer provision was partially offset by a lower net benefit in the wholesale provision in the current period, which includes net recoveries predominantly related to a loan sale in CIB.

Year-to-date discussion

The **provision for credit losses** decreased as a result of:

- a decrease in the consumer provision in CCB due to
  - a $150 million addition to the allowance for loan losses in the credit card portfolio, due to loan growth and higher loss rates, as anticipated, compared to a $650 million addition in the prior year,
  - lower net charge-offs in the residential real estate portfolio, largely driven by recoveries from loan sales, and
  - a $250 million reduction in the allowance for loan losses in the residential real estate PCI portfolio, reflecting continued improvement in home prices and lower delinquencies, compared to a $175 million reduction in the non credit-impaired portfolio in the prior year

  partially offset by
  - higher net charge-offs in the credit card portfolio due to seasoning of more recent vintages, as anticipated
  - the prior year included a $218 million write-down recorded in connection with the sale of the student loan portfolio
- the decrease in the consumer provision was partially offset by a lower net benefit in the wholesale provision with the current period net benefit primarily driven by loan sales and other activity related to a single name in the Oil & Gas portfolio, partially offset by other net portfolio activity. The prior year benefit was driven by a reduction in the allowance for credit losses in the Oil & Gas, Natural Gas Pipelines, and Metals and Mining portfolios.

INVESTMENT PORTFOLIO RISK MANAGEMENT

Investment portfolio risk is the risk associated with the loss of principal or a reduction in expected returns on investments arising from the investment securities portfolio held by Treasury and CIO in connection with the Firm's balance sheet or asset-liability management objectives or from principal investments managed in various LOBs in predominantly privately-held financial assets and instruments. 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 minimized given that Treasury and CIO generally invest in high-quality securities. At September 30, 2018, the investment securities portfolio was $229.9 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 ratings that correspond to ratings as defined by S&P and Moody's). For further information on the investment securities portfolio, refer to Corporate segment results on pages 40–41 and Note 9. For further information on the market risk inherent in the portfolio, refer to Market Risk Management on pages 73–77. For further information on related liquidity risk, refer to Liquidity Risk on pages 49–54.

Principal investment risk

Principal investments are typically private non-traded financial instruments representing ownership or other forms of junior capital. Principal investments cover multiple asset classes and are made either in stand-alone investing businesses or as part of a broader business platform. Increasingly, new principal investments are made to enhance or accelerate LOB strategic business initiatives. The Firm's principal investments are managed by the various LOBs and are reflected within the respective LOB financial results. Effective January 1, 2018, the Firm adopted new accounting guidance related to the recognition and measurement of financial assets, which requires fair value adjustments upon observable price changes to certain equity investments previously held at cost in the principal investment portfolios. For additional information, refer to Note 2.

As of September 30, 2018 and December 31, 2017, the aggregate carrying values of the principal investment portfolios were $20.1 billion and $19.5 billion, respectively, which included tax-oriented investments (e.g., affordable housing and alternative energy investments) of $13.7 billion and $14.0 billion, respectively, and private equity, various debt and equity instruments, and real assets of $6.4 billion and $5.5 billion, respectively.

For a discussion of the Firm's Investment Portfolio Risk Management governance and oversight, refer to page 120 of JPMorgan Chase's 2017 Annual Report.

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. For a discussion of the Firm's Market Risk Management organization, tools used to measure risk, risk monitoring and control and risk identification and classification, refer to Market Risk Management on pages 121-128 of JPMorgan Chase's 2017 Annual Report.

Value-at-risk

JPMorgan Chase utilizes value-at-risk ("VaR"), a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

As VaR is based on historical data, it is an imperfect measure of market risk exposure and potential future losses. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm therefore considers other measures such as stress testing and nonstatistical measures, in addition to VaR, to capture and manage its market risk positions. For further information, refer to Other risk measures on pages 126-128 of JPMorgan Chase's 2017 Annual Report.

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. For information regarding model reviews and approvals, refer to Estimations and Model Risk Management on page 137 of JPMorgan Chase's 2017 Annual Report.

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 stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business, and provides the necessary and appropriate information to respond to risk events on a daily basis. 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. For further information regarding the key differences between Risk Management VaR and Regulatory VaR, refer to page 123 of JPMorgan Chase's 2017 Annual Report. 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 JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website at: (https://jpmorganchaseco.gcs-web.com/financial-information/basel-pillar-3-us-lcr-disclosures).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

	Three months ended								
	September 30, 2018			June 30, 2018			September 30, 2017		
(in millions)	Avg.	Min	Max	Avg.	Min	Max	Avg.	Min	Max
CIB trading VaR by risk type									
Fixed income	**$30**	**$ 25**	**$ 37**	$31	$ 26	$ 36	$28	$24	$ 31
Foreign exchange	**5**	**3**	**11**	6	4	10	13	6	20
Equities	**16**	**13**	**19**	15	13	18	12	11	14
Commodities and other	**9**	**7**	**11**	7	5	9	6	4	8
Diversification benefit to CIB trading VaR	**(27)** [a]	**NM** [b]	**NM** [b]	(27) [a]	NM [b]	NM [b]	(31) [a]	NM [b]	NM [b]
CIB trading VaR	**33**	**27** [b]	**41** [b]	32	26 [b]	42 [b]	28	24 [b]	32 [b]
Credit portfolio VaR	**3**	**3**	**4**	4	3	4	5	5	6
Diversification benefit to CIB VaR	**(3)** [a]	**NM** [b]	**NM** [b]	(3) [a]	NM [b]	NM [b]	(3) [a]	NM [b]	NM [b]
CIB VaR	**33**	**28** [b]	**42** [b]	33	26 [b]	42 [b]	30	25 [b]	33 [b]
CCB VaR	**1**	**1**	**2**	1	1	3	2	1	3
Corporate VaR	**13**	**12**	**14**	12	10	13	3	1	3
Diversification benefit to other VaR	**(1)** [a]	**NM** [b]	**NM** [b]	(1) [a]	NM [b]	NM [b]	(1) [a]	NM [b]	NM [b]
Other VaR	**13**	**12** [b]	**14** [b]	12	10 [b]	14 [b]	4	3 [b]	5 [b]
Diversification benefit to CIB and other VaR	**(11)** [a]	**NM** [b]	**NM** [b]	(10) [a]	NM [b]	NM [b]	(4) [a]	NM [b]	NM [b]
Total VaR	**$35**	**$ 30** [b]	**$ 43** [b]	$35	$ 28 [b]	$ 44 [b]	$30	$26 [b]	$ 34 [b]

(a) Average portfolio VaR is less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects that the risks are not perfectly correlated.

(b) Diversification benefit represents the difference between the total VaR and each reported level and the sum of its individual components. Diversification benefit reflects the non-additive nature of VaR due to imperfect correlation across lines of business and risk types. 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 remained unchanged for the three months ended September 30, 2018 as compared with the prior quarter. There was a modest increase in Commodities, offset by reductions in Fixed Income exposure within CIB Trading VaR.

Year over year results

Average total VaR increased by $5 million for the three months ended September 30, 2018, compared with the same period in the prior year. The increase in average total VaR is primarily due to the inclusion of a Corporate private equity position that became publicly traded in the fourth quarter of 2017 and certain investments in CIB VaR.

VaR can vary significantly as positions change, market volatility fluctuates, and diversification benefits change.

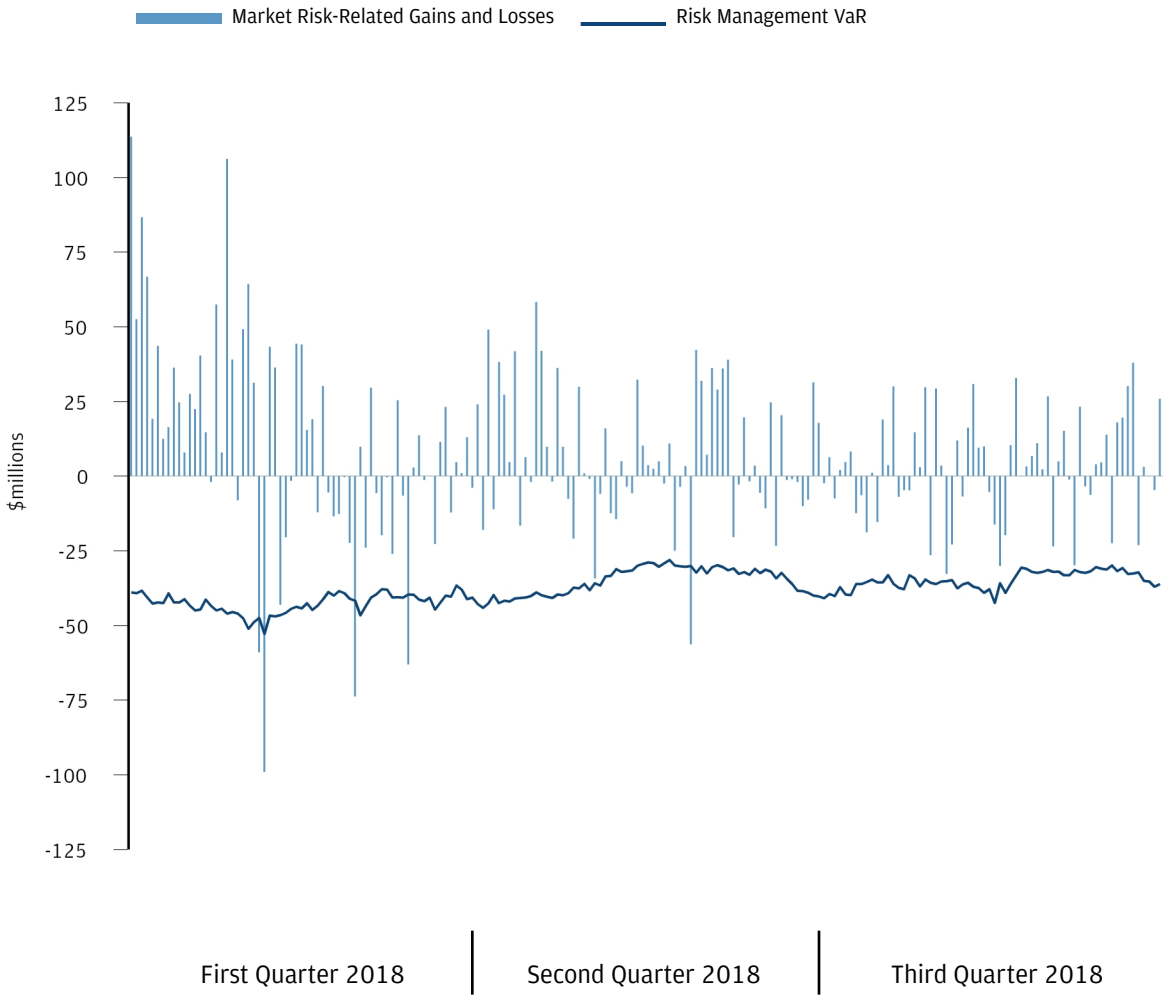
VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses actually recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: gains and losses on the positions included in the Firm's Risk Management VaR excluding fees, commissions, certain valuation adjustments (e.g., liquidity and FVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares actual daily market risk-related gains and losses with the Firm's Risk Management VaR for the nine months ended September 30, 2018. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of back-testing 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 covered positions. The chart shows that for the nine months ended September 30, 2018, the Firm observed five VaR back-testing exceptions and posted market risk-related gains on 113 of the 194 days. The Firm observed no VaR back-testing exceptions and posted market risk-related gains on 38 of the 65 days for the three months ended September 30, 2018.

Daily Market Risk-Related Gains and Losses
vs. Risk Management VaR (1-day, 95% Confidence level)
Nine months ended September 30, 2018



Earnings-at-risk

The VaR and sensitivity measures illustrate the economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables. The effect of interest rate exposure on the Firm's reported net income is also 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. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and interest rate-sensitive fees. For a summary by line of business, identifying positions included in earnings-at-risk, refer to the table on page 122 of JPMorgan Chase's 2017 Annual Report.

The Firm generates a baseline for net interest income and certain interest rate-sensitive fees, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollars and other currencies ("non-U.S. dollar" currencies). This simulation primarily includes retained loans, deposits, deposits with banks, investment securities, long term debt and any related interest rate hedges, and excludes other positions in risk management VaR and other sensitivity-based measures as described on page 122 of JPMorgan Chase's 2017 Annual Report.

Earnings-at-risk scenarios estimate the potential change in this baseline, over the following 12 months utilizing multiple assumptions. These scenarios consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, 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 scenario interest rates 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 in the baseline and scenarios use assumed rates paid which may differ from actual rates paid due to timing lags and other factors. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

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

JPMorgan Chase's 12-month earnings-at-risk sensitivity profiles

U.S. dollar	Instantaneous change in rates			
(in billions)	+200 bps	+100 bps	-100 bps	-200 bps
September 30, 2018	**$ 1.7**	**$ 0.8**	**$ (1.9)**	**NA** [(a)]
December 31, 2017	$ 2.4	$ 1.7	$ (3.6)	NA [(a)]

(a) Given the current market interest rate environment, these downward parallel earnings-at-risk scenarios are not considered to be reasonably possible in the near term.

The Firm's sensitivity to rates is largely a result of assets re-pricing at a faster pace than deposits.

The Firm's net U.S. dollar sensitivities to 200 and 100 basis points instantaneous rate increases decreased by approximately $700 million and $900 million, respectively, while the Firm's net U.S. dollar sensitivity to 100 basis points instantaneous decrease in rates decreased by $1.7 billion when compared to December 31, 2017. The primary driver of these decreases was the updating of the Firm's baseline to reflect higher interest rates. As higher interest rates are reflected in the Firm's baselines, sensitivities to changes in rates are expected to be less significant.

The non-U.S. dollar sensitivities for an instantaneous increase in rates by 200 and 100 basis points results in a 12-month benefit to net interest income of approximately $800 million and $500 million, respectively, at both September 30, 2018 and December 31, 2017. The non-U.S. dollar sensitivities for an instantaneous decrease in rates by 200 and 100 basis points are not material to the Firm's earnings-at-risk at September 30, 2018 and December 31, 2017.

Separately, another U.S. dollar interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month benefit to net interest income of approximately $500 million and $700 million at September 30, 2018 and December 31, 2017, respectively. The increase in net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The results of the comparable non-U.S. dollar scenarios are not material to the Firm at September 30, 2018 and December 31, 2017.

Other sensitivity-based measures

The Firm quantifies the market risk of certain investment and funding activities by assessing the potential impact on net revenue and OCI due to changes in relevant market variables. For additional information on the positions captured in other sensitivity-based measures, please refer to the Risk identification and classification table on page 122 of JPMorgan Chase's 2017 Annual Report.

The table below represents the potential impact to net revenue or OCI for market risk-sensitive instruments that are not included in VaR or earnings-at-risk. Where appropriate, instruments used for hedging purposes are reported along with 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, 2018 and December 31, 2017, as the movement in market parameters across maturities may vary and are not intended to imply management's expectation of future deterioration in these sensitivities.

Gain/(loss) (in millions) **Activity**	**Description**	**Sensitivity measure**	**September 30, 2018**	December 31, 2017
Investment activities[a]				
Investment management activities	Consists of seed capital and related hedges; and fund co-investments	10% decline in market value	**$ (147)**	$ (110)
Other investments	Consists of privately held equity and other investments held at fair value	10% decline in market value	**(246)**	(338)
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[b]	1 basis point parallel tightening of cross currency basis	**(9)**	(10)
Non-USD LTD hedges foreign currency ("FX") exposure	Primarily represents the foreign exchange revaluation on the fair value of the derivative hedges[b]	10% depreciation of currency	**13**	(13)
Derivatives – funding spread risk	Impact of changes in the spread related to derivatives FVA	1 basis point parallel increase in spread	**(4)**	(6)
Fair value option elected liabilities – funding spread risk	Impact of changes in the spread related to fair value option elected liabilities DVA[b]	1 basis point parallel increase in spread	**27**	22
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[b]	1 basis point parallel increase in spread	**(1)**	(1)

(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 OCI.

COUNTRY RISK MANAGEMENT

The Firm has a country risk management framework for monitoring and assessing how financial, economic, political or other significant developments 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 to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country Risk Management periodically designs and runs tailored stress scenarios to test vulnerabilities to individual countries or groups of countries in response to specific or potential market events, sector performance concerns and geopolitical risks. These tailored stress results are used to inform potential risk reduction across the firm, as necessary.

For a further discussion of the Firm's Country Risk Management organization; identification and measurement; stress testing; monitoring and control; and reporting, refer to pages 129–130 of JPMorgan Chase's 2017 Annual Report.

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of September 30, 2018. 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.

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

	September 30, 2018			
(in billions)	Lending and deposits[(b)]	Trading and investing[(c)(d)]	Other[(e)]	Total exposure
Germany	$ 55.1	$ 11.1	$ 0.3	$ 66.5
United Kingdom	28.8	9.4	11.8	50.0
Japan	32.9	7.1	0.3	40.3
China	9.8	7.7	1.8	19.3
Switzerland	14.0	0.5	4.0	18.5
France	11.3	5.6	0.6	17.5
Canada	11.8	3.0	0.1	14.9
Australia	6.9	4.4	–	11.3
India	6.0	3.7	1.4	11.1
Luxembourg	9.5	0.5	–	10.0
Brazil	4.9	3.0	–	7.9
Netherlands	6.3	0.6	0.7	7.6
Spain	4.6	1.5	0.3	6.4
Italy	2.4	3.9	0.1	6.4
South Korea	4.1	2.0	0.1	6.2
Hong Kong	3.0	1.0	2.1	6.1
Saudi Arabia	5.3	0.5	–	5.8
Singapore	3.4	1.2	1.1	5.7
Mexico	4.1	1.0	–	5.1
United Arab Emirates	2.7	0.5	–	3.2

(a) Country exposures presented in the table reflect 88% of total firmwide non-U.S. exposure.
(b) Lending and deposits includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with banks (including central banks), acceptances, other monetary assets, issued letters of credit net of participations, and unused commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.
(c) Includes market-making inventory, AFS securities, counterparty exposure on derivative and securities financings net of collateral and hedging.
(d) Includes single reference entity ("single-name"), index and other multiple reference entity transactions for which one or more of the underlying reference entities is in a country listed in the above table.
(e) Includes capital invested in local entities and physical commodity inventory.

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

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for credit losses includes a formula-based component, an asset-specific component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters. For further information on these components, areas of judgment and methodologies used in establishing the Firm's allowance for credit losses, refer to pages 117–119, page 138 and Note 13 of JPMorgan Chase's 2017 Annual Report; and refer to Allowance for credit losses on pages 69–71 and Note 12 of this Form 10-Q.

As noted in the discussion on page 138 of JPMorgan Chase's 2017 Annual Report, the Firm's allowance for credit losses is sensitive to numerous factors, which may differ depending on the portfolio. Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. The Firm uses its best judgment to assess these economic conditions and loss data in estimating the allowance for credit losses and these estimates are subject to periodic refinement based on changes to underlying external or Firm-specific historical data. Refer to Note 12 of this Form 10-Q for further discussion.

To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on the Firm's modeled credit loss estimates as of September 30, 2018, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- A combined 5% decline in housing prices and a 100 basis point increase in unemployment rates from current levels could imply:
  - an increase to modeled credit loss estimates of approximately $425 million for PCI loans.
  - an increase to modeled annual credit loss estimates of approximately $75 million for residential real estate loans, excluding PCI loans.
- For credit card loans, a 100 basis point increase in unemployment rates from current levels could imply an increase to modeled annual credit loss estimates of approximately $775 million.
- An increase in probability of default ("PD") factors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $1.6 billion.
- A 100 basis point increase in estimated loss given default ("LGD") for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled credit loss estimates of approximately $175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows and the judgments made in evaluating the risk factors related to its loss estimates, management believes that its current estimate of the allowance for credit losses is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

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. For further information, refer to Note 2.

September 30, 2018 (in billions, except ratios)	Total assets at fair value	Total level 3 assets
Trading-debt and equity instruments	$ 359.7	$ 4.2
Derivative receivables[(a)]	60.1	7.1
Trading assets	419.8	11.3
AFS securities	200.0	0.1
Loans	3.0	0.1
MSRs	6.4	6.4
Other	28.5	1.1
Total assets measured at fair value on a recurring basis	$ 657.7	$ 19.0
Total assets measured at fair value on a nonrecurring basis	1.8	1.1
Total assets measured at fair value	$ 659.5	$ 20.1
Total Firm assets	$ 2,615.2	
Level 3 assets as a percentage of total Firm assets[(a)]		0.8%
Level 3 assets as a percentage of total Firm assets at fair value[(a)]		3.0%

(a) For purposes of the table above, the derivative receivables total reflects the impact of netting adjustments; however, the $7.1 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. For a further discussion of the valuation of level 3 instruments, including unobservable inputs used, refer to Note 2.

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. For a further discussion of valuation adjustments applied by the Firm refer to Note 2.

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. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, refer to Note 2.

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. For a description of the significant valuation judgments associated with goodwill impairment, refer to Goodwill impairment on pages 139-140 of JPMorgan Chase's 2017 Annual Report.

For the three months ended September 30, 2018, the Firm reviewed current economic conditions, business performance, estimated market cost of equity, and prior projections of business performance for all its businesses. Based upon such reviews, the Firm concluded that the goodwill allocated to its reporting units was not impaired as of September 30, 2018.

Declines in business performance, increases in credit losses, increases in equity 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 or their associated goodwill 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.

For additional information on goodwill, refer to Note 14.

Credit card rewards liability

JPMorgan Chase offers credit cards with various rewards programs which allow cardholders to earn rewards points based on their account activity and the terms and conditions of the rewards program. Generally, there are no limits on the points that an eligible cardholder can earn, nor do the points expire, and the points can be redeemed for a variety of rewards, including cash (predominantly in the form of account credits), gift cards and travel. The Firm maintains a rewards liability which represents the estimated cost of rewards points earned and expected to be redeemed by cardholders. The rewards liability is sensitive to various assumptions, including cost per point and redemption rates for each of the various rewards programs, which are evaluated periodically. The liability is accrued as the cardholder earns the benefit and is reduced when the cardholder redeems points. This liability was $5.8 billion and $4.9 billion at September 30, 2018 and December 31, 2017, respectively, and is recorded in accounts payable and other liabilities on the Consolidated balance sheets.

Income taxes

For a description of the significant assumptions, judgments and interpretations associated with the accounting for income taxes, refer to Note 1, and Income taxes on page 140 of JPMorgan Chase's 2017 Annual Report.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, refer to Note 22 of this Form 10-Q, and Note 29 of JPMorgan Chase's 2017 Annual Report.

Financial Accounting Standards Board ("FASB") Standards Adopted since January 1, 2018

Standard	Summary of guidance	Effects on financial statements
Revenue recognition – revenue from contracts with customers *Issued May 2014*	• Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the Consolidated statements of income, and requires additional disclosures about revenue and contract costs.	• Adopted January 1, 2018. • For further information, refer to Note 1.
Recognition and measurement of financial assets and financial liabilities *Issued January 2016*	• Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings. • Provides a measurement alternative for equity securities without readily determinable fair values to be measured at cost less impairment (if any), plus or minus observable price changes from an identical or similar investment of the same issuer. Any such price changes are reflected in earnings beginning in the period of adoption.	• Adopted January 1, 2018. • For further information, refer to Note 1.
Classification of certain cash receipts and cash payments in the statement of cash flows *Issued August 2016*	• Provides targeted amendments to the classification of certain cash flows, including the treatment of settlement payments for zero coupon debt instruments and distributions received from equity method investments.	• Adopted January 1, 2018. • The adoption of the guidance had no material impact as the Firm was either in compliance with the amendments or the amounts to which it was applied were immaterial.
Treatment of restricted cash on the statement of cash flows *Issued November 2016*	• Requires restricted cash to be combined with unrestricted cash when reconciling the beginning and ending cash balances on the Consolidated statements of cash flows. • Requires additional disclosures to supplement the Consolidated statements of cash flows.	• Adopted January 1, 2018 • For further information, refer to Note 1.

FASB Standards Adopted since January 1, 2018 (continued)

Standard	Summary of guidance	Effects on financial statements
Definition of a business *Issued January 2017*	• Narrows the definition of a business and clarifies that, to be considered a business, substantially all of the fair value of the gross assets acquired (or disposed of) may not be concentrated in a single identifiable asset or a group of similar assets. • In addition, the definition now requires that a set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs.	• Adopted January 1, 2018. • The adoption of the guidance had no impact because it is being applied prospectively. Subsequent to adoption, fewer transactions will be treated as acquisitions or dispositions of a business.
Presentation of net periodic pension cost and net periodic postretirement benefit cost *Issued March 2017*	• Requires the service cost component of net periodic pension and postretirement benefit cost to be reported separately in the Consolidated statements of income from the other components (e.g., expected return on assets, interest costs, amortization of gains/losses and prior service costs).	• Adopted January 1, 2018. • For further information, refer to Note 1.
Premium amortization on purchased callable debt securities *Issued March 2017*	• Requires amortization of premiums to the earliest call date on debt securities with call features that are explicit, noncontingent and callable at fixed prices and on preset dates. • Does not impact debt securities held at a discount; the discount continues to be amortized to the contractual maturity date.	• Adopted January 1, 2018. • For further information, refer to Note 1.
Hedge accounting *Issued August 2017*	• Aligns the accounting with the economics of the risk management activities. • Expands the ability for certain hedges of interest rate risk to qualify for hedge accounting. • Allows recognition of ineffectiveness in cash flow hedges and net investment hedges in OCI. • Permits an election at adoption to transfer certain investment securities classified as held-to-maturity to available-for-sale. • Simplifies hedge documentation requirements.	• Adopted January 1, 2018. • For further information, refer to Note 1.
Reclassification of certain tax effects from AOCI *Issued February 2018*	• Permits reclassification of the income tax effects of the TCJA on items within AOCI to retained earnings so that the tax effects of items within AOCI reflect the appropriate tax rate.	• Adopted January 1, 2018. • For further information, refer to Note 1.

FASB Standards Issued but not yet Adopted

Standard	Summary of guidance	Effects on financial statements
Leases *Issued February 2016*	• Requires lessees to recognize all leases longer than twelve months on the Consolidated balance sheets as a lease liability with a corresponding right-of-use asset. • Requires lessees and lessors to classify most leases using principles similar to existing lease accounting, but eliminates the "bright line" classification tests. • Permits the Firm to generally account for its existing leases consistent with current guidance, except for the incremental balance sheet recognition. • Expands qualitative and quantitative leasing disclosures. • May be adopted using a modified cumulative effect approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date, or a cumulative-effect adjustment to retained earnings at the effective date without revising prior comparative periods.	• Required effective date: January 1, 2019.[(a)] • The Firm is in the final stages of its implementation which includes implementing a new lease accounting software solution for its real estate leases, and updating processes and internal controls for its leasing activities. As a lessee, the Firm is finalizing its estimate of the right-of-use asset and lease liability, which is based on the present value of lease payments. The Firm expects to recognize a lease liability and a corresponding right-of-use asset (at their present value) related to predominantly all of the $10 billion of future minimum payments required under operating leases as disclosed in Note 28 of JPMorgan Chase's 2017 Annual Report. However, the population of contracts subject to balance sheet recognition and their initial measurement remains under evaluation; final financial statement impacts will depend on the lease portfolio at the time of adoption. The Firm does not expect material changes to the recognition of operating lease expense in its Consolidated statements of income. • The Firm plans to adopt the new lease guidance on January 1, 2019 through a cumulative-effect adjustment without revising prior comparative periods and elect the available practical expedients, which will not require it to reassess whether an existing contract contains a lease or whether classification or unamortized initial lease costs would be different under the new lease guidance.
Financial instruments – credit losses *Issued June 2016*	• Replaces existing incurred loss impairment guidance and establishes a single allowance framework for financial assets carried at amortized cost, which will reflect management's estimate of credit losses over the full remaining expected life of the financial assets and will consider 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, which will be offset by an increase in the carrying value of the related loans. • 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.	• Required effective date: January 1, 2020.[(a)] • The Firm has established a Firmwide, cross-discipline governance structure, which provides implementation oversight. The Firm continues to identify key interpretive issues, and is in the process of developing and implementing current expected credit loss models that satisfy the requirements of the new standard. • The Firm expects that the allowance related to the Firm's loans and commitments will increase as it will cover credit losses over the full remaining expected life of the portfolios, with the most significant impact expected from the Firm's credit card portfolio. • The extent of the increase in the allowance is under evaluation, but will depend upon the nature and characteristics of the Firm's portfolio at the adoption date, and the macroeconomic conditions and forecasts at that date. • The Firm plans to adopt the new guidance on January 1, 2020.
Goodwill *Issued January 2017*	• Requires an impairment loss to be recognized when the estimated fair value of a reporting unit falls below its carrying value. • Eliminates the second condition in the current guidance that requires an impairment loss to be recognized only if the estimated implied fair value of the goodwill is below its carrying value.	• Required effective date: January 1, 2020.[(a)] • Based on current impairment test results, the Firm does not expect a material effect on the Consolidated Financial Statements. However, the impact of the new accounting guidance will depend on the performance of the reporting units and the market conditions at the time of adoption. • After adoption, the guidance may result in more frequent goodwill impairment losses due to the removal of the second condition. • The Firm plans to adopt the new guidance on January 1, 2020.

(a) Early adoption is permitted.

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipate," "target," "expect," "estimate," "intend," "plan," "goal," "believe," or other words of similar meaning. Forward-looking statements provide JPMorgan Chase's current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase's disclosures in this Form 10-Q contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the SEC. In addition, the Firm's senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm's control. JPMorgan Chase's actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events;
- 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 deal effectively with an economic slowdown or other economic or market disruption;
- 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 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 or conflicts and the Firm's ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operational systems and facilities;
- Ability of the Firm to withstand disruptions that may be caused by any failure of its operational systems or those of third parties;
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm's systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in JPMorgan Chase's 2017 Annual Report on Form 10-K for the year ended December 31, 2017.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update any forward-looking statements. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

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

(in millions, except per share data)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Revenue				
Investment banking fees	**$ 1,832**	$ 1,868	**$ 5,736**	$ 5,594
Principal transactions	**2,964**	2,721	**10,698**	9,440
Lending- and deposit-related fees	**1,542**	1,497	**4,514**	4,427
Asset management, administration and commissions	**4,310**	4,072	**12,923**	11,996
Investment securities losses	**(46)**	(1)	**(371)**	(38)
Mortgage fees and related income	**262**	429	**1,051**	1,239
Card income	**1,328**	1,242	**3,623**	3,323
Other income	**1,160**	952	**4,041**	3,197
Noninterest revenue	**13,352**	12,780	**42,215**	39,178
Interest income	**19,840**	16,687	**56,404**	47,379
Interest expense	**5,932**	3,889	**15,699**	10,309
Net interest income	**13,908**	12,798	**40,705**	37,070
Total net revenue	**27,260**	25,578	**82,920**	76,248
Provision for credit losses	**948**	1,452	**3,323**	3,982
Noninterest expense				
Compensation expense	**8,108**	7,697	**25,308**	23,710
Occupancy expense	**1,014**	930	**2,883**	2,803
Technology, communications and equipment expense	**2,219**	1,972	**6,441**	5,677
Professional and outside services	**2,086**	1,955	**6,333**	5,646
Marketing	**798**	710	**2,396**	2,179
Other expense	**1,398**	1,306	**4,313**	4,605
Total noninterest expense	**15,623**	14,570	**47,674**	44,620
Income before income tax expense	**10,689**	9,556	**31,923**	27,646
Income tax expense	**2,309**	2,824	**6,515**	7,437
Net income	**$ 8,380**	$ 6,732	**$ 25,408**	$ 20,209
Net income applicable to common stockholders	**$ 7,948**	$ 6,262	**$ 24,067**	$ 18,786
Net income per common share data				
Basic earnings per share	**$ 2.35**	$ 1.77	**$ 7.04**	$ 5.26
Diluted earnings per share	**2.34**	1.76	**7.00**	5.22
Weighted-average basic shares	**3,376.1**	3,534.7	**3,416.5**	3,570.9
Weighted-average diluted shares	**3,394.3**	3,559.6	**3,436.2**	3,597.0
Cash dividends declared per common share	**$ 0.80**	$ 0.56	**$ 1.92**	$ 1.56

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

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, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Net income	**$ 8,380**	$ 6,732	**$ 25,408**	$ 20,209
Other comprehensive income/(loss), after-tax				
Unrealized gains/(losses) on investment securities	**(819)**	147	**(2,280)**	842
Translation adjustments, net of hedges	**(31)**	—	**84**	7
Fair value hedges	**34**	NA	**(74)**	NA
Cash flow hedges	**(88)**	26	**(327)**	170
Defined benefit pension and OPEB plans	**19**	22	**78**	26
DVA on fair value option elected liabilities	**(402)**	(112)	**125**	(179)
Total other comprehensive income/(loss), after-tax	**(1,287)**	83	**(2,394)**	866
Comprehensive income	**$ 7,093**	$ 6,815	**$ 23,014**	$ 21,075

Effective January 1, 2018, the Firm adopted several new accounting standards. For additional information, refer to Note 1.

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)	Sep 30, 2018	Dec 31, 2017
Assets		
Cash and due from banks	**$ 23,225**	$ 25,898
Deposits with banks	**395,872**	405,406
Federal funds sold and securities purchased under resale agreements (included **$12,226** and $14,732 at fair value)	**217,632**	198,422
Securities borrowed (included **$4,528** and $3,049 at fair value)	**122,434**	105,112
Trading assets (included assets pledged of **$114,850** and $109,887)	**419,827**	381,844
Investment securities (included **$200,030** and $202,225 at fair value and assets pledged of **$10,534** and $17,969)	**231,398**	249,958
Loans (included **$2,987** and $2,508 at fair value)	**954,318**	930,697
Allowance for loan losses	**(13,128)**	(13,604)
Loans, net of allowance for loan losses	**941,190**	917,093
Accrued interest and accounts receivable	**78,792**	67,729
Premises and equipment	**14,180**	14,159
Goodwill, MSRs and other intangible assets	**54,697**	54,392
Other assets (included **$12,479** and $16,128 at fair value and assets pledged of **$5,334** and $7,980)	**115,936**	113,587
Total assets[(a)]	**$ 2,615,183**	$ 2,533,600
Liabilities		
Deposits (included **$20,500** and $21,321 at fair value)	**$ 1,458,762**	$ 1,443,982
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$1,059** and $697 at fair value)	**181,608**	158,916
Short-term borrowings (included **$7,885** and $9,191 at fair value)	**64,635**	51,802
Trading liabilities	**151,150**	123,663
Accounts payable and other liabilities (included **$5,159** and $9,208 at fair value)	**209,707**	189,383
Beneficial interests issued by consolidated VIEs (included **$17** and $45 at fair value)	**20,241**	26,081
Long-term debt (included **$54,112** and $47,519 at fair value)	**270,124**	284,080
Total liabilities[(a)]	**2,356,227**	2,277,907
Commitments and contingencies (refer to Notes 20, 21 and 22)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares; issued **2,776,375** and 2,606,750 shares)	**27,764**	26,068
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**89,333**	90,579
Retained earnings	**195,180**	177,676
Accumulated other comprehensive loss	**(2,425)**	(119)
Shares held in restricted stock units ("RSU") Trust, at cost (**472,953** shares)	**(21)**	(21)
Treasury stock, at cost (**779,523,170** and 679,635,064 shares)	**(54,980)**	(42,595)
Total stockholders' equity	**258,956**	255,693
Total liabilities and stockholders' equity	**$ 2,615,183**	$ 2,533,600

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at September 30, 2018, and December 31, 2017. 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. For a further discussion, refer to Note 13.

(in millions)	Sep 30, 2018	Dec 31, 2017
Assets		
Trading assets	**$ 1,567**	$ 1,449
Loans	**57,114**	68,995
All other assets	**2,407**	2,674
Total assets	**$ 61,088**	$ 73,118
Liabilities		
Beneficial interests issued by consolidated VIEs	**$ 20,241**	$ 26,081
All other liabilities	**330**	349
Total liabilities	**$ 20,571**	$ 26,430

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

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

(in millions, except per share data)	Nine months ended September 30, 2018	2017
Preferred stock		
Balance at January 1	**$ 26,068**	$ 26,068
Issuance	**1,696**	–
Balance at September 30	**$ 27,764**	$ 26,068
Common stock		
Balance at January 1 and September 30	**4,105**	4,105
Additional paid-in capital		
Balance at January 1	**90,579**	91,627
Shares issued and commitments to issue common stock for employee shared-based compensation awards, and related tax effects	**(897)**	(680)
Other	**(349)**	(250)
Balance at September 30	**89,333**	90,697
Retained earnings		
Balance at January 1	**177,676**	162,440
Cumulative effect of changes in accounting principles	**(183)**	–
Net income	**25,408**	20,209
Dividends declared:		
Preferred stock	**(1,167)**	(1,235)
Common stock (**$1.92** and $1.56 per share)	**(6,554)**	(5,587)
Balance at September 30	**195,180**	175,827
Accumulated other comprehensive income/(loss)		
Balance at January 1	**(119)**	(1,175)
Cumulative effect of changes in accounting principles	**88**	–
Other comprehensive income/(loss)	**(2,394)**	866
Balance at September 30	**(2,425)**	(309)
Shares held in RSU Trust, at cost		
Balance at January 1 and September 30	**(21)**	(21)
Treasury stock, at cost		
Balance at January 1	**(42,595)**	(28,854)
Repurchase	**(14,055)**	(10,602)
Reissuance	**1,670**	1,471
Balance at September 30	**(54,980)**	(37,985)
Total stockholders' equity	**$ 258,956**	$ 258,382

Effective January 1, 2018, the Firm adopted several new accounting standards. For additional information, refer to Note 1.

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, 2018	2017
Operating activities		
Net income	**$ 25,408**	$ 20,209
Adjustments to reconcile net income to net cash used in operating activities:		
Provision for credit losses	**3,323**	3,982
Depreciation and amortization	**5,716**	4,547
Deferred tax (benefit)/expense	**(323)**	(187)
Other	**2,179**	1,655
Originations and purchases of loans held-for-sale	**(68,235)**	(75,907)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**68,214**	75,255
Net change in:		
Trading assets	**(44,427)**	(31,189)
Securities borrowed	**(17,344)**	(5,191)
Accrued interest and accounts receivable	**(11,335)**	(9,795)
Other assets	**2,909**	18,668
Trading liabilities	**21,580**	(23,162)
Accounts payable and other liabilities	**26,677**	(10,124)
Other operating adjustments	**(577)**	7,858
Net cash provided by/(used in) operating activities	**13,765**	(23,381)
Investing activities		
Net change in:		
Federal funds sold and securities purchased under resale agreements	**(19,259)**	44,463
Held-to-maturity securities:		
Proceeds from paydowns and maturities	**2,268**	3,508
Purchases	**(8,613)**	(594)
Available-for-sale securities:		
Proceeds from paydowns and maturities	**29,618**	43,536
Proceeds from sales	**34,322**	57,640
Purchases	**(46,530)**	(73,717)
Proceeds from sales and securitizations of loans held-for-investment	**20,154**	11,600
Other changes in loans, net	**(49,755)**	(39,385)
All other investing activities, net	**(1,987)**	655
Net cash provided by/(used in) investing activities	**(39,782)**	47,706
Financing activities		
Net change in:		
Deposits	**15,274**	51,352
Federal funds purchased and securities loaned or sold under repurchase agreements	**22,719**	3,731
Short-term borrowings	**12,974**	19,006
Beneficial interests issued by consolidated VIEs	**975**	(1,312)
Proceeds from long-term borrowings	**54,842**	46,311
Payments of long-term borrowings	**(69,636)**	(65,932)
Proceeds from issuance of preferred stock	**1,655**	–
Treasury stock repurchased	**(14,055)**	(10,602)
Dividends paid	**(6,989)**	(6,478)
All other financing activities, net	**(1,440)**	329
Net cash provided by financing activities	**16,319**	36,405
Effect of exchange rate changes on cash and due from banks and deposits with banks	**(2,509)**	7,272
Net increase/(decrease) in cash and due from banks and deposits with banks	**(12,207)**	68,002
Cash and due from banks and deposits with banks at the beginning of the period	**431,304**	391,154
Cash and due from banks and deposits with banks at the end of the period	**$ 419,097**	$ 459,156
Cash interest paid	**$ 15,144**	$ 10,294
Cash income taxes paid, net	**2,197**	3,238

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

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. For a further discussion of the Firm's business segments, refer to Note 23.

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 presented.

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 2017 Annual Report.

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.

For a further description of JPMorgan Chase's accounting policies regarding consolidation, refer to Notes 1 and 14 of JPMorgan Chase's 2017 Annual Report.

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. For further information on offsetting assets and liabilities, refer to Note 1 of JPMorgan Chase's 2017 Annual Report.

Application of U.S. GAAP related to the Tax Cuts and Jobs Act ("TCJA") SEC Staff Accounting Bulletin No. 118

On December 22, 2017, the TCJA was signed into law and the Firm recorded the estimated impact of the deemed repatriation of the Firm's unremitted non-U.S. earnings and the remeasurement of deferred taxes under the TCJA. These provisional amounts represent estimates under SEC guidance, which provides a one-year measurement period in which to refine the estimates based on new information or the issuance of interpretative guidance. Based on legislative guidance and adjustments to the 2017 federal tax return as filed, the Firm recorded a net tax benefit of $132 million in the third quarter for changes in the estimates to both the remeasurement of certain deferred taxes and the deemed repatriation tax on non-U.S. earnings. The year-to-date benefit recorded for changes in estimates was $305 million and the Firm may recognize additional adjustments during the fourth quarter as a result of the issuance of additional legislative and accounting guidance. The Firm considers any legislative or accounting guidance issued as of the balance sheet date when evaluating potential refinements to these estimates.

Accounting standards adopted January 1, 2018

The following table identifies the standards adopted, and the note where further information on the impact of the new guidance can be found:

Revenue recognition – revenue from contracts with customers	Note 5
Recognition and measurement of financial assets and financial liabilities	Notes 2 and 9
Treatment of restricted cash on the statement of cash flows	Note 18
Presentation of net periodic pension cost and net periodic postretirement benefit cost	Note 7
Premium amortization on purchased callable debt securities	Notes 9 and 17
Hedge accounting	Notes 4, 9 and 17
Reclassification of certain tax effects from AOCI	Note 17

Certain of the new accounting standards were applied retrospectively and prior period amounts were revised accordingly. The most significant of the new standards was revenue recognition, which requires gross presentation of certain costs that were previously offset against revenue. This change resulted in noninterest revenue and noninterest expense each increasing by $252 million and $777 million for the three and nine months ended September 30, 2017, respectively, with no impact to net income.

Upon adoption of the restricted cash guidance, to align the Consolidated balance sheets with the Consolidated statements of cash flows, the Firm reclassified restricted cash into cash and due from banks or deposits with banks. In addition, for the Firm's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks and deposits with banks. This guidance was applied retrospectively and, accordingly, prior period amounts have been revised, resulting in cash and due from banks and deposits with banks increasing by $71 million and $1.1 billion, respectively, and other assets decreasing by $1.2 billion at December 31, 2017.

Business changes and developments

On October 30, 2018, the Firm redeemed $1.7 billion of its fixed-to-floating rate non-cumulative perpetual preferred stock, Series I. For additional information on the Firm's preferred stock, refer to Note 20 of JPMorgan Chase's 2017 Annual Report.

Note 2 – Fair value measurement

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, refer to Note 2 of JPMorgan Chase's 2017 Annual Report.

The following table presents the assets and liabilities reported at fair value as of September 30, 2018, and December 31, 2017, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

September 30, 2018 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 12,226	$ –	$ –	$ 12,226
Securities borrowed	–	4,528	–	–	4,528
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	46,252	529	–	46,781
Residential – nonagency	–	1,681	77	–	1,758
Commercial – nonagency	–	1,420	13	–	1,433
Total mortgage-backed securities	–	49,353	619	–	49,972
U.S. Treasury and government agencies[a]	40,815	7,443	–	–	48,258
Obligations of U.S. states and municipalities	–	8,785	699	–	9,484
Certificates of deposit, bankers' acceptances and commercial paper	–	3,070	–	–	3,070
Non-U.S. government debt securities	26,824	28,875	164	–	55,863
Corporate debt securities	–	23,210	395	–	23,605
Loans[b]	–	40,051	1,533	–	41,584
Asset-backed securities	–	2,779	76	–	2,855
Total debt instruments	67,639	163,566	3,486	–	234,691
Equity securities	104,701	405	329	–	105,435
Physical commodities[c]	3,727	1,256	–	–	4,983
Other	–	14,188	413	–	14,601
Total debt and equity instruments[d]	176,067	179,415	4,228	–	359,710
Derivative receivables:					
Interest rate	715	258,744	2,000	(238,062)	23,397
Credit	–	22,553	952	(22,923)	582
Foreign exchange	734	187,377	773	(171,841)	17,043
Equity	–	43,791	3,141	(36,828)	10,104
Commodity	–	22,129	239	(13,432)	8,936
Total derivative receivables[e]	1,449	534,594	7,105	(483,086)	60,062
Total trading assets[f]	177,516	714,009	11,333	(483,086)	419,772
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	63,110	–	–	63,110
Residential – nonagency	–	9,216	1	–	9,217
Commercial – nonagency	–	7,048	–	–	7,048
Total mortgage-backed securities	–	79,374	1	–	79,375
U.S. Treasury and government agencies	27,816	–	–	–	27,816
Obligations of U.S. states and municipalities	–	38,121	–	–	38,121
Certificates of deposit	–	75	–	–	75
Non-U.S. government debt securities	16,544	8,130	–	–	24,674
Corporate debt securities	–	2,056	–	–	2,056
Asset-backed securities:					
Collateralized loan obligations	–	20,048	61	–	20,109
Other	–	7,804	–	–	7,804
Total available-for-sale securities	44,360	155,608	62	–	200,030
Loans	–	2,847	140	–	2,987
Mortgage servicing rights	–	–	6,433	–	6,433
Other assets[f][g]	10,684	20	1,063	–	11,767
Total assets measured at fair value on a recurring basis	$ 232,560	$ 889,238	$ 19,031	$ (483,086)	$ 657,743
Deposits	$ –	$ 16,060	$ 4,440	$ –	$ 20,500
Federal funds purchased and securities loaned or sold under repurchase agreements	–	1,059	–	–	1,059
Short-term borrowings	–	5,914	1,971	–	7,885
Trading liabilities:					
Debt and equity instruments[d]	84,958	24,403	96	–	109,457
Derivative payables:					
Interest rate	310	232,614	1,309	(227,142)	7,091
Credit		22,435	925	(21,908)	1,452
Foreign exchange	880	175,664	1,075	(165,217)	12,402
Equity	–	45,937	5,418	(39,377)	11,978
Commodity	–	22,075	764	(14,069)	8,770
Total derivative payables[e]	1,190	498,725	9,491	(467,713)	41,693
Total trading liabilities	86,148	523,128	9,587	(467,713)	151,150
Accounts payable and other liabilities	5,127	20	12	–	5,159
Beneficial interests issued by consolidated VIEs	–	16	1	–	17
Long-term debt	–	34,074	20,038	–	54,112
Total liabilities measured at fair value on a recurring basis	$ 91,275	$ 580,271	$ 36,049	$ (467,713)	$ 239,882

December 31, 2017 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 14,732	$ –	$ –	$ 14,732
Securities borrowed	–	3,049	–	–	3,049
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	41,515	307	–	41,822
Residential – nonagency	–	1,835	60	–	1,895
Commercial – nonagency	–	1,645	11	–	1,656
Total mortgage-backed securities	–	44,995	378	–	45,373
U.S. Treasury and government agencies[a]	30,758	6,475	1	–	37,234
Obligations of U.S. states and municipalities	–	9,067	744	–	9,811
Certificates of deposit, bankers' acceptances and commercial paper	–	226	–	–	226
Non-U.S. government debt securities	28,887	28,831	78	–	57,796
Corporate debt securities	–	24,146	312	–	24,458
Loans[b]	–	35,242	2,719	–	37,961
Asset-backed securities	–	3,284	153	–	3,437
Total debt instruments	59,645	152,266	4,385	–	216,296
Equity securities	87,346	197	295	–	87,838
Physical commodities[c]	4,924	1,322	–	–	6,246
Other	–	14,197	690	–	14,887
Total debt and equity instruments[d]	151,915	167,982	5,370	–	325,267
Derivative receivables:					
Interest rate	181	314,107	1,704	(291,319)	24,673
Credit	–	21,995	1,209	(22,335)	869
Foreign exchange	841	158,834	557	(144,081)	16,151
Equity	–	37,722	2,318	(32,158)	7,882
Commodity	–	19,875	210	(13,137)	6,948
Total derivative receivables[e]	1,022	552,533	5,998	(503,030)	56,523
Total trading assets[f]	152,937	720,515	11,368	(503,030)	381,790
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	70,280	–	–	70,280
Residential – nonagency	–	11,366	1	–	11,367
Commercial – nonagency	–	5,025	–	–	5,025
Total mortgage-backed securities	–	86,671	1	–	86,672
U.S. Treasury and government agencies	22,745	–	–	–	22,745
Obligations of U.S. states and municipalities	–	32,338	–	–	32,338
Certificates of deposit	–	59	–	–	59
Non-U.S. government debt securities	18,140	9,154	–	–	27,294
Corporate debt securities	–	2,757	–	–	2,757
Asset-backed securities:					
Collateralized loan obligations	–	20,720	276	–	20,996
Other	–	8,817	–	–	8,817
Equity securities[g]	547	–	–	–	547
Total available-for-sale securities	41,432	160,516	277	–	202,225
Loans	–	2,232	276	–	2,508
Mortgage servicing rights	–	–	6,030	–	6,030
Other assets[f][g]	13,795	343	1,265	–	15,403
Total assets measured at fair value on a recurring basis	$ 208,164	$ 901,387	$ 19,216	$ (503,030)	$ 625,737
Deposits	$ –	$ 17,179	$ 4,142	$ –	$ 21,321
Federal funds purchased and securities loaned or sold under repurchase agreements	–	697	–	–	697
Short-term borrowings	–	7,526	1,665	–	9,191
Trading liabilities:					
Debt and equity instruments[d]	64,664	21,183	39	–	85,886
Derivative payables:					
Interest rate	170	282,825	1,440	(277,306)	7,129
Credit	–	22,009	1,244	(21,954)	1,299
Foreign exchange	794	154,075	953	(143,349)	12,473
Equity	–	39,668	5,727	(36,203)	9,192
Commodity	–	21,017	884	(14,217)	7,684
Total derivative payables[e]	964	519,594	10,248	(493,029)	37,777
Total trading liabilities	65,628	540,777	10,287	(493,029)	123,663
Accounts payable and other liabilities	9,074	121	13	–	9,208
Beneficial interests issued by consolidated VIEs	–	6	39	–	45
Long-term debt	–	31,394	16,125	–	47,519
Total liabilities measured at fair value on a recurring basis	$ 74,702	$ 597,700	$ 32,271	$ (493,029)	$ 211,644

(a) At September 30, 2018, and December 31, 2017, included total U.S. government-sponsored enterprise obligations of $77.3 billion and $78.0 billion, respectively, which were predominantly mortgage-related.

(b) At September 30, 2018, and December 31, 2017, included within trading loans were $13.8 billion and $11.4 billion, respectively, of residential first-lien mortgages, and $2.6 billion and $4.2 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $9.2 billion and $5.7 billion, respectively, and reverse mortgages of zero and $836 million respectively.

(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. For a further discussion of the Firm's hedge accounting relationships, refer to Note 4. 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) 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. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. The level 3 balances would be reduced if netting were applied, including the netting benefit associated with cash collateral.

(f) 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, 2018, and December 31, 2017, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $767 million and $779 million, respectively. Included in these balances at September 30, 2018, and December 31, 2017, were trading assets of $55 million and $54 million, respectively, and other assets of $712 million and $725 million, respectively.

(g) Effective January 1, 2018, the Firm adopted the recognition and measurement guidance. Equity securities that were previously reported as AFS securities were reclassified to other assets upon adoption.

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

For both the three months ended September 30, 2018 and 2017 and the nine months ended September 30, 2017 there were no individually significant transfers.

For the nine months ended September 30, 2018, the only significant transfers were between levels 2 and 3.

Significant transfers from level 3 to level 2 included the following:

- $1.2 billion of total debt and equity instruments, the majority of which were trading loans, driven by an increase in observability.
- $1.0 billion of gross equity derivative receivables and $1.2 billion of gross equity derivative payables as a result of an increase in observability and a decrease in the significance of unobservable inputs.

Significant transfers from level 2 to level 3 included the following:

- $1.0 billion of gross equity derivative payables as a result of a decrease in observability and an increase in the significance of unobservable inputs.

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

Level 3 valuations

For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, refer to Note 2 of JPMorgan Chase's 2017 Annual Report.

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, for certain instruments, the weighted 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 and the weighted average value 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.

For the Firm's derivatives and structured notes positions classified within level 3 at September 30, 2018, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range; equity correlation, equity-FX, and equity-IR correlation inputs were concentrated in the middle of the range; commodity correlation inputs were concentrated in the middle of the range; credit correlation inputs were concentrated towards the lower end of the range; and the interest rate-foreign exchange ("IR-FX") correlation inputs were distributed across the range. In addition, the interest rate spread volatility inputs used in estimating fair value were distributed across the range; equity volatilities and commodity volatilities were concentrated towards the lower end of the range; and forward commodity prices used in estimating the fair value of commodity derivatives were concentrated towards the lower end of the range. Prepayment speed inputs used in estimating fair value of interest rate derivatives were concentrated towards the lower end of the range. Recovery rate, yield and prepayment speed inputs used in estimating fair value of credit derivatives were distributed across the range; credit spreads and conditional default rates were concentrated towards the lower end of the range; loss severity and price inputs were concentrated towards the upper end of the range.

Level 3 inputs[a]

September 30, 2018					
Product/Instrument	**Fair value** (in millions)	**Principal valuation technique**	**Unobservable inputs[g]**	**Range of input values**	**Weighted average**
Residential mortgage-backed securities and loans[b]	$ 823	Discounted cash flows	Yield	0% - 28%	6%
			Prepayment speed	0% - 39%	9%
			Conditional default rate	0% - 6%	1%
			Loss severity	0% - 100%	5%
Commercial mortgage-backed securities and loans[c]	439	Market comparables	Price	$ 4 - $ 101	$ 93
Obligations of U.S. states and municipalities	699	Market comparables	Price	$ 60 - $ 100	$ 97
Corporate debt securities	395	Market comparables	Price	$ 3 - $ 110	$ 80
Loans[d]	1,031	Market comparables	Price	$ 3 - $ 102	$ 79
Asset-backed securities	61	Discounted cash flows	Credit spread	219 bps	219 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	30%	30%
	76	Market comparables	Price	$ 0 - $ 100	$ 51
Net interest rate derivatives	528	Option pricing	Interest rate spread volatility	16 bps - 38 bps	
			Interest rate correlation	(45)% - 97%	
			IR-FX correlation	55% - 60%	
	163	Discounted cash flows	Prepayment speed	0% - 30%	
Net credit derivatives	26	Discounted cash flows	Credit correlation	35% - 60%	
			Credit spread	6 bps - 1,543 bps	
			Recovery rate	20% - 70%	
			Yield	3% - 52%	
			Prepayment speed	5% - 17%	
			Conditional default rate	0% - 100%	
			Loss severity	0% - 100%	
	1	Market comparables	Price	$ 10 - $ 98	
Net foreign exchange derivatives	(121)	Option pricing	IR-FX correlation	(45)% - 60%	
	(181)	Discounted cash flows	Prepayment speed	8% - 9%	
Net equity derivatives	(2,277)	Option pricing	Equity volatility	10% - 60%	
			Equity correlation	10% - 95%	
			Equity-FX correlation	(75)% - 60%	
			Equity-IR correlation	20% - 60%	
Net commodity derivatives	(525)	Option pricing	Forward commodity price	$ 61 - $ 83 per barrel	
			Commodity volatility	5% - 48%	
			Commodity correlation	(52)% - 95%	
MSRs	6,433	Discounted cash flows	Refer to Note 14		
Other assets	322	Discounted cash flows	Credit spread	70 bps	70 bps
			Yield	8% - 10%	8%
	1,154	Market comparables	Price	$ 34 - $ 106	$ 45
			EBITDA multiple	3.0x - 9.2x	8.4x
Long-term debt, short-term borrowings, and deposits[e]	26,449	Option pricing	Interest rate spread volatility	16 bps - 38 bps	
			Interest rate correlation	(45)% - 97%	
			IR-FX correlation	(45)% - 60%	
			Equity correlation	10% - 95%	
			Equity-FX correlation	(75)% - 60%	
			Equity-IR correlation	20% - 60%	
Other level 3 assets and liabilities, net[f]	384				

(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) Includes U.S. government agency securities of $502 million, nonagency securities of $78 million and trading loans of $243 million.
(c) Includes U.S. government agency securities of $27 million, nonagency securities of $13 million, trading loans of $259 million and non-trading loans of $140 million.
(d) Comprises trading loans.
(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.

Changes in and ranges of unobservable inputs

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 refer to Note 2 of JPMorgan Chase's 2017 Annual Report.

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, 2018 and 2017. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters 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, 2018 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2018
	Fair value at July 1, 2018	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2018	
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 478	$ 2	$ 14	$ (28)	$ (17)	$ 83	$ (3)	$ 529	$ –
Residential – nonagency	87	1	–	(6)	(3)	18	(20)	77	1
Commercial – nonagency	18	(1)	–	–	–	9	(13)	13	(1)
Total mortgage-backed securities	583	2	14	(34)	(20)	110	(36)	619	–
U.S. Treasury and government agencies	–	–	–	–	–	–	–	–	–
Obligations of U.S. states and municipalities	736	8	26	(70)	(1)	–	–	699	7
Non-U.S. government debt securities	183	(9)	44	(29)	(2)	1	(24)	164	(9)
Corporate debt securities	274	(2)	156	(87)	(4)	82	(24)	395	(3)
Loans	1,986	17	188	(146)	(199)	48	(361)	1,533	3
Asset-backed securities	87	6	5	(7)	(13)	5	(7)	76	3
Total debt instruments	3,849	22	433	(373)	(239)	246	(452)	3,486	1
Equity securities	288	20	6	(48)	–	82	(19)	329	(18)
Other	406	30	13	–	(37)	2	(1)	413	10
Total trading assets – debt and equity instruments	4,543	72 [c]	452	(421)	(276)	330	(472)	4,228	(7) [c]
Net derivative receivables:[a]									
Interest rate	489	236	28	(22)	(101)	68	(7)	691	216
Credit	(24)	(19)	1	–	47	6	16	27	(15)
Foreign exchange	(245)	(56)	29	(7)	(49)	(2)	28	(302)	(54)
Equity	(2,578)	(94)	643	(635)	622	(251)	16	(2,277)	(121)
Commodity	(752)	318	–	–	(113)	15	7	(525)	138
Total net derivative receivables	(3,110)	385 [c]	701	(664)	406	(164)	60	(2,386)	164 [c]
Available-for-sale securities:									
Asset-backed securities	147	–	–	–	(86)	–	–	61	–
Other	1	–	–	–	–	–	–	1	–
Total available-for-sale securities	148	–	–	–	(86)	–	–	62	–
Loans	159	(1) [c]	1	–	(19)	–	–	140	(1) [c]
Mortgage servicing rights	6,241	98 [e]	291	(2)	(195)	–	–	6,433	98 [e]
Other assets	1,225	(160) [c]	2	–	(7)	3	–	1,063	(160) [c]

Three months ended September 30, 2018 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2018
	Fair value at July 1, 2018	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2018	
Liabilities:[b]										
Deposits	$ 4,305	$ (84) [c][i]	$ –	$ –	$ 517	$ (170)	$ 1	$ (129)	$ 4,440	$ (82) [c][i]
Short-term borrowings	2,209	(47) [c][i]	–	–	713	(885)	6	(25)	1,971	(31) [c][i]
Trading liabilities – debt and equity instruments	43	36 [c]	(6)	19	–	(2)	7	(1)	96	36 [c]
Accounts payable and other liabilities	8	1	–	–	–	–	3	–	12	1
Beneficial interests issued by consolidated VIEs	1	–	–	–	–	–	–	–	1	–
Long-term debt	18,262	194 [c][i]	–	–	3,551	(1,809)	59	(219)	20,038	192 [c][i]

Three months ended September 30, 2017 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2017
	Fair value at July 1, 2017	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2017	
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 365	$ (2)	$ –	$ (15)	$ (20)	$ 10	$ (15)	$ 323	$ (2)
Residential – nonagency	98	6	4	(4)	(12)	50	(35)	107	5
Commercial – nonagency	65	3	10	(24)	–	3	(30)	27	3
Total mortgage-backed securities	528	7	14	(43)	(32)	63	(80)	457	6
U.S. Treasury and government agencies	–	–	–	–	–	1	–	1	–
Obligations of U.S. states and municipalities	681	3	31	–	–	–	–	715	3
Non-U.S. government debt securities	37	–	252	(217)	–	23	(15)	80	–
Corporate debt securities	461	7	193	(327)	(22)	68	(19)	361	8
Loans	4,488	131	564	(1,498)	(421)	246	(303)	3,207	71
Asset-backed securities	83	5	170	(10)	(8)	36	(5)	271	4
Total debt instruments	6,278	153	1,224	(2,095)	(483)	437	(422)	5,092	92
Equity securities	284	6	29	(40)	–	16	(7)	288	7
Other	731	20	5	(38)	(25)	–	(2)	691	16
Total trading assets – debt and equity instruments	7,293	179 [c]	1,258	(2,173)	(508)	453	(431)	6,071	115 [c]
Net derivative receivables:[a]									
Interest rate	712	101	16	(23)	(182)	21	19	664	(7)
Credit	(45)	(32)	–	(1)	(2)	40	4	(36)	(22)
Foreign exchange	(686)	16	9	(2)	68	(39)	95	(539)	37
Equity	(2,444)	(10)	355	(184)	(132)	(1)	41	(2,375)	82
Commodity	(58)	(30)	–	–	(3)	(2)	(7)	(100)	(51)
Total net derivative receivables	(2,521)	45 [c]	380	(210)	(251)	19	152	(2,386)	39 [c]
Available-for-sale securities:									
Asset-backed securities	547	2	–	–	(63)	–	–	486	2
Other	1	–	–	–	–	–	–	1	–
Total available-for-sale securities	548	2 [d]	–	–	(63)	–	–	487	2 [d]
Loans	305	8 [c]	–	(26)	(10)	–	–	277	8 [c]
Mortgage servicing rights	5,753	(66) [e]	253	(2)	(200)	–	–	5,738	(66) [e]
Other assets	1,934	18 [c]	3	(2)	(82)	–	–	1,871	16 [c]

Three months ended September 30, 2017 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/losses related to financial instruments held at September 30, 2017
	Fair value at July 1, 2017	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2017	
Liabilities:[b]										
Deposits	$ 2,131	$ 33 [c]	$ –	$ –	$ 1,909	$ (58)	$ –	$ (177)	$ 3,838	$ 27 [c]
Federal funds purchased and securities loaned or sold under repurchase agreements	–	–	–	–	–	–	1	–	1	–
Short-term borrowings	1,314	33 [c]	–	–	818	(631)	13	(76)	1,471	21 [c]
Trading liabilities – debt and equity instruments	36	2 [c]	(23)	28	–	–	–	–	43	3 [c]
Accounts payable and other liabilities	10	–	–	–	–	(1)	–	–	9	–
Beneficial interests issued by consolidated VIEs	1	–	–	39	–	–	78	–	118	–
Long-term debt	14,732	319 [c][j]	–	–	3,023 [j]	(3,552)	181	(209)	14,494 [j]	242 [c][j]

Nine months ended September 30, 2018 (in millions)	Fair value measurements using significant unobservable inputs								Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2018
	Fair value at January 1, 2018	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2018	
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 307	$ 5	$ 348	$ (126)	$ (56)	$ 92	$ (41)	$ 529	$ 3
Residential – nonagency	60	1	45	(19)	(6)	58	(62)	77	4
Commercial – nonagency	11	2	7	(8)	(13)	30	(16)	13	(1)
Total mortgage-backed securities	378	8	400	(153)	(75)	180	(119)	619	6
U.S. Treasury and government agencies	1	–	–	–	–	–	(1)	–	–
Obligations of U.S. states and municipalities	744	(3)	107	(70)	(79)	–	–	699	(3)
Non-U.S. government debt securities	78	(19)	395	(213)	(2)	18	(93)	164	(18)
Corporate debt securities	312	(6)	297	(227)	(15)	249	(215)	395	(1)
Loans	2,719	58	1,223	(1,680)	(528)	422	(681)	1,533	(22)
Asset-backed securities	153	15	64	(29)	(53)	18	(92)	76	8
Total debt instruments	4,385	53	2,486	(2,372)	(752)	887	(1,201)	3,486	(30)
Equity securities	295	(1)	99	(108)	(1)	86	(41)	329	11
Other	690	(209)	47	(40)	(75)	3	(3)	413	(250)
Total trading assets – debt and equity instruments	5,370	(157) [c]	2,632	(2,520)	(828)	976	(1,245)	4,228	(269) [c]
Net derivative receivables:[a]									
Interest rate	264	576	83	(77)	(234)	40	39	691	498
Credit	(35)	19	3	(7)	22	5	20	27	7
Foreign exchange	(396)	184	42	(15)	(46)	(114)	43	(302)	42
Equity	(3,409)	688	1,467	(1,919)	1,043	(324)	177	(2,277)	31
Commodity	(674)	468	–	–	(287)	7	(39)	(525)	158
Total net derivative receivables	(4,250)	1,935 [c]	1,595	(2,018)	498	(386)	240	(2,386)	736 [c]
Available-for-sale securities:									
Asset-backed securities	276	1	–	–	(216)	–	–	61	1
Other	1	–	–	–	–	–	–	1	–
Total available-for-sale securities	277	1 [d]	–	–	(216)	–	–	62	1 [d]
Loans	276	(5) [c]	123	–	(180)	–	(74)	140	(5) [c]
Mortgage servicing rights	6,030	576 [e]	770	(401)	(542)	–	–	6,433	576 [e]
Other assets	1,265	(210) [c]	49	(16)	(28)	4	(1)	1,063	(217) [c]

Nine months ended September 30, 2018 (in millions)	Fair value measurements using significant unobservable inputs									Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2018
	Fair value at January 1, 2018	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2018	
Liabilities:[b]										
Deposits	$ 4,142	$ (125) [c][i]	$ –	$ –	$ 1,272	$ (425)	$ 2	$ (426)	$ 4,440	$ (115) [c][i]
Short-term borrowings	1,665	(229) [c][i]	–	–	2,783	(2,245)	61	(64)	1,971	26 [c][i]
Trading liabilities – debt and equity instruments	39	28 [c]	(68)	95	–	(1)	9	(6)	96	11 [c]
Accounts payable and other liabilities	13	–	(6)	1	–	–	4	–	12	–
Beneficial interests issued by consolidated VIEs	39	–	–	–	–	(38)	–	–	1	–
Long-term debt	16,125	(396) [c][i]	–	–	10,382	(6,155)	653	(571)	20,038	(576) [c][i]

Nine months ended September 30, 2017 (in millions)	Fair value at January 1, 2017	Total realized/ unrealized gains/ (losses)	Purchases[f]	Sales	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2017	Change in unrealized gains/ (losses) related to financial instruments held at September 30, 2017
	Fair value measurements using significant unobservable inputs								
Assets:									
Trading assets:									
Debt instruments:									
Mortgage-backed securities:									
U.S. government agencies	$ 392	$ (9)	$ 161	$ (166)	$ (55)	$ 37	$ (37)	$ 323	$ (17)
Residential – nonagency	83	14	40	(24)	(21)	111	(96)	107	2
Commercial – nonagency	17	5	27	(38)	(5)	63	(42)	27	1
Total mortgage-backed securities	492	10	228	(228)	(81)	211	(175)	457	(14)
U.S. Treasury and government agencies	–	–	–	–	–	1	–	1	–
Obligations of U.S. states and municipalities	649	15	126	(70)	(5)	–	–	715	15
Non-U.S. government debt securities	46	3	426	(395)	–	50	(50)	80	–
Corporate debt securities	576	–	690	(473)	(398)	128	(162)	361	11
Loans	4,837	309	2,055	(2,565)	(1,186)	564	(807)	3,207	73
Asset-backed securities	302	27	279	(178)	(44)	50	(165)	271	2
Total debt instruments	6,902	364	3,804	(3,909)	(1,714)	1,004	(1,359)	5,092	87
Equity securities	231	40	142	(87)	–	18	(56)	288	34
Other	761	85	27	(45)	(137)	10	(10)	691	46
Total trading assets – debt and equity instruments	7,894	489 [c]	3,973	(4,041)	(1,851)	1,032	(1,425)	6,071	167 [c]
Net derivative receivables:[a]									
Interest rate	1,263	182	53	(76)	(833)	55	20	664	(184)
Credit	98	(126)	1	(4)	(64)	57	2	(36)	(57)
Foreign exchange	(1,384)	86	13	(6)	633	(16)	135	(539)	(12)
Equity	(2,252)	24	840	(312)	(660)	(182)	167	(2,375)	76
Commodity	(85)	(34)	–	–	22	2	(5)	(100)	27
Total net derivative receivables	(2,360)	132 [c]	907	(398)	(902)	(84)	319	(2,386)	(150) [c]
Available-for-sale securities:									
Asset-backed securities	663	14	–	(50)	(141)	–	–	486	12
Other	1	–	–	–	–	–	–	1	–
Total available-for-sale securities	664	14 [d]	–	(50)	(141)	–	–	487	12 [d]
Loans	570	32 [c]	–	(26)	(299)	–	–	277	8 [c]
Mortgage servicing rights	6,096	(223) [e]	624	(140)	(619)	–	–	5,738	(224) [e]
Other assets	2,223	248 [c]	35	(157)	(478)	–	–	1,871	126 [c]

Nine months ended September 30, 2017 (in millions)	Fair value at January 1, 2017	Total realized/ unrealized (gains)/ losses	Purchases	Sales	Issuances	Settlements[g]	Transfers into level 3[h]	Transfers (out of) level 3[h]	Fair value at September 30, 2017	Change in unrealized (gains)/ losses related to financial instruments held at September 30, 2017
	Fair value measurements using significant unobservable inputs									
Liabilities:[b]										
Deposits	$ 2,117	$ 39 [c]	$ –	$ –	$ 2,510	$ (169)	$ –	$ (659)	$ 3,838	$ 140 [c]
Federal funds purchased and securities loaned or sold under repurchase agreements	–	–	–	–	–	–	1	–	1	–
Short-term borrowings	1,134	80 [c]	–		2,208	(1,873)	53	(131)	1,471	50 [c]
Trading liabilities – debt and equity instruments	43	1 [c]	(31)	32	–	1	3	(6)	43	1 [c]
Accounts payable and other liabilities	13	–	(1)	–	–	(3)	–	–	9	–
Beneficial interests issued by consolidated VIEs	48	3	(44)	39	–	(6)	78	–	118	–
Long-term debt	12,850	918 [c][j]	–	–	9,756 [j]	(8,637)	269	(662)	14,494 [j]	996 [c][j]

(a) All level 3 derivatives are presented on a net basis, irrespective of the underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 15% at both September 30, 2018 and December 31, 2017, respectively.
(c) 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.
(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment ("OTTI") losses that are recorded in earnings, are reported in investment securities losses. Unrealized gains/(losses) are reported in OCI. There were no realized gains/(losses) or foreign exchange hedge accounting adjustments recorded in income on AFS securities for the three and nine months ended September 30, 2018 and 2017, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were zero and $2 million for the three months ended September 30, 2018 and 2017, respectively and $1 million and $14 million for the nine months ended September 30, 2018 and 2017, respectively.
(e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
(f) Loan originations are included in purchases.
(g) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, deconsolidation associated with beneficial interests in VIEs and other items.
(h) All transfers into and/or out of level 3 are based on changes in the observability of the valuation inputs and are assumed to occur at the beginning of the quarterly reporting period in which they occur.
(i) Realized (gains)/losses due to DVA for fair value option elected liabilities are reported in principal transactions revenue. Unrealized (gains)/losses are reported in OCI. Unrealized (gains)/losses were $123 million for the three months ended September 30, 2018 and unrealized (gains)/losses were not material for the nine months ended September 30, 2018. There were no material realized (gains)/losses for the three and nine months ended September 30, 2018, respectively.
(j) The prior period amounts have been revised to conform with the current period presentation.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 0.8% of total Firm assets at September 30, 2018. The following describes significant changes to level 3 assets since December 31, 2017, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, refer to Assets and liabilities measured at fair value on a nonrecurring basis on page 105.

Three months ended September 30, 2018

Level 3 assets were $19.0 billion at September 30, 2018, reflecting a decrease of $272 million from June 30, 2018 with no movements that were individually significant.

Nine months ended September 30, 2018

Level 3 assets at September 30, 2018 decreased by $185 million from December 31, 2017 with no movements that were individually significant.

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. For further information on these instruments, refer to Changes in level 3 recurring fair value measurements rollforward tables on pages 99–104.

Three months ended September 30, 2018

- $394 million of net gains on assets and $100 million of net gains on liabilities, none of which were individually significant.

Three months ended September 30, 2017

- $186 million of net gains on assets and $387 million of net losses on liabilities, none of which were individually significant.

Nine months ended September 30, 2018

- $2.1 billion of net gains on assets predominantly driven by market movements in derivative receivables.
- $722 million of net gains on liabilities, none of which were individually significant.

Nine months ended September 30, 2017

- $692 million of of net gains on assets and $1.0 billion of net losses on liabilities, none of which were individually significant.

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)	**2018**	2017	**2018**	2017
Credit and funding adjustments:				
Derivatives CVA	**$ 66**	$ 245	**$ 223**	$ 715
Derivatives FVA	**88**	(222)	**102**	(289)

For further information about both credit and funding adjustments, as well as information about valuation adjustments on fair value option elected liabilities, refer to Note 2 of JPMorgan Chase's 2017 Annual Report.

Assets and liabilities measured at fair value on a nonrecurring basis

The following tables present the assets still held as of September 30, 2018 and 2017, respectively, for which a nonrecurring fair value adjustment was recorded during the nine months ended September 30, 2018 and 2017, respectively, by major product category and fair value hierarchy.

	Fair value hierarchy			
September 30, 2018 (in millions)	Level 1	Level 2	Level 3	Total fair value
Loans	**$ –**	**$ 492**	**$ 243** [a]	**$ 735**
Other assets[b]	**–**	**216**	**826**	**1,042**
Total assets measured at fair value on a nonrecurring basis	**$ –**	**$ 708**	**$ 1,069**	**$ 1,777**

	Fair value hierarchy			
September 30, 2017 (in millions)	Level 1	Level 2	Level 3	Total fair value
Loans	$ –	$ 338	$ 542	$ 880
Other assets	–	7	245	252
Total assets measured at fair value on a nonrecurring basis	$ –	$ 345	$ 787	$ 1,132

(a) Of the $243 million in level 3 assets measured at fair value on a nonrecurring basis as of September 30, 2018, $200 million related to residential real estate loans carried at the net realizable value of the underlying collateral (e.g., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3 as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 13% to 40% with a weighted average of 22%.

(b) 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) as a result of the adoption of the recognition and measurement guidance. Of the $826 million in level 3 assets measured at fair value on a nonrecurring basis as of September 30, 2018, $724 million related to such equity securities. These equity securities are classified as level 3 due to the infrequency of the observable prices and/or the restrictions on the shares.

There were no material liabilities measured at fair value on a nonrecurring basis at September 30, 2018 and at September 30, 2017.

Nonrecurring fair value changes

The following table presents the total change in value of assets and liabilities for which a fair value adjustment has been recognized for the three and nine months ended September 30, 2018 and 2017, related to financial instruments held at those dates.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	**2017**
Loans	**$ (22)**	$ (52)	**$ (36)**	$ (157)
Other assets	**(117)** [a]	(11)	**383** [a]	(44)
Accounts payable and other liabilities	**–**	–	**–**	(1)
Total nonrecurring fair value gains/(losses)	**$ (139)**	$ (63)	**$ 347**	$ (202)

(a) Included $(113) million and $384 million for the three months and nine months ended September 30, 2018, respectively, of fair value gains/(losses) as a result of the measurement alternative.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

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, 2018, and December 31, 2017, 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. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, refer to Note 2 of JPMorgan Chase's 2017 Annual Report.

	September 30, 2018					December 31, 2017				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 23.2**	**$ 23.2**	**$ –**	**$ –**	**$ 23.2**	$ 25.9	$ 25.9	$ –	$ –	$ 25.9
Deposits with banks	**395.9**	**392.2**	**3.7**	**–**	**395.9**	405.4	401.8	3.6	–	405.4
Accrued interest and accounts receivable	**77.7**	**–**	**77.6**	**0.1**	**77.7**	67.0	–	67.0	–	67.0
Federal funds sold and securities purchased under resale agreements	**205.4**	**–**	**205.4**	**–**	**205.4**	183.7	–	183.7	–	183.7
Securities borrowed	**117.9**	**–**	**117.9**	**–**	**117.9**	102.1	–	102.1	–	102.1
Securities, held-to-maturity	**31.4**	**–**	**30.9**	**–**	**30.9**	47.7	–	48.7	–	48.7
Loans, net of allowance for loan losses[(a)]	**938.2**	**–**	**227.3**	**710.0**	**937.3**	914.6	–	213.2	707.1	920.3
Other[(b)]	**55.0**	**–**	**54.1**	**1.0**	**55.1**	53.9	–	52.1	9.2	61.3
Financial liabilities										
Deposits	**$ 1,438.3**	**$ –**	**$ 1,438.4**	**$ –**	**$ 1,438.4**	$ 1,422.7	$ –	$ 1,422.7	$ –	$ 1,422.7
Federal funds purchased and securities loaned or sold under repurchase agreements	**180.5**	**–**	**180.5**	**–**	**180.5**	158.2	–	158.2	–	158.2
Short-term borrowings	**56.7**	**–**	**56.7**	**–**	**56.7**	42.6	–	42.4	0.2	42.6
Accounts payable and other liabilities	**173.4**	**–**	**170.0**	**3.1**	**173.1**	152.0	–	148.9	2.9	151.8
Beneficial interests issued by consolidated VIEs	**20.2**	**–**	**20.2**	**–**	**20.2**	26.0	–	26.0	–	26.0
Long-term debt and junior subordinated deferrable interest debentures	**216.0**	**–**	**217.5**	**3.3**	**220.8**	236.6	–	240.3	3.2	243.5

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised.

(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. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, refer to Valuation hierarchy on pages 156–159 of JPMorgan Chase's 2017 Annual Report.

(b) The prior period amounts have been revised to conform with the current period presentation.

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 of the wholesale allowance for lending-related commitments and the estimated fair value of these wholesale lending-related commitments were as follows for the periods indicated.

	September 30, 2018					December 31, 2017				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[(a)]	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	**$1.1**	**$–**	**$–**	**$1.5**	**$1.5**	$1.1	$–	$–	$1.6	$1.6

(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.

The Firm does not estimate the fair value of consumer 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. For a further discussion of the valuation of lending-related commitments, refer to page 157 of JPMorgan Chase's 2017 Annual Report.

Equity securities without readily determinable fair values

As a result of the adoption of the recognition and measurement guidance and the election of the measurement alternative in the first quarter of 2018, the Firm 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, with such changes recognized in earnings.

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, 2018, 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	
(in millions)	Three months ended September 30, 2018	Nine months ended September 30, 2018
Other assets		
Carrying value	**$ 1,801**	**$ 1,801**
Upward carrying value changes	**14**	**540**
Downward carrying value changes/impairment	**(127)**	**(156)**

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 1.6298 at September 30, 2018, and may be adjusted by Visa depending on developments related to the litigation matters.

Note 3 – Fair value option

For a discussion of the primary financial instruments for which the fair value option was elected, including the basis for those elections and the determination of instrument-specific credit risk, where relevant, refer to Note 3 of JPMorgan Chase's 2017 Annual Report.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the three months ended September 30, 2018 and 2017, 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,					
	2018			2017		
(in millions)	Principal transactions	All other income	Total changes in fair value recorded [e]	Principal transactions	All other income	Total changes in fair value recorded [e]
Federal funds sold and securities purchased under resale agreements	**$ (23)**	**$ –**	**$ (23)**	$ (17)	$ –	$ (17)
Securities borrowed	**(24)**	**–**	**(24)**	(10)	–	(10)
Trading assets:						
Debt and equity instruments, excluding loans	**(45)**	**5** [c]	**(40)**	412	–	412
Loans reported as trading assets:						
Changes in instrument-specific credit risk	**122**	**1** [c]	**123**	139	(2) [c]	137
Other changes in fair value	**(6)**	**49** [c]	**43**	111	249 [c]	360
Loans:						
Changes in instrument-specific credit risk	**(1)**	**–**	**(1)**	–	–	–
Other changes in fair value	**1**	**–**	**1**	3	–	3
Other assets	**2**	**16** [d]	**18**	3	(4) [d]	(1)
Deposits[a]	**32**	**–**	**32**	(117)	–	(117)
Federal funds purchased and securities loaned or sold under repurchase agreements	**8**	**–**	**8**	2	–	2
Short-term borrowings[a]	**(25)**	**–**	**(25)**	(54)	–	(54)
Trading liabilities	**2**	**–**	**2**	(3)	–	(3)
Long-term debt[a][b]	**259**	**–**	**259**	(793)	–	(793)

(in millions)	Nine months ended September 30,					
	2018			2017		
	Principal transactions	All other income	Total changes in fair value recorded[e]	Principal transactions	All other income	Total changes in fair value recorded[e]
Federal funds sold and securities purchased under resale agreements	**$ (49)**	**$ –**	**$ (49)**	$ (50)	$ –	$ (50)
Securities borrowed	**(22)**	**–**	**(22)**	80	–	80
Trading assets:		–				
Debt and equity instruments, excluding loans	**(490)**	**6** [c]	**(484)**	1,107	2 [c]	1,109
Loans reported as trading assets:		–				
Changes in instrument-specific credit risk	**458**	**5** [c]	**463**	382	13 [c]	395
Other changes in fair value	**64**	**24** [c]	**88**	188	601 [c]	789
Loans:						
Changes in instrument-specific credit risk	**(2)**	**–**	**(2)**	(1)	–	(1)
Other changes in fair value	**(1)**		**(1)**	4	3 [c]	7
Other assets	**4**	**6** [d]	**10**	10	(26) [d]	(16)
Deposits[a]	**371**	**–**	**371**	(362)	–	(362)
Federal funds purchased and securities loaned or sold under repurchase agreements	**27**	**–**	**27**	4	–	4
Other borrowed funds[a]	**86**	**–**	**86**	(485)	–	(485)
Trading liabilities	**1**	**–**	**1**	(4)	–	(4)
Long-term debt[a][b]	**1,486**	**–**	**1,486**	(1,716)	–	(1,716)

(a) Unrealized gains/(losses) due to instrument-specific credit risk (DVA) for liabilities for which the fair value option has been elected is recorded in OCI, while realized gains/(losses) are recorded in principal transactions revenue. Realized gains/(losses) due to instrument-specific credit risk recorded in principal transactions revenue were not material for the three and nine months ended September 30, 2018 and 2017, respectively.
(b) Long-term debt measured at fair value predominantly relates to structured notes. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.
(c) Reported in mortgage fees and related income.
(d) Reported in other income.
(e) Changes in fair value exclude contractual interest, which is included in interest income and interest expense for all instruments other than hybrid financial instruments. For further information regarding interest income and interest expense, refer to Note 6.

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, 2018, and December 31, 2017, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	September 30, 2018			December 31, 2017		
(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[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 4,171**	**$ 1,189**	**$ (2,982)**	$ 4,219	$ 1,371	$ (2,848)
Loans	**–**	**–**	**–**	39	–	(39)
Subtotal	**4,171**	**1,189**	**(2,982)**	4,258	1,371	(2,887)
All other performing loans						
Loans reported as trading assets	**41,986**	**40,395**	**(1,591)**	38,157	36,590	(1,567)
Loans	**3,039**	**2,987**	**(52)**	2,539	2,508	(31)
Total loans	**$ 49,196**	**$ 44,571**	**$ (4,625)**	$ 44,954	$ 40,469	$ (4,485)
Long-term debt						
Principal-protected debt	**$ 31,858** [c]	**$ 27,518**	**$ (4,340)**	$ 26,297 [c]	$ 23,848	$ (2,449)
Nonprincipal-protected debt[b]	**NA**	**26,594**	**NA**	NA	23,671	NA
Total long-term debt	**NA**	**$ 54,112**	**NA**	NA	$ 47,519	NA
Long-term beneficial interests						
Nonprincipal-protected debt	**NA**	**$ 17**	**NA**	NA	$ 45	NA
Total long-term beneficial interests	**NA**	**$ 17**	**NA**	NA	$ 45	NA

(a) There were no performing loans that were ninety days or more past due as of September 30, 2018, and December 31, 2017, respectively.
(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but 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.
(c) 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, 2018, and December 31, 2017, the contractual amount of lending-related commitments for which the fair value option was elected was $9.1 billion and $7.4 billion, respectively, with a corresponding fair value of $(53) million and $(76) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, refer to Note 27 of JPMorgan Chase's 2017 Annual Report, and Note 20 of this Form 10-Q.

Structured note products by balance sheet classification and risk component

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

	September 30, 2018				December 31, 2017			
(in millions)	Long-term debt	Short-term borrowings	Deposits	Total	Long-term debt	Short-term borrowings	Deposits	Total
Risk exposure								
Interest rate	**$ 23,333**	**$ 616**	**$ 9,269**	**$ 33,218**	$ 22,056	$ 69	$ 8,058	$ 30,183
Credit	**3,771**	**483**	**–**	**4,254**	4,329	1,312	–	5,641
Foreign exchange	**2,930**	**96**	**37**	**3,063**	2,841	147	38	3,026
Equity	**21,950**	**6,258**	**7,330**	**35,538**	17,581	7,106	6,548	31,235
Commodity	**355**	**7**	**1,715**	**2,077**	230	15	4,468	4,713
Total structured notes	**$ 52,339**	**$ 7,460**	**$ 18,351**	**$ 78,150**	$ 47,037	$ 8,649	$ 19,112	$ 74,798

Note 4 – Derivative instruments

JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. For a further discussion of the Firm's use of and accounting policies regarding derivative instruments, refer to Note 5 of JPMorgan Chase's 2017 Annual Report.

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 certain risks associated with specified assets or liabilities ("specified risk management" positions) as well as derivatives used in the Firm's market-making businesses or for other purposes.

Derivatives designated as hedges

The adoption of the new hedge accounting guidance in the first quarter of 2018 better aligns hedge accounting with the economics of the Firm's risk management activities. For additional information on the impact of the new guidance, refer to Note 17.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, nonstatistical methods such as dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item, and qualitative comparisons of critical terms and the evaluation of any changes in those terms. The extent to which a derivative has been, and is expected to continue to be, highly effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

For qualifying fair value hedges, changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. Certain amounts excluded from the assessment of effectiveness are recorded in OCI and recognized in earnings through an amortization approach over the life of the derivative. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item, and for benchmark interest rate hedges, is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item - primarily net interest income and principal transactions revenue.

For qualifying cash flow hedges, changes in the fair value of the derivative are recorded in OCI and recognized in earnings as the hedged item affects earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item - primarily interest income, interest expense, noninterest revenue and compensation expense. If the hedge relationship is terminated, then the change in value of the derivative recorded in AOCI is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

For qualifying net investment hedges, changes in the fair value of the derivatives due to changes in spot foreign exchange rates are recorded in OCI as translation adjustments. Amounts excluded from the assessment of effectiveness are recorded directly in earnings.

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

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	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	118-119
• Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	120
• Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	118-119
• Foreign exchange	Hedge foreign currency-denominated forecasted revenue and expense	Cash flow hedge	Corporate	120
• Foreign exchange	Hedge the value of the Firm's investments in non-U.S. dollar functional currency entities	Net investment hedge	Corporate	121
• Commodity	Hedge commodity inventory	Fair value hedge	CIB	118-119
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
• Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	121
• Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	121
• Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	121
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	121
• Various	Other derivatives	Market-making and other	CIB, Corporate	121

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of September 30, 2018, and December 31, 2017.

(in billions)	Notional amounts[b]	
	September 30, 2018	December 31, 2017
Interest rate contracts		
Swaps	**$ 25,236**	$ 21,043
Futures and forwards	**7,326**	4,904
Written options	**4,718**	3,576
Purchased options	**5,233**	3,987
Total interest rate contracts	**42,513**	33,510
Credit derivatives[a]	**1,603**	1,522
Foreign exchange contracts		
Cross-currency swaps	**3,893**	3,953
Spot, futures and forwards	**6,812**	5,923
Written options	**961**	786
Purchased options	**956**	776
Total foreign exchange contracts	**12,622**	11,438
Equity contracts		
Swaps	**402**	367
Futures and forwards	**106**	90
Written options	**596**	531
Purchased options	**543**	453
Total equity contracts	**1,647**	1,441
Commodity contracts		
Swaps	**140**	116
Spot, futures and forwards	**164**	168
Written options	**157**	98
Purchased options	**134**	93
Total commodity contracts	**595**	475
Total derivative notional amounts	**$ 58,980**	$ 48,386

(a) For more information on volumes and types of credit derivative contracts, refer to the Credit derivatives discussion on page 122.

(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 transactions, the notional amount is not exchanged; it is used simply as a reference 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, 2018, and December 31, 2017, 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, 2018 (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	**$ 260,636**	**$ 823**	**$ 261,459**	**$ 23,397**	**$ 234,232**	**$ 1**	**$ 234,233**	**$ 7,091**
Credit	**23,505**	**–**	**23,505**	**582**	**23,360**	**–**	**23,360**	**1,452**
Foreign exchange	**188,261**	**623**	**188,884**	**17,043**	**176,771**	**848**	**177,619**	**12,402**
Equity	**46,932**	**–**	**46,932**	**10,104**	**51,355**	**–**	**51,355**	**11,978**
Commodity	**22,175**	**193**	**22,368**	**8,936**	**22,749**	**90**	**22,839**	**8,770**
Total fair value of trading assets and liabilities	**$ 541,509**	**$ 1,639**	**$ 543,148**	**$ 60,062**	**$ 508,467**	**$ 939**	**$ 509,406**	**$ 41,693**

	Gross derivative receivables				Gross derivative payables			
December 31, 2017 (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	$ 314,962 [c]	$ 1,030 [c]	$ 315,992	$ 24,673	$ 284,433 [c]	$ 3 [c]	$ 284,436	$ 7,129
Credit	23,205	–	23,205	869	23,252	–	23,252	1,299
Foreign exchange	159,740	491	160,231	16,151	154,601	1,221	155,822	12,473
Equity	40,040	–	40,040	7,882	45,395	–	45,395	9,192
Commodity	20,066	19	20,085	6,948	21,498	403	21,901	7,684
Total fair value of trading assets and liabilities	$ 558,013 [c]	$ 1,540 [c]	$ 559,553	$ 56,523	$ 529,179 [c]	$ 1,627 [c]	$ 530,806	$ 37,777

(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.
(c) The prior period amounts have been revised to conform with the current period presentation.

Derivatives netting

The following tables present, as of September 30, 2018, and December 31, 2017, 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, 2018			December 31, 2017		
(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")	**$ 250,181**	**$ (230,533)**	**$ 19,648**	$ 305,569	$ (284,917)	$ 20,652
OTC-cleared	**7,512**	**(7,374)**	**138**	6,531	(6,318)	213
Exchange-traded[a]	**300**	**(155)**	**145**	185	(84)	101
Total interest rate contracts	**257,993**	**(238,062)**	**19,931**	312,285	(291,319)	20,966
Credit contracts:						
OTC	**12,502**	**(12,153)**	**349**	15,390	(15,165)	225
OTC-cleared	**10,806**	**(10,770)**	**36**	7,225	(7,170)	55
Total credit contracts	**23,308**	**(22,923)**	**385**	22,615	(22,335)	280
Foreign exchange contracts:						
OTC	**184,421**	**(171,163)**	**13,258**	155,289	(142,420)	12,869
OTC-cleared	**676**	**(659)**	**17**	1,696	(1,654)	42
Exchange-traded[a]	**42**	**(19)**	**23**	141	(7)	134
Total foreign exchange contracts	**185,139**	**(171,841)**	**13,298**	157,126	(144,081)	13,045
Equity contracts:						
OTC	**25,197**	**(22,380)**	**2,817**	22,024	(19,917)	2,107
Exchange-traded[a]	**16,789**	**(14,448)**	**2,341**	14,188	(12,241)	1,947
Total equity contracts	**41,986**	**(36,828)**	**5,158**	36,212	(32,158)	4,054
Commodity contracts:						
OTC	**12,497**	**(4,916)**	**7,581**	10,903	(4,436)	6,467
Exchange-traded[a]	**9,198**	**(8,516)**	**682**	8,854	(8,701)	153
Total commodity contracts	**21,695**	**(13,432)**	**8,263**	19,757	(13,137)	6,620
Derivative receivables with appropriate legal opinion	**530,121**	**(483,086)** [b]	**47,035**	547,995	(503,030) [b]	44,965
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**13,027**		**13,027**	11,558		11,558
Total derivative receivables recognized on the Consolidated balance sheets	**$ 543,148**		**$ 60,062**	$ 559,553		$ 56,523
Collateral not nettable on the Consolidated balance sheets[c][d]			**(13,826)**			(13,363)
Net amounts			**$ 46,236**			$ 43,160

(in millions)	September 30, 2018			December 31, 2017		
	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 225,999**	**$ (220,369)**	**$ 5,630**	$ 276,960	$ (271,294)	$ 5,666
OTC-cleared	**6,650**	**(6,618)**	**32**	6,004	(5,928)	76
Exchange-traded[a]	**172**	**(155)**	**17**	127	(84)	43
Total interest rate contracts	**232,821**	**(227,142)**	**5,679**	283,091	(277,306)	5,785
Credit contracts:						
OTC	**13,133**	**(11,852)**	**1,281**	16,194	(15,170)	1,024
OTC-cleared	**10,062**	**(10,056)**	**6**	6,801	(6,784)	17
Total credit contracts	**23,195**	**(21,908)**	**1,287**	22,995	(21,954)	1,041
Foreign exchange contracts:						
OTC	**173,389**	**(164,557)**	**8,832**	150,966	(141,789)	9,177
OTC-cleared	**679**	**(654)**	**25**	1,555	(1,553)	2
Exchange-traded[a]	**25**	**(6)**	**19**	98	(7)	91
Total foreign exchange contracts	**174,093**	**(165,217)**	**8,876**	152,619	(143,349)	9,270
Equity contracts:						
OTC	**28,618**	**(24,869)**	**3,749**	28,193	(23,969)	4,224
Exchange-traded[a]	**16,234**	**(14,508)**	**1,726**	12,720	(12,234)	486
Total equity contracts	**44,852**	**(39,377)**	**5,475**	40,913	(36,203)	4,710
Commodity contracts:						
OTC	**13,607**	**(5,600)**	**8,007**	12,645	(5,508)	7,137
Exchange-traded[a]	**8,558**	**(8,469)**	**89**	8,870	(8,709)	161
Total commodity contracts	**22,165**	**(14,069)**	**8,096**	21,515	(14,217)	7,298
Derivative payables with appropriate legal opinion	**497,126**	**(467,713)** [b]	**29,413**	521,133	(493,029) [b]	28,104
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**12,280**		**12,280**	9,673		9,673
Total derivative payables recognized on the Consolidated balance sheets	**$ 509,406**		**$ 41,693**	$ 530,806		$ 37,777
Collateral not nettable on the Consolidated balance sheets[c][d]			**(3,566)**			(4,180)
Net amounts			**$ 38,127**			$ 33,597

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Net derivatives receivable included cash collateral netted of $55.5 billion at both September 30, 2018, and December 31, 2017, respectively. Net derivatives payable included cash collateral netted of $40.1 billion and $45.5 billion related to OTC and OTC-cleared derivatives at September 30, 2018, and December 31, 2017, respectively.
(c) 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.
(d) Derivative collateral relates only to OTC and OTC-cleared derivative instruments.

Liquidity risk and credit-related contingent features

For a more detailed discussion of liquidity risk and credit-related contingent features related to the Firm's derivative contracts, refer to Note 5 of JPMorgan Chase's 2017 Annual Report.

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, 2018, and December 31, 2017.

OTC and OTC-cleared derivative payables containing downgrade triggers

(in millions)	**September 30, 2018**	December 31, 2017
Aggregate fair value of net derivative payables	**$ 10,103**	$ 11,916
Collateral posted	**8,926**	9,973

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, National Association ("JPMorgan Chase Bank, N.A."), at September 30, 2018, and December 31, 2017, 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, 2018		December 31, 2017	
(in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 116**	**$ 2,046**	$ 79	$ 1,989
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**317**	**861**	320	650

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

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

In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 10, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding at September 30, 2018 was not material, and there were no such transfers at December 31, 2017.

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, 2018 and 2017, 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[f]		OCI impact
Three months ended September 30, 2018 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[g]
Contract type						
Interest rate[a][b]	**$ (870)**	**$ 1,032**	**$ 162**	**$ –**	**$ 160**	**$ –**
Foreign exchange[c]	**277**	**(165)**	**112**	**(137)**	**112**	**45**
Commodity[d]	**454**	**(461)**	**(7)**	**–**	**(5)**	**–**
Total	**$ (139)**	**$ 406**	**$ 267**	**$ (137)**	**$ 267**	**$ 45**

	Gains/(losses) recorded in income			Income statement impact due to:	
Three months ended September 30, 2017 (in millions)	Derivatives	Hedged items	Income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	$ 22	$ 182	$ 204	$ (2)	$ 206
Foreign exchange[c]	(982)	1,002	20	–	20
Commodity[d]	(457)	461	4	4	–
Total	$ (1,417)	$ 1,645	$ 228	$ 2	$ 226

	Gains/(losses) recorded in income			Income statement impact of excluded components[f]		OCI impact
Nine months ended September 30, 2018 (in millions)	Derivatives	Hedged items	Income statement impact	Amortization approach	Changes in fair value	Derivatives - Gains/(losses) recorded in OCI[g]
Contract type						
Interest rate[a][b]	**$ (2,747)**	**$ 3,214**	**$ 467**	**$ –**	**$ 459**	**$ –**
Foreign exchange[c]	**797**	**(452)**	**345**	**(404)**	**345**	**(96)**
Commodity[d]	**649**	**(626)**	**23**	**–**	**29**	**–**
Total	**$ (1,301)**	**$ 2,136**	**$ 835**	**$ (404)**	**$ 833**	**$ (96)**

	Gains/(losses) recorded in income			Income statement impact due to:	
Nine months ended September 30, 2017 (in millions)	Derivatives	Hedged items	Income statement impact	Hedge ineffectiveness[e]	Excluded components[f]
Contract type					
Interest rate[a][b]	$ (131)	$ 759	$ 628	$ (16)	$ 644
Foreign exchange[c]	(3,254)	3,235	(19)	–	(19)
Commodity[d]	(823)	861	38	23	15
Total	$ (4,208)	$ 4,855	$ 647	$ 7	$ 640

(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) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) 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. Under the new hedge accounting guidance, the initial amount of the excluded components may be amortized into income over the life of the derivative, or changes in fair value may be recognized in current period earnings.

(g) 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, 2018, 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.

September 30, 2018 (in millions)	Carrying amount of the hedged items[a][b]	Cumulative amount of fair value hedging adjustments included in the carrying amount of hedged items:		
		Active hedging relationships	Discontinued hedging relationships[d]	Total
Assets				
Investment securities - AFS	$ 47,896 [c]	$ (2,292)	$ 438	$ (1,854)
Liabilities				
Long-term debt	$ 135,239	$ (2,693)	$ (5)	$ (2,698)
Beneficial interests issued by consolidated VIEs	6,976	–	(42)	(42)

(a) Excludes physical commodities with a carrying value of $4.6 billion 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. Given 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. The carrying amount excluded for available-for-sale securities is $14.7 billion and for long-term debt is $7.2 billion.

(c) Carrying amount represents the amortized cost.

(d) Represents hedged items no longer designated in qualifying fair value hedging relationships for which an associated basis adjustment exists at the balance sheet date.

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, 2018 and 2017, 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.

Three months ended September 30, 2018 (in millions)	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[a]	**$ 10**	**$ (30)**	**$ (40)**
Foreign exchange[b]	**(19)**	**(92)**	**(73)**
Total	**$ (9)**	**$ (122)**	**$ (113)**

Three months ended September 30, 2017 (in millions)	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
	Amounts reclassified from AOCI to income	Amounts recorded in OCI[c]	Total change in OCI for period
Contract type			
Interest rate[a]	$ 1	$ (1)	$ (2)
Foreign exchange[b]	(11)	30	41
Total	$ (10)	$ 29	$ 39

Nine months ended September 30, 2018 (in millions)	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
	Amounts reclassified from AOCI to income	Amounts recorded in OCI	Total change in OCI for period
Contract type			
Interest rate[a]	**$ 36**	**$ (141)**	**$ (177)**
Foreign exchange[b]	**26**	**(224)**	**(250)**
Total	**$ 62**	**$ (365)**	**$ (427)**

Nine months ended September 30, 2017 (in millions)	Derivatives gains/(losses) recorded in income and other comprehensive income/(loss)		
	Amounts reclassified from AOCI to income	Amounts recorded in OCI[c]	Total change in OCI for period
Contract type			
Interest rate[a]	$ (16)	$ 11	$ 27
Foreign exchange[b]	(144)	100	244
Total	$ (160)	$ 111	$ 271

(a) Primarily consists of benchmark interest rate 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.

(c) Represents the effective portion of changes in value of the related hedging derivative. Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk. The Firm did not recognize any ineffectiveness on cash flow hedges during the three and nine months ended September 30, 2017.

The Firm did not experience any forecasted transactions that failed to occur for the three and nine months ended September 30, 2018 and 2017.

Over the next 12 months, the Firm expects that approximately $(118) million (after-tax) of net losses recorded in AOCI at September 30, 2018, related to cash flow hedges will be recognized in income. For terminated cash flow hedges, the maximum length of time over which forecasted transactions are remaining is approximately six years.

For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately six 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, 2018 and 2017.

	2018		2017	
Three months ended September 30, (in millions)	Amounts recorded in income[(a)(c)]	Amounts recorded in OCI	Amounts recorded in income[(a)(c)]	Amounts recorded in OCI[(b)]
Foreign exchange derivatives	**$ 2**	**$ 311**	$ (39)	$ (286)

	2018		2017	
Nine months ended September 30, (in millions)	Amounts recorded in income[(a)(c)]	Amounts recorded in OCI	Amounts recorded in income[(a)(c)]	Amounts recorded in OCI[(b)]
Foreign exchange derivatives	**$ (5)**	**$ 1,126**	$ (150)	$ (1,161)

(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) Represents the effective portion of changes in value of the related hedging derivative. The Firm did not recognize any ineffectiveness on net investment hedges directly in income during the three and nine months ended September 30, 2017.
(c) Excludes amounts reclassified from AOCI to income on the sale or liquidation of hedged entities. For additional information, refer to Note 17.

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 the mortgage pipeline, 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)	**2018**	2017	**2018**	2017
Contract type				
Interest rate[(a)]	**$ (42)**	$ 97	**$ (277)**	$ 318
Credit[(b)]	**(7)**	(18)	**(17)**	(70)
Foreign exchange[(c)]	**52**	(18)	**152**	(52)
Total	**$ 3**	$ 61	**$ (142)**	$ 196

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

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

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

Credit derivatives

For a more detailed discussion of credit derivatives, refer to Note 5 of JPMorgan Chase's 2017 Annual Report. 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, 2018 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (746,195)**	**$ 754,889**	**$ 8,694**	**$ 6,341**
Other credit derivatives[a]	**(38,928)**	**45,393**	**6,465**	**11,563**
Total credit derivatives	**(785,123)**	**800,282**	**15,159**	**17,904**
Credit-related notes	**(18)**	**–**	**(18)**	**7,653**
Total	**$ (785,141)**	**$ 800,282**	**$ 15,141**	**$ 25,557**

	Maximum payout/Notional amount			
December 31, 2017 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (690,224)	$ 702,098	$ 11,874	$ 5,045
Other credit derivatives[a]	(54,157)	59,158	5,001	11,747
Total credit derivatives	(744,381)	761,256	16,875	16,792
Credit-related notes	(18)	–	(18)	7,915
Total	$ (744,399)	$ 761,256	$ 16,857	$ 24,707

(a) Other credit derivatives largely consists of credit swap options.
(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.

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, 2018, and December 31, 2017, 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, 2018 (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	**$ (116,930)**	**$ (364,470)**	**$ (71,226)**	**$ (552,626)**	**$ 8,043**	**$ (1,859)**	**$ 6,184**
Noninvestment-grade	**(53,103)**	**(147,117)**	**(32,295)**	**(232,515)**	**8,337**	**(4,519)**	**3,818**
Total	**$ (170,033)**	**$ (511,587)**	**$ (103,521)**	**$ (785,141)**	**$ 16,380**	**$ (6,378)**	**$ 10,002**

December 31, 2017 (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	$ (159,286)	$ (319,726)	$ (39,429)	$ (518,441)	$ 8,516	$ (1,134)	$ 7,382
Noninvestment-grade	(73,394)	(134,125)	(18,439)	(225,958)	7,407	(5,313)	2,094
Total	$ (232,680)	$ (453,851)	$ (57,868)	$ (744,399)	$ 15,923	$ (6,447)	$ 9,476

(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 and cash collateral received by the Firm.

Note 5 – Noninterest revenue and noninterest expense

Noninterest revenue

For a discussion of the components of and accounting policies for the Firm's noninterest revenue, refer to Note 6 of JPMorgan Chase's 2017 Annual Report.

The adoption of the revenue recognition guidance in the first quarter of 2018, required gross presentation of certain costs previously offset against revenue, predominantly associated with certain distribution costs (previously offset against asset management, administration and commissions), with the remainder associated with certain underwriting costs (previously offset against investment banking fees). Adoption of the guidance did not result in any material changes in the timing of revenue recognition. This guidance was adopted retrospectively and, accordingly, prior period amounts were revised, which resulted in an increase in both noninterest revenue and noninterest expense. For additional information, refer to Note 1.

Investment banking fees

The following table presents the components of investment banking fees.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	2017
Underwriting				
Equity	**$ 417**	$ 302	**$ 1,342**	$ 1,105
Debt	**836**	945	**2,596**	2,873
Total underwriting	**1,253**	1,247	**3,938**	3,978
Advisory	**579**	621	**1,798**	1,616
Total investment banking fees	**$ 1,832**	$ 1,868	**$ 5,736**	$ 5,594

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. Refer to Note 6 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	2017
Trading revenue by instrument type				
Interest rate	**$ 338**	$ 649	**$ 1,784**	$ 2,032
Credit	**202**	330	**1,230**	1,288
Foreign exchange	**937**	681	**2,706**	2,363
Equity	**1,363**	915	**4,376**	3,153
Commodity	**277**	156	**800**	461
Total trading revenue	**3,117**	2,731	**10,896**	9,297
Private equity gains/ (losses)[(a)]	**(153)**	(10)	**(198)**	143
Principal transactions	**$ 2,964**	$ 2,721	**$10,698**	$ 9,440

(a) The third quarter of 2018 included markdowns of approximately $220 million on certain private equity investments in Corporate, with $170 million recorded within principal transactions revenue and $50 million in other income.

Lending- and deposit-related fees

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

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	2017
Lending-related fees	**$ 284**	$ 280	**$ 838**	$ 824
Deposit-related fees	**1,258**	1,217	**3,676**	3,603
Total lending- and deposit-related fees	**$ 1,542**	$ 1,497	**$ 4,514**	$ 4,427

Asset management, administration and commissions

The following table presents the components of Firmwide asset management, administration and commissions.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	2017
Asset management fees				
Investment management fees[(a)]	**$ 2,716**	$ 2,636	**$ 8,081**	$ 7,603
All other asset management fees[(b)]	**79**	63	**211**	226
Total asset management fees	**2,795**	2,699	**8,292**	7,829
Total administration fees[(c)]	**533**	514	**1,651**	1,500
Commission and other fees				
Brokerage commissions	**604**	546	**1,887**	1,691
All other commissions and fees	**378**	313	**1,093**	976
Total commissions and fees	**982**	859	**2,980**	2,667
Total asset management, administration and commissions	**$ 4,310**	$ 4,072	**$ 12,923**	$ 11,996

(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.

Card income

The following table presents the components of card income:

(in millions)	Three months ended September 30, 2018	2017	Nine months ended September 30, 2018	2017
Interchange and merchant processing income	**$ 4,781**	$ 4,342	**$ 13,863**	$ 12,557
Rewards costs and partner payments	**(3,276)**	(2,727)	**(9,687)** [b]	(7,941)
Other card income[a]	**(177)**	(373)	**(553)**	(1,293)
Total card income	**$ 1,328**	$ 1,242	**$ 3,623**	$ 3,323

(a) Predominantly represents annual fees and new account origination costs, which are deferred and recognized on a straight-line basis over a 12-month period.
(b) Includes an adjustment to the credit card rewards liability of approximately $330 million, recorded in the second quarter of 2018.

Other income

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

(in millions)	Three months ended September 30, 2018	2017	Nine months ended September 30, 2018	2017
Operating lease income	**$ 1,157**	$ 928	**$ 3,316**	$ 2,625

Noninterest expense

Other expense

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

(in millions)	Three months ended September 30, 2018	2017	Nine months ended September 30, 2018	2017
Legal expense	**$ 20**	$ (107)	**$ 90**	$ 172
FDIC-related expense	**349**	353	**1,100**	1,110

Note 6 – Interest income and Interest expense

For a description of JPMorgan Chase's accounting policies regarding interest income and interest expense, refer to Note 7 of JPMorgan Chase's 2017 Annual Report.

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

(in millions)	Three months ended September 30, 2018	2017	Nine months ended September 30, 2018	2017
Interest income				
Loans[a]	**$ 12,207**	$ 10,519	**$ 34,915**	$ 30,265
Taxable securities	**1,402**	1,362	**4,098**	4,202
Non-taxable securities[b]	**394**	456	**1,199**	1,393
Total investment securities[a]	**1,796**	1,818	**5,297**	5,595
Trading assets	**2,155**	1,947	**6,369**	5,611
Federal funds sold and securities purchased under resale agreements	**952**	622	**2,490**	1,676
Securities borrowed[c]	**200**	–	**410**	(65)
Deposits with banks	**1,585**	1,259	**4,449**	3,002
All other interest-earning assets[d]	**945**	522	**2,474**	1,295
Total interest income	**19,840**	16,687	**56,404**	47,379
Interest expense				
Interest-bearing deposits	**1,621**	837	**4,021**	1,949
Federal funds purchased and securities loaned or sold under repurchase agreements	**827**	451	**2,164**	1,131
Short-term borrowings[e]	**288**	149	**757**	318
Trading liabilities – debt and all other interest-bearing liabilities[f]	**1,018**	570	**2,579**	1,490
Long-term debt	**2,056**	1,759	**5,812**	5,035
Beneficial interest issued by consolidated VIEs	**122**	123	**366**	386
Total interest expense	**5,932**	3,889	**15,699**	10,309
Net interest income	**13,908**	12,798	**40,705**	37,070
Provision for credit losses	**948**	1,452	**3,323**	3,982
Net interest income after provision for credit losses	**$ 12,960**	$ 11,346	**$ 37,382**	$ 33,088

(a) Includes the amortization/accretion of unearned income (e.g., purchase premiums/discounts, net deferred fees/costs, etc.).
(b) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(c) Negative interest income is related to client-driven demand for certain securities combined with the impact of low interest rates. This is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense.
(d) Includes held-for-investment margin loans, which are classified in accrued interest and accounts receivable, and all other interest-earning assets included in other assets on the Consolidated balance sheets.
(e) Includes commercial paper.
(f) Other interest-bearing liabilities include brokerage customer payables.

Note 7 – Pension and other postretirement employee benefit plans

For a discussion of JPMorgan Chase's pension and OPEB plans, refer to Note 8 of JPMorgan Chase's 2017 Annual Report.

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,			
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017
(in millions)	Defined benefit pension plans		OPEB plans		Defined benefit pension plans		OPEB plans	
Components of net periodic benefit cost								
Benefits earned during the period	**$ 88**	$ 83	**$ –**	$ –	**$ 267**	$ 247	**$ –**	$ –
Interest cost on benefit obligations	**139**	148	**6**	7	**417**	447	**18**	21
Expected return on plan assets	**(246)**	(242)	**(25)**	(24)	**(741)**	(725)	**(77)**	(72)
Amortization:								
Net (gain)/loss	**26**	63	**–**	–	**78**	187	**–**	–
Prior service cost/(credit)	**(7)**	(9)	**–**	–	**(19)**	(27)	**–**	–
Settlement	**–**	–	**–**	–	**–**	(3)	**–**	–
Net periodic defined benefit cost[(a)]	**–**	43	**(19)**	(17)	**2**	126	**(59)**	(51)
Other defined benefit pension plans[(b)]	**6**	6	**NA**	NA	**21**	16	**NA**	NA
Total defined benefit plans	**6**	49	**(19)**	(17)	**23**	142	**(59)**	(51)
Total defined contribution plans	**229**	221	**NA**	NA	**661**	617	**NA**	NA
Total pension and OPEB cost included in noninterest expense	**$ 235**	$ 270	**$ (19)**	$ (17)	**$ 684**	$ 759	**$ (59)**	$ (51)

(a) Effective January 1, 2018, benefits earned during the period are reported in compensation expense; all other components of net periodic defined benefit costs are reported within other expense in the Consolidated statements of income.
(b) 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, 2018**	December 31, 2017
Fair value of plan assets		
Defined benefit pension plans	**$ 19.2**	$ 19.6
OPEB plans	**2.8**	2.8

There are no expected contributions to the U.S. defined benefit pension plan for 2018.

Note 8 – Employee share-based incentives

For a discussion of the accounting policies and other information relating to employee share-based incentives, refer to Note 9 of JPMorgan Chase's 2017 Annual Report.

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)	**2018**	2017	**2018**	2017
Cost of prior grants of RSUs, stock appreciation rights ("SARs") and performance share units ("PSUs") that are amortized over their applicable vesting periods	**$ 282**	$ 267	**$ 956**	$ 867
Accrual of estimated costs of share-based awards to be granted in future periods including those to full-career eligible employees	**240**	224	**852**	750
Total noncash compensation expense related to employee share-based incentive plans	**$ 522**	$ 491	**$1,808**	$1,617

In the first quarter of 2018, in connection with its annual incentive grant for the 2017 performance year, the Firm granted 17 million RSUs and 516 thousand PSUs with weighted-average grant date fair values of $111.17 per RSU and $110.46 per PSU.

Note 9 – Investment securities

Investment securities consist of debt securities that are classified as AFS or HTM. Debt securities classified as trading assets are discussed in Note 2. Predominantly all of the Firm's AFS and HTM securities are held by Treasury and CIO in connection with its asset-liability management activities. At September 30, 2018, 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 ratings which correspond to ratings as defined by S&P and Moody's). For additional information regarding the investment securities portfolio, refer to Note 10 of JPMorgan Chase's 2017 Annual Report.

As a result of the adoption of the premium amortization accounting guidance in the first quarter of 2018, premiums on purchased callable debt securities must be amortized to the earliest call date for debt securities with call features that are explicit, noncontingent and callable at fixed prices and on preset dates. The guidance primarily impacts obligations of U.S. states and municipalities held in the Firm's investment securities portfolio. For additional information, refer to Note 17.

As permitted by the new hedge accounting guidance, the Firm also elected to transfer U.S. government agency MBS, commercial MBS, and obligations of U.S. states and municipalities with a carrying value of $22.4 billion from HTM to AFS in the first quarter of 2018. This transfer was a non-cash transaction. For additional information, refer to Note 17.

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

	September 30, 2018				December 31, 2017			
(in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 64,229**	**$ 389**	**$ 1,508**	**$ 63,110**	$ 69,879	$ 736	$ 335	$ 70,280
Residential:								
U.S.	**6,396**	**127**	**36**	**6,487**	8,193	185	14	8,364
Non-U.S.	**2,639**	**94**	**3**	**2,730**	2,882	122	1	3,003
Commercial	**7,151**	**79**	**182**	**7,048**	4,932	98	5	5,025
Total mortgage-backed securities	**80,415**	**689**	**1,729**	**79,375**	85,886	1,141	355	86,672
U.S. Treasury and government agencies	**27,526**	**486**	**196**	**27,816**	22,510	266	31	22,745
Obligations of U.S. states and municipalities	**36,659**	**1,580**	**118**	**38,121**	30,490	1,881	33	32,338
Certificates of deposit	**75**	**–**	**–**	**75**	59	–	–	59
Non-U.S. government debt securities	**24,398**	**321**	**45**	**24,674**	26,900	426	32	27,294
Corporate debt securities	**1,993**	**64**	**1**	**2,056**	2,657	101	1	2,757
Asset-backed securities:								
Collateralized loan obligations	**20,139**	**12**	**42**	**20,109**	20,928	69	1	20,996
Other	**7,761**	**70**	**27**	**7,804**	8,764	77	24	8,817
Total available-for-sale debt securities	**198,966**	**3,222**	**2,158**	**200,030**	198,194	3,961	477	201,678
Available-for-sale equity securities[b]	**–**	**–**	**–**	**–**	547	–	–	547
Total available-for-sale securities	**198,966**	**3,222**	**2,158**	**200,030**	198,741	3,961	477	202,225
Held-to-maturity securities								
Mortgage-backed securities:								
U.S. government agencies[c]	**26,537**	**5**	**493**	**26,049**	27,577	558	40	28,095
Commercial	**–**	**–**	**–**	**–**	5,783	1	74	5,710
Total mortgage-backed securities	**26,537**	**5**	**493**	**26,049**	33,360	559	114	33,805
Obligations of U.S. states and municipalities	**4,831**	**69**	**31**	**4,869**	14,373	554	80	14,847
Total held-to-maturity securities	**31,368**	**74**	**524**	**30,918**	47,733	1,113	194	48,652
Total investment securities	**$ 230,334**	**$ 3,296**	**$ 2,682**	**$ 230,948**	$ 246,474	$ 5,074	$ 671	$ 250,877

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $44.2 billion and $45.8 billion at September 30, 2018, and December 31, 2017, respectively.

(b) Effective January 1, 2018, the Firm adopted the recognition and measurement guidance. Equity securities that were previously reported as AFS securities were reclassified to other assets upon adoption.

(c) Included total U.S. government-sponsored enterprise obligations with amortized cost of $20.6 billion and $22.0 billion at September 30, 2018, and December 31, 2017, respectively.

Investment securities impairment

The following tables present the fair value and gross unrealized losses for investment securities by aging category at September 30, 2018, and December 31, 2017.

	Investment securities with gross unrealized losses					
	Less than 12 months		12 months or more			
September 30, 2018 (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:						
U.S. government agencies	$ 37,109	$ 988	$ 10,492	$ 520	$ 47,601	$ 1,508
Residential:						
U.S.	1,343	20	860	16	2,203	36
Non-U.S.	635	2	180	1	815	3
Commercial	914	11	3,018	171	3,932	182
Total mortgage-backed securities	40,001	1,021	14,550	708	54,551	1,729
U.S. Treasury and government agencies	4,556	100	1,416	96	5,972	196
Obligations of U.S. states and municipalities	4,171	63	1,291	55	5,462	118
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	4,237	16	1,798	29	6,035	45
Corporate debt securities	–	–	38	1	38	1
Asset-backed securities:						
Collateralized loan obligations	10,267	42	–	–	10,267	42
Other	2,018	6	2,545	21	4,563	27
Total available-for-sale securities	65,250	1,248	21,638	910	86,888	2,158
Held-to-maturity securities						
Mortgage-backed securities						
U.S. government agencies	22,131	356	2,595	137	24,726	493
Commercial	–	–	–	–	–	–
Total mortgage-backed securities	22,131	356	2,595	137	24,726	493
Obligations of U.S. states and municipalities	853	10	677	21	1,530	31
Total held-to-maturity securities	22,984	366	3,272	158	26,256	524
Total investment securities with gross unrealized losses	**$ 88,234**	**$ 1,614**	**$ 24,910**	**$ 1,068**	**$ 113,144**	**$ 2,682**

December 31, 2017 (in millions)	Investment securities with gross unrealized losses					
	Less than 12 months		12 months or more			
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale securities						
Mortgage-backed securities:						
U.S. government agencies	$ 36,037	$ 139	$ 7,711	$ 196	$ 43,748	$ 335
Residential:						
U.S.	1,112	5	596	9	$ 1,708	14
Non-U.S.	–	–	266	1	266	1
Commercial	528	4	335	1	863	5
Total mortgage-backed securities	37,677	148	8,908	207	46,585	355
U.S. Treasury and government agencies	1,834	11	373	20	2,207	31
Obligations of U.S. states and municipalities	949	7	1,652	26	2,601	33
Certificates of deposit	–	–	–	–	–	–
Non-U.S. government debt securities	6,500	15	811	17	7,311	32
Corporate debt securities	–	–	52	1	52	1
Asset-backed securities:						
Collateralized loan obligations	–	–	276	1	276	1
Other	3,521	20	720	4	4,241	24
Total available-for-sale securities	50,481	201	12,792	276	63,273	477
Held-to-maturity securities						
Mortgage-backed securities						
U.S. government agencies	4,070	38	205	2	4,275	40
Commercial	3,706	41	1,882	33	5,588	74
Total mortgage-backed securities	7,776	79	2,087	35	9,863	114
Obligations of U.S. states and municipalities	584	9	2,131	71	2,715	80
Total held-to-maturity securities	8,360	88	4,218	106	12,578	194
Total investment securities with gross unrealized losses	$ 58,841	$ 289	$ 17,010	$ 382	$ 75,851	$ 671

Gross unrealized losses

The Firm has recognized unrealized losses on investment securities that it intends to sell as OTTI. The Firm does not intend to sell any of the remaining investment securities with an unrealized loss in AOCI as of September 30, 2018, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities for which credit losses have been recognized in income, the Firm believes that the investment securities with an unrealized loss in AOCI as of September 30, 2018, are not other-than-temporarily impaired. For additional information on other-than-temporary impairment, refer to Note 10 of the JPMorgan Chase's 2017 Annual Report.

Investment securities gains and losses

The following table presents realized gains and losses and OTTI from AFS securities that were recognized in income.

(in millions)	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017
Realized gains	**$ 58**	$ 122	**$ 137**	$ 664
Realized losses	**(103)**	(123)	**(507)**	(696)
OTTI losses	**(1)**	–	**(1)**	(6)
Net investment securities losses	**$ (46)**	$ (1)	**$ (371)**	$ (38)
OTTI losses				
Credit-related losses recognized in income	**$ –**	$ –	**$ –**	$ –
Investment securities the Firm intends to sell[(a)]	**(1)**	–	**(1)**	(6)
Total OTTI losses recognized in income	**$ (1)**	$ –	**$ (1)**	$ (6)

(a) Excludes realized losses on securities sold of $21 million and $6 million for the nine months ended September 30, 2018 and 2017 that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The cumulative credit loss component, including any changes therein, of OTTI losses that have been recognized in income related to AFS securities that the Firm does not intend to sell was not material as of and during the nine month periods ended September 30, 2018 and 2017.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at September 30, 2018, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity September 30, 2018 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale securities					
Mortgage-backed securities[a]					
Amortized cost	$ 258	$ 377	$ 5,746	$ 74,034	$ 80,415
Fair value	260	379	5,827	72,909	79,375
Average yield[b]	1.84%	2.45%	3.44%	3.48%	3.46%
U.S. Treasury and government agencies					
Amortized cost	$ 84	$ 8,565	$ 13,644	$ 5,233	$ 27,526
Fair value	85	8,673	13,533	5,525	27,816
Average yield[b]	2.12%	2.70%	2.53%	2.91%	2.66%
Obligations of U.S. states and municipalities					
Amortized cost	$ 103	$ 715	$ 2,783	$ 33,058	$ 36,659
Fair value	104	728	2,872	34,417	38,121
Average yield[b]	2.07%	3.89%	5.05%	5.01%	4.98%
Certificates of deposit					
Amortized cost	$ 75	$ –	$ –	$ –	$ 75
Fair value	75	–	–	–	75
Average yield[b]	0.49%	–%	–%	–%	0.49%
Non-U.S. government debt securities					
Amortized cost	$ 4,289	$ 14,711	$ 5,398	$ –	$ 24,398
Fair value	4,289	14,886	5,499	–	24,674
Average yield[b]	3.00%	1.86%	1.30%	–%	1.94%
Corporate debt securities					
Amortized cost	$ 70	$ 914	$ 872	$ 137	$ 1,993
Fair value	70	936	905	145	2,056
Average yield[b]	4.04%	4.40%	4.57%	4.73%	4.48%
Asset-backed securities					
Amortized cost	$ –	$ 3,537	$ 5,345	$ 19,018	$ 27,900
Fair value	–	3,515	5,347	19,051	27,913
Average yield[b]	–%	2.83%	3.19%	3.04%	3.04%
Total available-for-sale securities					
Amortized cost	$ 4,879	$ 28,819	$ 33,788	$ 131,480	$ 198,966
Fair value	4,883	29,117	33,983	132,047	200,030
Average yield[b]	2.88%	2.37%	2.85%	3.78%	3.39%
Held-to-maturity securities					
Mortgage-backed securities[a]					
Amortized cost	$ –	$ –	$ 2,765	$ 23,772	$ 26,537
Fair value	–	–	2,725	23,324	26,049
Average yield[b]	–%	–%	3.52%	3.33%	3.35%
Obligations of U.S. states and municipalities					
Amortized cost	$ –	$ –	$ 20	$ 4,811	$ 4,831
Fair value	–	–	20	4,849	4,869
Average yield[b]	–%	–%	3.90%	4.11%	4.11%
Total held-to-maturity securities					
Amortized cost	$ –	$ –	$ 2,785	$ 28,583	$ 31,368
Fair value	–	–	2,745	28,173	30,918
Average yield[b]	–%	–%	3.53%	3.46%	3.47%

(a) As of September 30, 2018, mortgage-backed securities issued by Fannie Mae exceeded 10% of JPMorgan Chase's total stockholders' equity; the amortized cost and fair value of such securities was $51.2 billion and $50.6 billion, respectively.

(b) 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.

(c) Includes investment securities with no stated maturity. 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 7 years for agency residential MBS, 3 years for agency residential collateralized mortgage obligations and 3 years for nonagency residential collateralized mortgage obligations.

Note 10 – Securities financing activities

For a discussion of accounting policies relating to securities financing activities, refer to Note 11 of JPMorgan Chase's 2017 Annual Report. For further information regarding securities borrowed and securities lending agreements for which the fair value option has been elected, refer to Note 3. For further information regarding assets pledged and collateral received in securities financing agreements, refer to Note 21.

The table below summarizes the gross and net amounts of the Firm's securities financing agreements as of September 30, 2018 and December 31, 2017. When the Firm has obtained an appropriate legal opinion with respect to the 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 counterparties; this collateral also reduces the economic exposure with the counterparty. Such collateral, along with securities financing balances that do not meet all these relevant netting criteria under U.S. GAAP, is presented as "Amounts not nettable on the Consolidated balance sheets," and reduces the "Net amounts" presented below, if the Firm has an appropriate legal opinion with respect to the master netting agreement with the counterparty. Where a legal opinion has not been either sought or obtained, the securities financing balances are presented gross in the "Net amounts" below, and related collateral does not reduce the amounts presented.

	September 30, 2018				
(in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets[b]	Amounts not nettable on the Consolidated balance sheets[c]	Net amounts[d]
Assets					
Securities purchased under resale agreements	**$ 521,732**	**$ (304,110)**	**$ 217,622**	**$ (205,345)**	**$ 12,277**
Securities borrowed	**143,644**	**(21,210)**	**122,434**	**(89,771)**	**32,663**
Liabilities					
Securities sold under repurchase agreements	**$ 472,560**	**$ (304,110)**	**$ 168,450**	**$ (154,335)**	**$ 14,115**
Securities loaned and other[a]	**38,720**	**(21,210)**	**17,510**	**(17,146)**	**364**

	December 31, 2017				
(in millions)	Gross amounts	Amounts netted on the Consolidated balance sheets	Amounts presented on the Consolidated balance sheets[b]	Amounts not nettable on the Consolidated balance sheets[c]	Net amounts[d]
Assets					
Securities purchased under resale agreements	$ 448,608	$ (250,505)	$ 198,103	$ (188,502)	$ 9,601
Securities borrowed	113,926	(8,814)	105,112	(76,805)	28,307
Liabilities					
Securities sold under repurchase agreements	$ 398,218	$ (250,505)	$ 147,713	$ (129,178)	$ 18,535
Securities loaned and other[a]	27,228	(8,814)	18,414	(18,151)	263

(a) Includes securities-for-securities lending transactions of $5.2 billion and $9.2 billion at September 30, 2018 and December 31, 2017, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities in the Consolidated balance sheets.

(b) Includes securities financing agreements accounted for at fair value. At September 30, 2018 and December 31, 2017, included securities purchased under resale agreements of $12.2 billion and $14.7 billion, respectively and securities sold under agreements to repurchase of $1.1 billion and $697 million, respectively. There were $4.5 billion and $3.0 billion of securities borrowed at September 30, 2018 and December 31, 2017, respectively. There were no securities loaned accounted for at fair value in either period.

(c) 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 asset or liability with that counterparty.

(d) 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, 2018 and December 31, 2017, included $6.4 billion and $7.5 billion, respectively, of securities purchased under resale agreements; $29.7 billion and $25.5 billion, respectively, of securities borrowed; $13.2 billion and $16.5 billion, respectively, of securities sold under agreements to repurchase; and $45 million and $29 million, respectively, of securities loaned and other.

The tables below present as of September 30, 2018, and December 31, 2017 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, 2018		December 31, 2017	
(in millions)	Securities sold under repurchase agreements	Securities loaned and other[(a)]	Securities sold under repurchase agreements	Securities loaned and other[(a)]
Mortgage-backed securities				
U.S. government agencies	**25,116**	**–**	13,100	–
Residential - nonagency	**1,861**	**–**	2,972	–
Commercial - nonagency	**1,431**	**–**	1,594	–
U.S. Treasury and government agencies	**236,939**	**14**	177,581	14
Obligations of U.S. states and municipalities	**1,161**	**–**	1,557	–
Non-U.S. government debt	**174,400**	**2,294**	170,196	2,485
Corporate debt securities	**15,474**	**216**	14,231	287
Asset-backed securities	**2,543**	**–**	3,508	–
Equity securities	**13,635**	**36,196**	13,479	24,442
Total	**$ 472,560**	**$ 38,720**	$ 398,218	$ 27,228

	Remaining contractual maturity of the agreements				
September 30, 2018 (in millions)	Overnight and continuous	Up to 30 days	30 - 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	**$ 195,713**	**$ 166,754**	**$ 46,511**	**$ 63,582**	**$ 472,560**
Total securities loaned and other[(a)]	**29,415**	**138**	**1,805**	**7,362**	**38,720**

	Remaining contractual maturity of the agreements				
December 31, 2017 (in millions)	Overnight and continuous	Up to 30 days	30 - 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 142,185 [(b)]	$ 180,674 [(b)]	$ 41,611	$ 33,748	$ 398,218
Total securities loaned and other[(a)]	22,876	375	2,328	1,649	27,228

(a) Includes securities-for-securities lending transactions of $5.2 billion and $9.2 billion at September 30, 2018 and December 31, 2017, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities on the Consolidated balance sheets.
(b) The prior period amounts have been revised to conform with the current period presentation.

Transfers not qualifying for sale accounting

At September 30, 2018, and December 31, 2017, the Firm held $1.6 billion and $1.5 billion respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are recorded predominantly in short-term borrowings on the Consolidated balance sheets.

Note 11 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

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

For a detailed discussion of loans, including accounting policies, refer to Note 12 of JPMorgan Chase's 2017 Annual Report. Refer to Note 3 of this Form 10-Q for further information on the Firm's elections of fair value accounting under the fair value option. Refer to Note 2 of this Form 10-Q for information on loans carried at fair value and classified as trading assets.

Loan portfolio

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

Consumer, excluding credit card[a]	Credit card	Wholesale[f]
Residential real estate – excluding PCI • Residential mortgage[b] • Home equity[c] Other consumer loans[d] • Auto • Consumer & Business Banking[e] Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[g]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate.
(b) Predominantly includes prime (including option ARMs) and subprime loans.
(c) Includes senior and junior lien home equity loans.
(d) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(e) Predominantly includes Business Banking loans.
(f) Includes loans held in CIB, CB, AWM and Corporate. Excludes prime mortgage and home equity loans held in AWM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(g) Includes loans to: individuals (predominantly Wealth Management clients within AWM), SPEs, and private education and civic organizations. For more information on SPEs, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

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

September 30, 2018 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	**$ 375,958**	**$ 147,856**	**$ 423,837**	**$ 947,651**	[b]
Held-for-sale	**104**	**25**	**3,551**	**3,680**	
At fair value	**–**	**–**	**2,987**	**2,987**	
Total	**$ 376,062**	**$ 147,881**	**$ 430,375**	**$ 954,318**	

December 31, 2017 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	$ 372,553	$ 149,387	$ 402,898	$ 924,838	[b]
Held-for-sale	128	124	3,099	3,351	
At fair value	–	–	2,508	2,508	
Total	$ 372,681	$ 149,511	$ 408,505	$ 930,697	

(a) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
(b) Loans (other than PCI loans and loans 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, 2018, and December 31, 2017.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. Reclassifications of loans to held-for sale are non-cash transactions. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures. Loans that were reclassified to held-for-sale and sold in a subsequent period are excluded from the sales line of this table.

	2018				2017			
Three months ended September 30, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 561** [a][b]	**$ –**	**$ 285**	**$ 846**	$ 711 [a][b]	$ –	$ 479	$ 1,190
Sales	**1,789**	**–**	**4,197**	**5,986**	672	–	3,342	4,014
Retained loans reclassified to held-for-sale	**–**	**–**	**666**	**666**	–	–	367	367

	2018				2017			
Nine months ended September 30, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 2,164** [a][b]	**$ –**	**$ 1,915**	**$ 4,079**	$ 2,277 [a][b]	$ –	$ 1,357	$ 3,634
Sales	**4,661**	**–**	**12,829**	**17,490**	2,025	–	8,166	10,191
Retained loans reclassified to held-for-sale	**36**	**–**	**1,926**	**1,962**	6,340 [c]	–	961	7,301

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Government National Mortgage Association ("Ginnie Mae") guidelines. 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.
(b) Excludes purchases of retained loans sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $5.6 billion and $6.9 billion for the three months ended September 30, 2018 and 2017, respectively, and $14.5 billion and $18.2 billion for the nine months ended September 30, 2018 and 2017, respectively.
(c) Includes the Firm's student loan portfolio which was sold in 2017.

Gains and losses on sales of loans

Gains and losses on sales of loans (including adjustments to record loans held-for-sale at the lower of cost or fair value) recognized in other income were not material to the Firm for the three and nine months ended September 30, 2018 and 2017. 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 residential mortgages, home equity loans and lines of credit, auto loans and consumer 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 2017, the Firm sold its student loan portfolio.

(in millions)	September 30, 2018	December 31, 2017
Residential real estate – excluding PCI		
Residential mortgage	**$ 231,361**	$ 216,496
Home equity	**29,318**	33,450
Other consumer loans		
Auto	**63,619**	66,242
Consumer & Business Banking	**26,451**	25,789
Residential real estate – PCI		
Home equity	**9,393**	10,799
Prime mortgage	**4,931**	6,479
Subprime mortgage	**2,072**	2,609
Option ARMs	**8,813**	10,689
Total retained loans	**$ 375,958**	$ 372,553

For further information on consumer credit quality indicators, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

Residential real estate – excluding PCI loans

The following table provides information by class for retained residential real estate – excluding PCI loans.

Residential real estate – excluding PCI loans

(in millions, except ratios)	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
	Sep 30, 2018	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Loan delinquency[a]						
Current	**$ 225,799**	$ 208,713	**$ 28,554**	$ 32,391	**$ 254,353**	$ 241,104
30–149 days past due	**2,825**	4,234	**470**	671	**3,295**	4,905
150 or more days past due	**2,737**	3,549	**294**	388	**3,031**	3,937
Total retained loans	**$ 231,361**	$ 216,496	**$ 29,318**	$ 33,450	**$ 260,679**	$ 249,946
% of 30+ days past due to total retained loans[b]	**0.51%**	0.77%	**2.61%**	3.17%	**0.75%**	1.09%
90 or more days past due and government guaranteed[c]	**$ 2,828**	$ 4,172	**$ –**	$ –	**$ 2,828**	$ 4,172
Nonaccrual loans	**1,880**	2,175	**1,382**	1,610	**3,262**	3,785
Current estimated LTV ratios[d][e]						
Greater than 125% and refreshed FICO scores:						
Equal to or greater than 660	**$ 28**	$ 37	**$ 6**	$ 10	**$ 34**	$ 47
Less than 660	**30**	19	**1**	3	**31**	22
101% to 125% and refreshed FICO scores:						
Equal to or greater than 660	**20**	36	**138**	296	**158**	332
Less than 660	**60**	88	**46**	95	**106**	183
80% to 100% and refreshed FICO scores:						
Equal to or greater than 660	**3,606**	4,369	**1,059**	1,676	**4,665**	6,045
Less than 660	**314**	483	**359**	569	**673**	1,052
Less than 80% and refreshed FICO scores:						
Equal to or greater than 660	**212,585**	194,758	**22,851**	25,262	**235,436**	220,020
Less than 660	**6,734**	6,952	**3,501**	3,850	**10,235**	10,802
No FICO/LTV available	**888**	1,259	**1,357**	1,689	**2,245**	2,948
U.S. government-guaranteed	**7,096**	8,495	**–**	–	**7,096**	8,495
Total retained loans	**$ 231,361**	$ 216,496	**$ 29,318**	$ 33,450	**$ 260,679**	$ 249,946
Geographic region						
California	**$ 74,324**	$ 68,855	**$ 5,852**	$ 6,582	**$ 80,176**	$ 75,437
New York	**29,146**	27,473	**6,016**	6,866	**35,162**	34,339
Illinois	**15,242**	14,501	**2,208**	2,521	**17,450**	17,022
Texas	**13,926**	12,508	**1,843**	2,021	**15,769**	14,529
Florida	**10,624**	9,598	**1,619**	1,847	**12,243**	11,445
New Jersey	**7,448**	7,142	**1,702**	1,957	**9,150**	9,099
Washington	**8,057**	6,962	**904**	1,026	**8,961**	7,988
Colorado	**8,131**	7,335	**525**	632	**8,656**	7,967
Massachusetts	**6,545**	6,323	**246**	295	**6,791**	6,618
Arizona	**4,519**	4,109	**1,211**	1,439	**5,730**	5,548
All other[f]	**53,399**	51,690	**7,192**	8,264	**60,591**	59,954
Total retained loans	**$ 231,361**	$ 216,496	**$ 29,318**	$ 33,450	**$ 260,679**	$ 249,946

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.7 billion and $2.4 billion; 30–149 days past due included $2.2 billion and $3.2 billion; and 150 or more days past due included $2.2 billion and $2.9 billion at September 30, 2018, and December 31, 2017, respectively.

(b) At September 30, 2018, and December 31, 2017, residential mortgage loans excluded mortgage loans insured by U.S. government agencies of $4.4 billion and $6.1 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(c) These balances, which are 90 days or more past due, were 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, 2018, and December 31, 2017, these balances included $1.3 billion and $1.5 billion, 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, 2018, and December 31, 2017.

(d) 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. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(f) At September 30, 2018, and December 31, 2017, included mortgage loans insured by U.S. government agencies of $7.1 billion and $8.5 billion, respectively. These amounts have been excluded from the geographic regions presented based upon the government guarantee.

Approximately 37% of the home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table represents the Firm's delinquency statistics for junior lien home equity loans and lines of credit as of September 30, 2018, and December 31, 2017.

	Total loans		Total 30+ day delinquency rate	
(in millions, except ratios)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
HELOCs:[a]				
Within the revolving period[b]	**$ 5,482**	$ 6,363	**0.22%**	0.50%
Beyond the revolving period	**11,982**	13,532	**2.78**	3.56
HELOANs	**1,104**	1,371	**2.99**	3.50
Total	**$ 18,568**	$ 21,266	**2.04%**	2.64%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs that allow interest-only payments beyond the revolving period.
(b) 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 experiencing financial difficulty.

HELOCs beyond the revolving period and HELOANs have higher delinquency rates than HELOCs 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 HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the Firm's allowance for loan losses.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 13 of JPMorgan Chase's 2017 Annual Report.

	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
(in millions)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Impaired loans						
With an allowance	**$ 3,558**	$ 4,407	**$ 1,177**	$ 1,236	**$ 4,735**	$ 5,643
Without an allowance[a]	**1,164**	1,213	**879**	882	**2,043**	2,095
Total impaired loans[b][c]	**$ 4,722**	$ 5,620	**$ 2,056**	$ 2,118	**$ 6,778**	$ 7,738
Allowance for loan losses related to impaired loans	**$ 97**	$ 62	**$ 42**	$ 111	**$ 139**	$ 173
Unpaid principal balance of impaired loans[d]	**6,439**	7,741	**3,537**	3,701	**9,976**	11,442
Impaired loans on nonaccrual status[e]	**1,536**	1,743	**993**	1,032	**2,529**	2,775

(a) Represents collateral-dependent residential real estate loans that are charged off to the fair value of the underlying collateral less cost 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, 2018, Chapter 7 residential real estate loans included approximately 13% of residential mortgages and 9% of home equity that were 30 days or more past due.
(b) At September 30, 2018, and December 31, 2017, $4.0 billion and $3.8 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, 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.
(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.
(d) Represents the contractual amount of principal owed at September 30, 2018, and December 31, 2017. The unpaid principal balance differs from the impaired loan balances due to various factors including charge-offs, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.
(e) At September 30, 2018 and December 31, 2017, nonaccrual loans included $2.0 billion and $2.2 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework in Note 12 of JPMorgan Chase's 2017 Annual Report.

The following tables present average impaired loans and the related interest income reported by the Firm.

Three months ended September 30, (in millions)	Average impaired loans		Interest income on impaired loans[a]		Interest income on impaired loans on a cash basis[a]	
	2018	2017	**2018**	2017	**2018**	2017
Residential mortgage	**$ 4,872**	$ 5,743	**$ 61**	$ 71	**$ 19**	$ 19
Home equity	**2,065**	2,150	**33**	32	**21**	20
Total residential real estate – excluding PCI	**$ 6,937**	$ 7,893	**$ 94**	$ 103	**$ 40**	$ 39

Nine months ended September 30, 2018 (in millions)	Average impaired loans		Interest income on impaired loans[a]		Interest income on impaired loans on a cash basis[a]	
	2018	2017	**2018**	2017	**2018**	2017
Residential mortgage	**$ 5,242**	$ 5,861	**$ 197**	$ 217	**$ 58**	$ 57
Home equity	**2,092**	2,213	**98**	95	**63**	60
Total residential real estate – excluding PCI	**$ 7,334**	$ 8,074	**$ 295**	$ 312	**$ 121**	$ 117

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until the borrower has made a minimum of six payments under the new terms, unless the loan is deemed to be collateral-dependent.

Loan modifications

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

The following table presents new TDRs reported by the Firm.

(in millions)	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017
Residential mortgage	**$ 67**	$ 57	**$ 314**	$ 225
Home equity	**55**	82	**241**	232
Total residential real estate – excluding PCI	**$ 122**	$ 139	**$ 555**	$ 457

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following tables provide information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs described above during the periods presented. These tables exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
Three months ended September 30,	**2018**	2017	**2018**	2017	**2018**	2017
Number of loans approved for a trial modification	**513**	206	**586**	536	**1,099**	742
Number of loans permanently modified	**719**	510	**939**	1,228	**1,658**	1,738
Concession granted:[(a)]						
Interest rate reduction	**58%**	64%	**77%**	60%	**69%**	61%
Term or payment extension	**83**	80	**88**	66	**86**	70
Principal and/or interest deferred	**30**	22	**11**	8	**19**	12
Principal forgiveness	**9**	17	**7**	19	**8**	19
Other[(b)]	**36**	15	**58**	32	**49**	27

	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
Nine months ended September 30,	**2018**	2017	**2018**	2017	**2018**	2017
Number of loans approved for a trial modification	**1,789**	1,052	**1,895**	1,844	**3,684**	2,896
Number of loans permanently modified	**2,374**	1,952	**4,005**	4,028	**6,379**	5,980
Concession granted:[(a)]						
Interest rate reduction	**36%**	73%	**57%**	68%	**49%**	69%
Term or payment extension	**49**	84	**62**	78	**57**	80
Principal and/or interest deferred	**47**	16	**22**	12	**31**	13
Principal forgiveness	**7**	18	**7**	12	**7**	14
Other[(b)]	**40**	24	**58**	19	**52**	21

(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 for the three and nine months ended September 30, 2018 and 2017. Also includes forbearances that meet the definition of a TDR for the three and nine months ended September 30, 2018. Forbearances suspend or reduce monthly payments for a specific period of time to address a temporary hardship.

Financial effects of modifications and redefaults

The following tables provide information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI loans, under the loss mitigation programs described above and about redefaults of certain loans modified in TDRs for the periods presented. The following tables present only the financial effects of permanent modifications and does not include temporary concessions offered through trial modifications. These tables also exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

Three months ended September 30, (in millions, except weighted-average data)	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
	2018	2017	**2018**	2017	**2018**	2017
Weighted-average interest rate of loans with interest rate reductions – before TDR	**6.13%**	4.92%	**5.69%**	5.26%	**5.89%**	5.06%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**4.23**	2.89	**3.83**	2.96	**4.01**	2.92
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**22**	24	**18**	18	**21**	22
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**39**	38	**39**	38	**39**	38
Charge-offs recognized upon permanent modification	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –
Principal deferred	**7**	3	**2**	1	**9**	4
Principal forgiven	**3**	5	**1**	4	**4**	9
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 27**	$ 32	**$ 19**	$ 17	**$ 46**	$ 49

Nine months ended September 30, (in millions, except weighted-average)	Residential mortgage		Home equity		Total residential real estate – excluding PCI	
	2018	2017	**2018**	2017	**2018**	2017
Weighted-average interest rate of loans with interest rate reductions – before TDR	**5.45%**	5.16%	**5.34%**	4.92%	**5.39%**	5.06%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**3.64**	2.97	**3.39**	2.55	**3.49**	2.79
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**24**	24	**18**	22	**22**	23
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**38**	38	**39**	39	**38**	38
Charge-offs recognized upon permanent modification	**$ –**	$ 1	**$ 1**	$ 1	**$ 1**	$ 2
Principal deferred	**17**	10	**7**	8	**24**	18
Principal forgiven	**9**	16	**5**	9	**14**	25
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 69**	$ 86	**$ 49**	$ 36	**$ 118**	$ 122

(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 is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At September 30, 2018, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 10 years for residential mortgage and 9 years for home equity. 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, 2018, and December 31, 2017, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $719 million and $787 million, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto and business banking loans.

(in millions, except ratios)	Auto		Consumer & Business Banking		Total other consumer	
	Sep 30, 2018	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Loan delinquency						
Current	**$ 63,095**	$ 65,651	**$ 26,170**	$ 25,454	**$ 89,265**	$ 91,105
30–119 days past due	**517**	584	**183**	213	**700**	797
120 or more days past due	**7**	7	**98**	122	**105**	129
Total retained loans	**$ 63,619**	$ 66,242	**$ 26,451**	$ 25,789	**$ 90,070**	$ 92,031
% of 30+ days past due to total retained loans	**0.82%**	0.89%	**1.06%**	1.30%	**0.89%**	1.01%
Nonaccrual loans[(a)]	**137**	141	**237**	283	**374**	424
Geographic region						
California	**$ 8,382**	$ 8,445	**$ 5,375**	$ 5,032	**$ 13,757**	$ 13,477
Texas	**6,497**	7,013	**3,002**	2,916	**9,499**	9,929
New York	**3,843**	4,023	**4,218**	4,195	**8,061**	8,218
Illinois	**3,667**	3,916	**2,045**	2,017	**5,712**	5,933
Florida	**3,332**	3,350	**1,484**	1,424	**4,816**	4,774
Arizona	**2,061**	2,221	**1,451**	1,383	**3,512**	3,604
Ohio	**1,987**	2,105	**1,346**	1,380	**3,333**	3,485
New Jersey	**1,990**	2,044	**738**	721	**2,728**	2,765
Michigan	**1,378**	1,418	**1,332**	1,357	**2,710**	2,775
Louisiana	**1,570**	1,656	**860**	849	**2,430**	2,505
All other	**28,912**	30,051	**4,600**	4,515	**33,512**	34,566
Total retained loans	**$ 63,619**	$ 66,242	**$ 26,451**	$ 25,789	**$ 90,070**	$ 92,031
Loans by risk ratings[(b)]						
Noncriticized	**$ 14,193**	$ 15,604	**$ 18,644**	$ 17,938	**$ 32,837**	$ 33,542
Criticized performing	**337**	93	**760**	791	**1,097**	884
Criticized nonaccrual	**3**	9	**195**	213	**198**	222

(a) There were no loans that were 90 or more days past due and still accruing interest at September 30, 2018, and December 31, 2017.
(b) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

(in millions)	**September 30, 2018**	December 31, 2017
Impaired loans		
With an allowance	**$ 227**	$ 272
Without an allowance[(a)]	**41**	26
Total impaired loans[(b)(c)]	**$ 268**	$ 298
Allowance for loan losses related to impaired loans	**$ 65**	$ 73
Unpaid principal balance of impaired loans[(d)]	**372**	402
Impaired loans on nonaccrual status	**244**	268

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Predominantly all other consumer impaired loans are in the U.S.
(c) Other consumer average impaired loans were $271 million and $366 million for the three months ended September 30, 2018 and 2017, respectively, and $281 million and $459 million for the nine months ended September 30, 2018 and 2017, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the three and nine months ended September 30, 2018 and 2017.
(d) Represents the contractual amount of principal owed at September 30, 2018, and December 31, 2017. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, interest payments received and applied to the principal balance, net deferred loan fees or costs, and unamortized discounts or premiums on purchased loans.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All of these TDRs are reported as impaired loans. Refer to Note 12 of JPMorgan Chase's 2017 Annual Report for further information on other consumer loans modified in TDRs.

At September 30, 2018 and December 31, 2017, other consumer loans modified in TDRs were $90 million and $102 million, respectively. 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, 2018 and 2017. Additional commitments to lend to borrowers whose loans have been modified in TDRs as of September 30, 2018 and December 31, 2017 were not material. TDRs on nonaccrual status were $66 million and $72 million at September 30, 2018 and December 31, 2017, respectively.

Purchased credit-impaired loans

For a detailed discussion of PCI loans, including the related accounting policies, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
(in millions, except ratios)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Carrying value[a]	**$ 9,393**	$10,799	**$ 4,931**	$ 6,479	**$ 2,072**	$ 2,609	**$ 8,813**	$10,689	**$25,209**	$30,576
Loan delinquency (based on unpaid principal balance)										
Current	**$ 9,047**	$10,272	**$ 4,429**	$ 5,839	**$ 2,152**	$ 2,640	**$ 7,904**	$ 9,662	**$23,532**	$28,413
30–149 days past due	**257**	356	**269**	336	**297**	381	**427**	547	**1,250**	1,620
150 or more days past due	**263**	392	**257**	327	**143**	176	**526**	689	**1,189**	1,584
Total loans	**$ 9,567**	$11,020	**$ 4,955**	$ 6,502	**$ 2,592**	$ 3,197	**$ 8,857**	$10,898	**$25,971**	$31,617
% of 30+ days past due to total loans	**5.44%**	6.79%	**10.62%**	10.20%	**16.98%**	17.42%	**10.76%**	11.34%	**9.39%**	10.13%
Current estimated LTV ratios (based on unpaid principal balance)[b][c]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 17**	$ 33	**$ 1**	$ 4	**$ –**	$ 2	**$ 3**	$ 6	**$ 21**	$ 45
Less than 660	**15**	21	**10**	16	**12**	20	**8**	9	**45**	66
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**153**	274	**7**	16	**8**	20	**24**	43	**192**	353
Less than 660	**73**	132	**24**	42	**38**	75	**46**	71	**181**	320
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**846**	1,195	**92**	221	**62**	119	**145**	316	**1,145**	1,851
Less than 660	**394**	559	**132**	230	**192**	309	**220**	371	**938**	1,469
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**5,627**	6,134	**2,791**	3,551	**753**	895	**5,235**	6,113	**14,406**	16,693
Less than 660	**1,940**	2,095	**1,649**	2,103	**1,403**	1,608	**2,792**	3,499	**7,784**	9,305
No FICO/LTV available	**502**	577	**249**	319	**124**	149	**384**	470	**1,259**	1,515
Total unpaid principal balance	**$ 9,567**	$11,020	**$ 4,955**	$ 6,502	**$ 2,592**	$ 3,197	**$ 8,857**	$10,898	**$25,971**	$31,617
Geographic region (based on unpaid principal balance)										
California	**$ 5,678**	$ 6,555	**$ 2,706**	$ 3,716	**$ 627**	$ 797	**$ 4,966**	$ 6,225	**$13,977**	$17,293
Florida	**1,014**	1,137	**351**	428	**249**	296	**753**	878	**2,367**	2,739
New York	**543**	607	**383**	457	**282**	330	**538**	628	**1,746**	2,022
Washington	**442**	532	**103**	135	**46**	61	**185**	238	**776**	966
Illinois	**242**	273	**164**	200	**131**	161	**211**	249	**748**	883
New Jersey	**217**	242	**145**	178	**94**	110	**283**	336	**739**	866
Massachusetts	**67**	79	**118**	149	**78**	98	**252**	307	**515**	633
Maryland	**51**	57	**104**	129	**106**	132	**188**	232	**449**	550
Virginia	**56**	66	**94**	123	**39**	51	**234**	280	**423**	520
Arizona	**175**	203	**70**	106	**45**	60	**121**	156	**411**	525
All other	**1,082**	1,269	**717**	881	**895**	1,101	**1,126**	1,369	**3,820**	4,620
Total unpaid principal balance	**$ 9,567**	$11,020	**$ 4,955**	$ 6,502	**$ 2,592**	$ 3,197	**$ 8,857**	$10,898	**$25,971**	$31,617

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.
(b) 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. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.
(c) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

Approximately 25% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table represents the Firm's delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of September 30, 2018, and December 31, 2017.

(in millions, except ratios)	Total loans		Total 30+ day delinquency rate	
	Sep 30, 2018	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
HELOCs:[a]				
Within the revolving period[b]	**$ 6**	$ 51	**—%**	1.96%
Beyond the revolving period[c]	**6,837**	7,875	**3.79**	4.63
HELOANs	**296**	360	**3.38**	5.28
Total	**$ 7,139**	$ 8,286	**3.77%**	4.65%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the three and nine months ended September 30, 2018 and 2017, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

(in millions, except ratios)	Total PCI			
	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017
Beginning balance	**$ 8,722**	$12,639	**$ 11,159**	$11,768
Accretion into interest income	**(303)**	(345)	**(958)**	(1,061)
Changes in interest rates on variable-rate loans	**37**	51	**(231)**	218
Other changes in expected cash flows[a]	**46**	(1,333)	**(1,468)**	87
Balance at September 30	**$ 8,502**	$11,012	**$ 8,502**	$11,012
Accretable yield percentage	**4.95%**	4.54%	**4.88%**	4.48%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model, for example cash flows expected to be collected due to the impact of modifications and changes in prepayment assumptions.

Active and suspended foreclosure

At September 30, 2018, and December 31, 2017, the Firm had PCI residential real estate loans with an unpaid principal balance of $1.1 billion and $1.3 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

For further information on the credit card loan portfolio, including credit quality indicators, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

The table below sets forth information about the Firm's credit card loans.

(in millions, except ratios)	**September 30, 2018**	December 31, 2017
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 145,271**	$ 146,704
30–89 days past due and still accruing	**1,323**	1,305
90 or more days past due and still accruing	**1,262**	1,378
Total retained credit card loans	**$ 147,856**	$ 149,387
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.75%**	1.80%
% of 90+ days past due to total retained loans	**0.85**	0.92
Credit card loans by geographic region		
California	**$ 22,166**	$ 22,245
Texas	**14,171**	14,200
New York	**12,908**	13,021
Florida	**9,064**	9,138
Illinois	**8,482**	8,585
New Jersey	**6,345**	6,506
Ohio	**4,803**	4,997
Pennsylvania	**4,677**	4,883
Colorado	**4,090**	4,006
Michigan	**3,710**	3,826
All other	**57,440**	57,980
Total retained credit card loans	**$ 147,856**	$ 149,387
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**83.7%**	84.0%
Less than 660	**14.9**	14.6
No FICO available	**1.4**	1.4

Credit card impaired loans and loan modifications

For a detailed discussion of impaired credit card loans, including credit card loan modifications, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

(in millions)	**September 30, 2018**	December 31, 2017
Impaired credit card loans with an allowance[(a)(b)]		
Credit card loans with modified payment terms[(c)]	**$ 1,228**	$ 1,135
Modified credit card loans that have reverted to pre-modification payment terms[(d)]	**56**	80
Total impaired credit card loans[(e)]	**$ 1,284**	$ 1,215
Allowance for loan losses related to impaired credit card loans	**$ 421**	$ 383

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At September 30, 2018, and December 31, 2017, $26 million and $43 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $30 million and $37 million at September 30, 2018, and December 31, 2017, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	2017
Average impaired credit card loans	**$ 1,267**	$ 1,205	**$ 1,245**	$ 1,215
Interest income on impaired credit card loans	**17**	15	**48**	44

Loan modifications

The Firm may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of these loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. Substantially all modifications are considered to be TDRs. New enrollments in these loan modification programs were $215 million and $191 million for the three months ended September 30, 2018 and 2017, respectively, and $640 million and $552 million for the nine months ended September 30, 2018 and 2017, respectively. For all periods disclosed, new enrollments were less than 1% of total retained credit card loans.

For additional information about credit card loan modifications, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

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.

	Three months ended September 30,		Nine months ended September 30,	
(in millions, except weighted-average data)	**2018**	2017	**2018**	2017
Weighted-average interest rate of loans – before TDR	**18.25%**	16.84%	**17.82%**	16.52%
Weighted-average interest rate of loans – after TDR	**5.10**	4.95	**5.12**	4.84
Loans that redefaulted within one year of modification[(a)]	**$ 31**	$ 27	**$ 82**	$ 72

(a) 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. A substantial portion of these loans are expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for modified credit card loans was expected to be 32.78% and 31.54% as of September 30, 2018, and December 31, 2017, respectively.

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 risk rating assigned to each loan. For further information on these risk ratings, refer to Note 12 and Note 13 of JPMorgan Chase's 2017 Annual Report.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other[d]		Total retained loans	
(in millions, except ratios)	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Loans by risk ratings												
Investment-grade	**$ 66,968**	$ 68,071	**$100,036**	$ 98,467	**$ 31,194**	$26,791	**$14,435**	$15,140	**$111,710**	$103,212	**$324,343**	$311,681
Noninvestment-grade:												
Noncriticized	**51,758**	46,558	**14,526**	14,335	**14,374**	13,071	**168**	369	**13,288**	9,988	**94,114**	84,321
Criticized performing	**3,429**	3,983	**604**	710	**142**	210	**–**	–	**211**	259	**4,386**	5,162
Criticized nonaccrual	**696**	1,357	**130**	136	**2**	2	**–**	–	**166**	239	**994**	1,734
Total noninvestment-grade	**55,883**	51,898	**15,260**	15,181	**14,518**	13,283	**168**	369	**13,665**	10,486	**99,494**	91,217
Total retained loans	**$122,851**	$119,969	**$115,296**	$ 113,648	**$ 45,712**	$40,074	**$14,603**	$15,509	**$125,375**	$113,698	**$423,837**	$402,898
% of total criticized exposure to total retained loans	**3.36%**	4.45%	**0.64%**	0.74%	**0.32%**	0.53%	**–%**	–%	**0.30%**	0.44%	**1.27%**	1.71%
% of criticized nonaccrual to total retained loans	**0.57**	1.13	**0.11**	0.12	**–**	–	**–**	–	**0.13**	0.21	**0.23**	0.43
Loans by geographic distribution[a]												
Total non-U.S.	**$ 30,435**	$ 28,470	**$ 2,741**	$ 3,101	**$ 17,748**	$16,790	**$ 2,973**	$ 2,906	**$ 49,030**	$ 44,112	**$102,927**	$ 95,379
Total U.S.	**92,416**	91,499	**112,555**	110,547	**27,964**	23,284	**11,630**	12,603	**76,345**	69,586	**320,910**	307,519
Total retained loans	**$122,851**	$119,969	**$115,296**	$ 113,648	**$ 45,712**	$40,074	**$14,603**	$15,509	**$125,375**	$113,698	**$423,837**	$402,898
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$121,913**	$118,288	**$115,098**	$ 113,258	**$ 45,671**	$40,042	**$14,585**	$15,493	**$124,097**	$112,559	**$421,364**	$399,640
30–89 days past due and still accruing	**211**	216	**52**	242	**38**	15	**15**	12	**1,110**	898	**1,426**	1,383
90 or more days past due and still accruing[c]	**31**	108	**16**	12	**1**	15	**3**	4	**2**	2	**53**	141
Criticized nonaccrual	**696**	1,357	**130**	136	**2**	2	**–**	–	**166**	239	**994**	1,734
Total retained loans	**$122,851**	$119,969	**$115,296**	$ 113,648	**$ 45,712**	$40,074	**$14,603**	$15,509	**$125,375**	$113,698	**$423,837**	$402,898

(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. For a further discussion, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Other includes individuals (predominantly Wealth Management clients within AWM), SPEs, and private education and civic organizations. For more information on SPEs, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio for the periods indicated. For further information on real estate loans, refer to Note 12 of JPMorgan Chase's 2017 Annual Report.

(in millions, except ratios)	Multifamily		Other commercial		Total real estate loans	
	Sep 30, 2018	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Real estate retained loans	**$ 79,112**	$ 77,597	**$ 36,184**	$ 36,051	**$ 115,296**	$ 113,648
Criticized exposure	**383**	491	**351**	355	**734**	846
% of total criticized exposure to total real estate retained loans	**0.48%**	0.63%	**0.97%**	0.98%	**0.64%**	0.74%
Criticized nonaccrual	**$ 47**	$ 44	**$ 83**	$ 92	**$ 130**	$ 136
% of criticized nonaccrual loans to total real estate retained loans	**0.06%**	0.06%	**0.23%**	0.26%	**0.11%**	0.12%

Wholesale impaired retained loans and loan modifications

Wholesale impaired retained loans consist of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 13 of JPMorgan Chase's 2017 Annual Report.

The table below sets forth information about the Firm's wholesale impaired retained loans.

(in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	Sep 30, 2018	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017	**Sep 30, 2018**	Dec 31, 2017
Impaired loans												
With an allowance	**$ 658**	$ 1,170	**$ 78**	$ 78	**$ 2**	$ 93	**$ –**	$ –	**$ 151**	$ 168	**$ 889**	$ 1,509
Without an allowance[a]	**84**	228	**53**	60	**–**	–	**–**	–	**25**	70	**162**	358
Total impaired loans	**$ 742**	$ 1,398	**$ 131**	$ 138	**$ 2**	$ 93	**$ –**	$ –	**$ 176**	$ 238	**$ 1,051** [c]	$ 1,867 [c]
Allowance for loan losses related to impaired loans	**$ 243**	$ 404	**$ 15**	$ 11	**$ 1**	$ 4	**$ –**	$ –	**$ 21**	$ 42	**$ 280**	$ 461
Unpaid principal balance of impaired loans[b]	**846**	1,604	**198**	201	**2**	94	**–**	–	**387**	255	**1,433**	2,154

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at September 30, 2018, and December 31, 2017. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.
(c) Based upon the domicile of the borrower, largely consists of loans in the U.S.

The following table presents the Firm's average impaired retained loans for the periods indicated.

(in millions)	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017
Commercial and industrial	**$ 838**	$ 1,207	**$ 1,095**	$ 1,277
Real estate	**134**	167	**138**	175
Financial institutions	**45**	70	**76**	38
Government agencies	**–**	–	**–**	–
Other	**202**	231	**214**	246
Total[a][b]	**$ 1,219**	$ 1,675	**$ 1,523**	$ 1,736

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the three and nine months ended September 30, 2018 and 2017.
(b) The prior period amounts have been revised to conform with the current period presentation.

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were $517 million and $614 million as of September 30, 2018, and December 31, 2017, respectively.

Note 12 – Allowance for credit losses

For a detailed discussion of the allowance for credit losses and the related accounting policies, refer to Note 13 of JPMorgan Chase's 2017 Annual Report.

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.

	2018				2017			
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,	**$ 4,579**	**$ 4,884**	**$ 4,141**	**$ 13,604**	$ 5,198	$ 4,034	$ 4,544	$ 13,776
Gross charge-offs	**776**	**3,777**	**264**	**4,817**	1,479	3,344	154	4,977
Gross recoveries	**(681)**	**(370)**	**(146)**	**(1,197)**	(478)	(295)	(81)	(854)
Net charge-offs	**95**	**3,407**	**118**	**3,620**	1,001	3,049	73	4,123
Write-offs of PCI loans[a]	**151**	**–**	**–**	**151**	66	–	–	66
Provision for loan losses	**(152)**	**3,557**	**(111)**	**3,294**	653	3,699	(401)	3,951
Other	**1**	**–**	**–**	**1**	(2)	–	3	1
Ending balance at September 30,	**$ 4,182**	**$ 5,034**	**$ 3,912**	**$ 13,128**	$ 4,782	$ 4,684	$ 4,073	$ 13,539
Allowance for loan losses by impairment methodology								
Asset-specific[b]	**$ 204**	**$ 421** [c]	**$ 280**	**$ 905**	$ 271	$ 376 [c]	$ 363	$ 1,010
Formula-based	**2,154**	**4,613**	**3,632**	**10,399**	2,266	4,308	3,710	10,284
PCI	**1,824**	**–**	**–**	**1,824**	2,245	–	–	2,245
Total allowance for loan losses	**$ 4,182**	**$ 5,034**	**$ 3,912**	**$ 13,128**	$ 4,782	$ 4,684	$ 4,073	$ 13,539
Loans by impairment methodology								
Asset-specific	**$ 7,046**	**$ 1,284**	**$ 1,051**	**$ 9,381**	$ 8,147	$ 1,206	$ 1,638	$ 10,991
Formula-based	**343,703**	**146,572**	**422,783**	**913,058**	329,445	139,994	396,928	866,367
PCI	**25,209**	**–**	**3**	**25,212**	31,821	–	3	31,824
Total retained loans	**$ 375,958**	**$ 147,856**	**$ 423,837**	**$ 947,651**	$ 369,413	$ 141,200	$ 398,569	$ 909,182
Impaired collateral-dependent loans								
Net charge-offs	**$ 15**	**$ –**	**$ –**	**$ 15**	$ 47	$ –	$ 30	$ 77
Loans measured at fair value of collateral less cost to sell	**2,077**	**–**	**258**	**2,335**	2,198	–	250	2,448
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 33**	**$ –**	**$ 1,035**	**$ 1,068**	$ 26	$ –	$ 1,052	$ 1,078
Provision for lending-related commitments	**–**	**–**	**29**	**29**	7	–	24	31
Other	**–**	**–**	**–**	**–**	–	–	–	–
Ending balance at September 30,	**$ 33**	**$ –**	**$ 1,064**	**$ 1,097**	$ 33	$ –	$ 1,076	$ 1,109
Allowance for lending-related commitments by impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 71**	**$ 71**	$ –	$ –	$ 220	$ 220
Formula-based	**33**	**–**	**993**	**1,026**	33	–	856	889
Total allowance for lending-related commitments	**$ 33**	**$ –**	**$ 1,064**	**$ 1,097**	$ 33	$ –	$ 1,076	$ 1,109
Lending-related commitments by impairment methodology								
Asset-specific	**$ –**	**$ –**	**$ 252**	**$ 252**	$ –	$ –	$ 764	$ 764
Formula-based	**50,630**	**600,728**	**397,064**	**1,048,422**	52,796 [d]	574,641	371,616	999,053 [d]
Total lending-related commitments	**$ 50,630**	**$ 600,728**	**$ 397,316**	**$ 1,048,674**	$ 52,796 [d]	$ 574,641	$ 372,380	$ 999,817 [d]

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool.
(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.
(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.
(d) The prior period amounts have been revised to conform with the current period presentation.

Note 13 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, refer to Note 1 of JPMorgan Chase's 2017 Annual Report.

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	148
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	148-150
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, and other consumer loans	148-150
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	150
	Municipal bond vehicles	Financing of municipal bond investments	150

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties. Refer to pages 151-152 of this Note for more information on the VIEs sponsored by third parties.

Significant Firm-sponsored VIEs

Credit card securitizations

For a more detailed discussion of JPMorgan Chase's involvement with credit card securitizations, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

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 trusts, including its primary vehicle, the Chase Issuance Trust. Refer to the table on page 151 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.

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, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

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 transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. Refer to Securitization activity on page 152 of this Note for further information regarding the Firm's cash flows associated with and interests retained in nonconsolidated VIEs, and pages 152-153 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
September 30, 2018 (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	**$ 65,481**	**$ 3,314**	**$ 51,914**	**$ 607**	**$ 704**	**$ –**	**$ 1,311**
Subprime	**17,278**	**19**	**15,950**	**55**	**–**	**–**	**55**
Commercial and other[b]	**102,603**	**–**	**77,494**	**497**	**869**	**216**	**1,582**
Total	**$ 185,362**	**$ 3,333**	**$ 145,358**	**$ 1,159**	**$ 1,573**	**$ 216**	**$ 2,948**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]			
December 31, 2017 (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	$ 68,874	$ 3,615	$ 52,280	$ 410	$ 943	$ –	$ 1,353
Subprime	18,984	7	17,612	93	–	–	93
Commercial and other[b]	94,905	63	63,411	745	1,133	157	2,035
Total	$ 182,763	$ 3,685	$ 133,303	$ 1,248	$ 2,076	$ 157	$ 3,481

(a) Excludes U.S. government agency securitizations and re-securitizations, which are not Firm-sponsored. Refer to pages 152-153 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties.
(c) Excludes the following: retained servicing (refer to Note 14 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (Refer to Note 4 for further information on derivatives); senior and subordinated securities of $75 million and $111 million, respectively, at September 30, 2018, and $88 million and $48 million, respectively, at December 31, 2017, 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, 2018, and December 31, 2017, 66% and 61%, 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 $1.3 billion of investment-grade at both September 30, 2018 and December 31, 2017, and $34 million and $48 million of noninvestment-grade at September 30, 2018, and December 31, 2017, respectively. The retained interests in commercial and other securitizations trusts consisted of $1.2 billion and $1.6 billion of investment-grade and $410 million and $412 million of noninvestment-grade retained interests at September 30, 2018, and December 31, 2017, 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. For a more detailed description of the Firm's involvement with residential mortgage securitizations, refer to Note 14 of JPMorgan Chase's 2017 Annual Report. Refer to the table on page 151 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. For a more detailed description of the Firm's involvement with commercial mortgage and other consumer securitizations, refer to Note 14 of JPMorgan Chase's 2017 Annual Report. Refer to the table on page 151 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
For a more detailed description of JPMorgan Chase's participation in certain re-securitization transactions, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

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)	**2018**	**2017**	**2018**	**2017**
Transfers of securities to VIEs				
Agency	**$ 2,540**	$ 1,477	**$ 11,321**	$ 6,163

The following table presents information on nonconsolidated re-securitization VIEs.

	Nonconsolidated re-securitization VIEs	
(in millions)	**September 30, 2018**	December 31, 2017
Firm-sponsored private-label		
Assets held in VIEs with continuing involvement[(a)]	**$ 198**	$ 783
Interest in VIEs	**10**	29
Agency		
Interest in VIEs	**2,263**	2,250

(a) Represents the principal amount and includes the notional amount of interest-only securities.

As of September 30, 2018, and December 31, 2017, the Firm did not consolidate any agency re-securitization VIEs or any Firm-sponsored private-label re-securitization VIEs.

Multi-seller conduits
For a more detailed description of JPMorgan Chase's principal involvement with Firm-administered multi-seller conduits, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

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 $18.7 billion and $20.4 billion of the commercial paper issued by the Firm-administered multi-seller conduits at September 30, 2018, and December 31, 2017, respectively, which have been eliminated in consolidation. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. Other than the amounts required to be held pursuant to credit risk retention rules, the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded commitments were $9.2 billion and $8.8 billion at September 30, 2018, and December 31, 2017, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, refer to Note 20.

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 151-152 of this Note for further information. The Firm serves as sponsor for all Non-Customer TOB transactions. For a more detailed description of JPMorgan Chase's Municipal bond vehicles, refer to Note 14 of JPMorgan Chase's 2017 Annual Report. The Firm had no exposure to nonconsolidated Firm-sponsored municipal bond vehicles at September 30, 2018 and December 31, 2017, respectively.

Refer to pages 151-152 of this Note for further information on consolidated 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, 2018, and December 31, 2017.

	Assets				Liabilities		
September 30, 2018 (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	**$ –**	**$ 30,949**	**$ 504**	**$ 31,453**	**$ 14,142**	**$ 12**	**$ 14,154**
Firm-administered multi-seller conduits	**1**	**22,797**	**129**	**22,927**	**4,304**	**30**	**4,334**
Municipal bond vehicles	**1,370**	**–**	**4**	**1,374**	**1,344**	**2**	**1,346**
Mortgage securitization entities[a]	**62**	**3,368**	**37**	**3,467**	**304**	**171**	**475**
Other	**134**	**–**	**1,733**	**1,867**	**147**	**115**	**262**
Total	**$ 1,567**	**$ 57,114**	**$ 2,407**	**$ 61,088**	**$ 20,241**	**$ 330**	**$ 20,571**

	Assets				Liabilities		
December 31, 2017 (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	$ –	$ 41,923	$ 652	$ 42,575	$ 21,278	$ 16	$ 21,294
Firm-administered multi-seller conduits	–	23,411	48	23,459	3,045	28	3,073
Municipal bond vehicles	1,278	–	3	1,281	1,265	2	1,267
Mortgage securitization entities[a]	66	3,661	55	3,782	359	199	558
Other	105	–	1,916	2,021	134	104	238
Total	$ 1,449	$ 68,995	$ 2,674	$ 73,118	$ 26,081	$ 349	$ 26,430

(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. For conduits program-wide credit enhancements, refer to note 14 of JPMorgan Chase's 2017 Annual Report. Included in beneficial interests in VIE assets are long-term beneficial interests of $14.6 billion and $21.8 billion at September 30, 2018, and December 31, 2017, 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 construct, own and operate affordable housing, wind, solar and other alternative energy 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 $13.7 billion and $13.4 billion, of which $3.2 billion was unfunded at both September 30, 2018 and December 31, 2017, respectively. In order to reduce the risk of loss, the Firm assesses each project and withholds varying amounts of its capital investment until qualification of the project for tax credits. For further information on affordable housing tax credits, refer to Note 24 of JPMorgan Chase's 2017 Annual Report. For more information on off-balance sheet lending-related commitments, refer to Note 20 of this Form 10-Q.

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, 2018 and December 31, 2017 was $5.0 billion and $5.3 billion, respectively. The fair value of assets held by such VIEs at September 30, 2018 and December 31, 2017, was $8.0 billion and $9.2 million, respectively. For more information on off-balance sheet lending-related commitments, refer to Note 20.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, and commercial mortgage. For a further description of the Firm's accounting policies regarding securitizations, refer to Note 14 of JPMorgan Chase's 2017 Annual Report.

Securitization activity

The following table provides information related to the Firm's securitization activities for the three and nine months ended September 30, 2018 and 2017, 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,			
	2018		2017		**2018**		2017	
(in millions)	Residential mortgage[e]	Commercial and other[f]	Residential mortgage[e]	Commercial and other[f]	Residential mortgage[e]	Commercial and other[f]	Residential mortgage[e]	Commercial and other[f]
Principal securitized	**$ 1,513**	**$ 3,533**	$ 1,017	$ 4,411	**$ 5,972**	**$ 8,705**	$ 3,066	$ 7,723
All cash flows during the period[a]:								
Proceeds received from loan sales as financial instruments[b]	**$ 1,524**	**$ 3,558**	$ 1,053	$ 4,419	**$ 5,984**	**$ 8,745**	$ 3,136	$ 7,796
Servicing fees collected[c]	**43**	**1**	49	1	**134**	**1**	151	3
Purchases of previously transferred financial assets (or the underlying collateral)[d]	**–**	**–**	–	–	**–**	**–**	1	–
Cash flows received on interests	**99**	**99**	125	287	**328**	**230**	384	828

(a) Excludes re-securitization transactions.
(b) Predominantly includes Level 2 assets.
(c) The prior period amounts have been revised to conform with the current period presentation.
(d) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer "clean-up" calls.
(e) Includes prime, Alt-A, subprime, and option ARMs. Excludes loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.
(f) Includes commercial mortgage and other consumer loans.

Loans and excess MSRs sold to U.S. government-sponsored enterprises, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

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. government-sponsored enterprises ("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 20 of this Form 10-Q, and Note 27 of JPMorgan Chase's 2017 Annual Report for additional information about the Firm's loan sales- and securitization-related indemnifications. Refer to Note 14 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, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

(in millions)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Carrying value of loans sold	**$ 11,968**	$ 15,402	**$ 28,804**	$ 44,282
Proceeds received from loan sales as cash	**1**	104	**1**	117
Proceeds from loan sales as securities[(a)]	**11,713**	15,093	**28,291**	43,682
Total proceeds received from loan sales[(b)]	**$ 11,714**	$ 15,197	**$ 28,292**	$ 43,799
Gains on loan sales[(c)(d)]	**$ 9**	$ 41	**$ 32**	$ 114

(a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.
(b) Excludes the value of MSRs retained upon the sale of loans.
(c) Gains on loan sales include the value of MSRs.
(d) 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 20, 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. For additional information, refer to Note 11.

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, 2018 and December 31, 2017. Substantially all of these loans and real estate are insured or guaranteed by U.S. government agencies.

(in millions)	Sep 30, 2018	Dec 31, 2017
Loans repurchased or option to repurchase[(a)]	**$ 7,207**	$ 8,629
Real estate owned	**78**	95
Foreclosed government-guaranteed residential mortgage loans[(b)]	**404**	527

(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 nonconsolidated securitized financial assets held in Firm-sponsored private-label securitization entities, in which the Firm has continuing involvement, and delinquencies as of September 30, 2018, and December 31, 2017.

(in millions)	Securitized assets Sep 30, 2018	Securitized assets Dec 31, 2017	90 days past due Sep 30, 2018	90 days past due Dec 31, 2017	Net liquidation losses[(a)] Three months ended September 30, 2018	Net liquidation losses[(a)] Three months ended September 30, 2017	Net liquidation losses[(a)] Nine months ended September 30, 2018	Net liquidation losses[(a)] Nine months ended September 30, 2017
Securitized loans								
Residential mortgage:								
Prime / Alt-A & option ARMs	**$ 51,914**	$ 52,280	**$ 3,612**	$ 4,870	**$ 182**	$ 184	**$ 453**	$ 622
Subprime	**15,950**	17,612	**2,637**	3,276	**155**	153	**(307)**	529
Commercial and other	**77,494**	63,411	**526**	957	**71**	2	**119**	59
Total loans securitized	**$ 145,358**	$ 133,303	**$ 6,775**	$ 9,103	**$ 408**	$ 339	**$ 265**	$ 1,210

(a) Includes liquidation gains as a result of private label mortgage settlement payments during the first quarter of 2018, which were reflected as asset recoveries by trustees.

Note 14 – Goodwill and Mortgage servicing rights

For a discussion of the accounting policies related to goodwill and mortgage servicing rights, refer to Note 15 of JPMorgan Chase's 2017 Annual Report.

Goodwill

The following table presents goodwill attributed to the business segments.

(in millions)	**September 30, 2018**	December 31, 2017
Consumer & Community Banking	**$ 30,995**	$ 31,013
Corporate & Investment Bank	**6,771**	6,776
Commercial Banking	**2,860**	2,860
Asset & Wealth Management	**6,857**	6,858
Total goodwill	**$ 47,483**	$ 47,507

The following table presents changes in the carrying amount of goodwill.

	Three months ended September 30,		Nine months ended September 30,	
(in millions)	**2018**	2017	**2018**	2017
Balance at beginning of period	**$ 47,488**	$ 47,300	**$ 47,507**	$ 47,288
Changes during the period from:				
Other[(a)]	**(5)**	9	**(24)**	21
Balance at September 30,	**$ 47,483**	$ 47,309	**$ 47,483**	$ 47,309

(a) Includes foreign currency remeasurement and other adjustments.

Goodwill Impairment testing

For a further description of the Firm's goodwill impairment testing, including the primary method used to estimate the fair value of the reporting units, and the assumptions used in the goodwill impairment test, refer to Impairment testing on pages 244–245 of JPMorgan Chase's 2017 Annual Report.

Goodwill was not impaired at September 30, 2018, or December 31, 2017, nor was goodwill written off due to impairment during the nine months ended September 30, 2018 or 2017.

Declines in business performance, increases in credit losses, increases in equity 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 or their associated goodwill 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.

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. For a further description of the MSR asset, interest rate risk management, and the valuation of MSRs, refer to Notes 2 and 15 of JPMorgan Chase's 2017 Annual Report.

The following table summarizes MSR activity for the three and nine months ended September 30, 2018 and 2017.

	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)	**2018**	2017	**2018**	2017
Fair value at beginning of period	**$ 6,241**	$ 5,753	**$ 6,030**	$ 6,096
MSR activity:				
Originations of MSRs	**278**	253	**611**	624
Purchase of MSRs	**13**	–	**159**	–
Disposition of MSRs[a]	**(2)**	(2)	**(401)**	(140)
Net additions/(dispositions)	**289**	251	**369**	484
Changes due to collection/realization of expected cash flows	**(195)**	(200)	**(542)**	(619)
Changes in valuation due to inputs and assumptions:				
Changes due to market interest rates and other[b]	**150**	(67)	**635**	(188)
Changes in valuation due to other inputs and assumptions:				
Projected cash flows (e.g., cost to service)	**14**	(116)	**14**	(102)
Discount rates	**–**	–	**24**	(19)
Prepayment model changes and other[c]	**(66)**	117	**(97)**	86
Total changes in valuation due to other inputs and assumptions	**(52)**	1	**(59)**	(35)
Total changes in valuation due to inputs and assumptions	**98**	(66)	**576**	(223)
Fair value at September 30,	**$ 6,433**	$ 5,738	**$ 6,433**	$ 5,738
Change in unrealized gains/(losses) included in income related to MSRs held at September 30,	**$ 98**	$ (66)	**$ 576**	$ (223)
Contractual service fees, late fees and other ancillary fees included in income	**428**	463	**1,339**	1,427
Third-party mortgage loans serviced at September 30, (in billions)	**528**	558	**528**	558
Net servicer advances at September 30, (in billions)[d]	**3.1**	3.9	**3.1**	3.9

(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.

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, 2018 and 2017.

(in millions)	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
CCB mortgage fees and related income				
Net production revenue	**$ 108**	$ 158	**$ 296**	$ 451
Net mortgage servicing revenue:				
Operating revenue:				
Loan servicing revenue	**435**	493	**1,389**	1,533
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(195)**	(200)	**(542)**	(617)
Total operating revenue	**240**	293	**847**	916
Risk management:				
Changes in MSR asset fair value due to market interest rates and other[(a)]	**150**	(67)	**636**	(188)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(52)**	1	**(59)**	(35)
Change in derivative fair value and other	**(186)**	43	**(671)**	91
Total risk management	**(88)**	(23)	**(94)**	(132)
Total net mortgage servicing revenue	**152**	270	**753**	784
Total CCB mortgage fees and related income	**260**	428	**1,049**	1,235
All other	**2**	1	**2**	4
Mortgage fees and related income	**$ 262**	$ 429	**$ 1,051**	$ 1,239

(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, 2018, and December 31, 2017, and outlines hypothetical sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

(in millions, except rates)	Sep 30, 2018	Dec 31, 2017
Weighted-average prepayment speed assumption ("CPR")	**8.40%**	9.35%
Impact on fair value of 10% adverse change	**$ (194)**	$ (221)
Impact on fair value of 20% adverse change	**(376)**	(427)
Weighted-average option adjusted spread	**8.65%**	9.04%
Impact on fair value of a 100 basis point adverse change	**$ (251)**	$ (250)
Impact on fair value of a 200 basis point adverse change	**(483)**	(481)

CPR: Constant prepayment rate.

Changes in fair value based on variation 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 15 – Deposits

For further information on deposits, refer to Note 17 of JPMorgan Chase's 2017 Annual Report.

At September 30, 2018, and December 31, 2017, noninterest-bearing and interest-bearing deposits were as follows.

(in millions)	**September 30, 2018**	December 31, 2017
U.S. offices		
Noninterest-bearing	**$ 374,603**	**$ 393,645**
Interest-bearing (included **$16,526** and $14,947 at fair value)[a]	**814,988**	793,618
Total deposits in U.S. offices	**1,189,591**	1,187,263
Non-U.S. offices		
Noninterest-bearing	**19,127**	15,576
Interest-bearing (included **$3,974** and $6,374 at fair value)[a]	**250,044**	241,143
Total deposits in non-U.S. offices	**269,171**	256,719
Total deposits	**$ 1,458,762**	$ 1,443,982

(a) Includes structured notes classified as deposits for which the fair value option has been elected. For a further discussion, refer to Note 3 of JPMorgan Chase's 2017 Annual Report.

Note 16 – Earnings per share

For a discussion of the computation of basic and diluted earnings per share ("EPS"), refer to Note 22 of JPMorgan Chase's 2017 Annual Report. The following table presents the calculation of basic and diluted EPS for the three and nine months ended September 30, 2018 and 2017.

(in millions, except per share amounts)	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	**2018**	2017
Basic earnings per share				
Net income	**$ 8,380**	$ 6,732	**$ 25,408**	$ 20,209
Less: Preferred stock dividends	**379**	412	**1,167**	1,235
Net income applicable to common equity	**8,001**	6,320	**24,241**	18,974
Less: Dividends and undistributed earnings allocated to participating securities	**53**	58	**174**	188
Net income applicable to common stockholders	**$ 7,948**	$ 6,262	**$ 24,067**	$ 18,786
Total weighted-average basic shares outstanding	**3,376.1**	3,534.7	**3,416.5**	3,570.9
Net income per share	**$ 2.35**	$ 1.77	**$ 7.04**	$ 5.26
Diluted earnings per share				
Net income applicable to common stockholders	**$ 7,948**	$ 6,262	**$ 24,067**	$ 18,786
Total weighted-average basic shares outstanding	**3,376.1**	3,534.7	**3,416.5**	3,570.9
Add: Employee stock options, SARs, warrants and unvested PSUs	**18.2**	24.9	**19.7**	26.1
Total weighted-average diluted shares outstanding	**3,394.3**	3,559.6	**3,436.2**	3,597.0
Net income per share	**$ 2.34**	$ 1.76	**$ 7.00**	$ 5.22

Note 17 – 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.

As of or for the three months ended September 30, 2018 (in millions)	Unrealized gains/(losses) on investment securities	Translation adjustments, net of hedges	Fair value hedges[(b)]	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, 2018	**$ 1,599**	**$ (632)**	**$ (162)**	**$ (147)**	**$ (1,876)**	**$ 80**	**$ (1,138)**
Net change	**(819)**	**(31)**	**34**	**(88)**	**19**	**(402)**	**(1,287)**
Balance at September 30, 2018	**$ 780**	**$ (663)**	**$ (128)**	**$ (235)**	**$ (1,857)**	**$ (322)**	**$ (2,425)**

As of or for the three months ended September 30, 2017 (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, 2017	$ 2,219	$ (157)	NA	$ 44	$ (2,255)	$ (243)	$ (392)
Net change	147	–	NA	26	22	(112)	83
Balance at September 30, 2017	$ 2,366	$ (157)	NA	$ 70	$ (2,233)	$ (355)	$ (309)

As of or for the nine months ended September 30, 2018 (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, 2018	**$ 2,164**	**$ (470)**	**$ –**	**$ 76**	**$ (1,521)**	**$ (368)**	**$ (119)**
Cumulative effect of changes in accounting principles[(a)]:							
Premium amortization on purchased callable debt securities	**261**	**–**	**–**	**–**	**–**	**–**	**261**
Hedge accounting	**169**	**–**	**(54)**	**–**	**–**	**–**	**115**
Reclassification of certain tax effects from AOCI	**466**	**(277)**	**–**	**16**	**(414)**	**(79)**	**(288)**
Net change	**(2,280)**	**84**	**(74)**	**(327)**	**78**	**125**	**(2,394)**
Balance at September 30, 2018	**$ 780**	**$ (663)**	**$ (128)**	**$ (235)**	**$ (1,857)**	**$ (322)**	**$ (2,425)**

As of or for the nine months ended September 30, 2017 (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, 2017	$ 1,524	$ (164)	NA	$ (100)	$ (2,259)	$ (176)	$ (1,175)
Net change	842	7	NA	170	26	(179)	866
Balance at September 30, 2017	$ 2,366	$ (157)	NA	$ 70	$ (2,233)	$ (355)	$ (309)

(a) Represents the adjustment to AOCI as a result of the new accounting standards adopted in the first quarter of 2018.

(b) 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.

The following table presents the pre-tax and after-tax changes in the components of OCI.

	2018			2017		
Three months ended September 30, (in millions)	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	**$ (1,117)**	**$ 262**	**$ (855)**	$ 232	$ (86)	$ 146
Reclassification adjustment for realized (gains)/losses included in net income[a]	**46**	**(10)**	**36**	1	–	1
Net change	**(1,071)**	**252**	**(819)**	233	(86)	147
Translation adjustments:						
Translation	**(314)**	**45**	**(269)**	286	(106)	180
Hedges	**311**	**(73)**	**238**	(286)	106	(180)
Net change	**(3)**	**(28)**	**(31)**	–	–	–
Fair value hedges, net change[b]:	**45**	**(11)**	**34**	NA	NA	NA
Cash flow hedges:						
Net unrealized gains/(losses) arising during the period	**(122)**	**27**	**(95)**	29	(11)	18
Reclassification adjustment for realized (gains)/losses included in net income[c]	**9**	**(2)**	**7**	10	(2)	8
Net change	**(113)**	**25**	**(88)**	39	(13)	26
Defined benefit pension and OPEB plans:						
Net gains/(losses) arising during the period	**–**	**–**	**–**	–	–	–
Reclassification adjustments included in net income[d]:						
Amortization of net loss	**26**	**(6)**	**20**	63	(23)	40
Prior service costs/(credits)	**(7)**	**2**	**(5)**	(9)	3	(6)
Foreign exchange and other	**7**	**(3)**	**4**	(19)	7	(12)
Net change	**26**	**(7)**	**19**	35	(13)	22
DVA on fair value option elected liabilities, net change:	**(527)**	**125**	**(402)**	(178)	66	(112)
Total other comprehensive income/(loss)	**$ (1,643)**	**$ 356**	**$ (1,287)**	$ 129	$ (46)	$ 83

	2018			2017		
Nine months ended September 30, (in millions)	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	**$ (3,351)**	**$ 787**	**$ (2,564)**	$ 1,294	$ (476)	$ 818
Reclassification adjustment for realized (gains)/losses included in net income[a]	**371**	**(87)**	**284**	38	(14)	24
Net change	**(2,980)**	**700**	**(2,280)**	1,332	(490)	842
Translation adjustments[e]:						
Translation	**(981)**	**188**	**(793)**	1,185	(448)	737
Hedges	**1,149**	**(272)**	**877**	(1,161)	431	(730)
Net change	**168**	**(84)**	**84**	24	(17)	7
Fair value hedges, net change[b]:	**(96)**	**22**	**(74)**	NA	NA	NA
Cash flow hedges:						
Net unrealized gains/(losses) arising during the period	**(365)**	**85**	**(280)**	111	(42)	69
Reclassification adjustment for realized (gains)/losses included in net income[c]	**(62)**	**15**	**(47)**	160	(59)	101
Net change	**(427)**	**100**	**(327)**	271	(101)	170
Defined benefit pension and OPEB plans:						
Net gains/(losses) arising during the period	**25**	**(6)**	**19**	(52)	19	(33)
Reclassification adjustments included in net income[d]:						
Amortization of net loss	**78**	**(18)**	**60**	187	(69)	118
Prior service costs/(credits)	**(19)**	**5**	**(14)**	(27)	10	(17)
Settlement (gain)/loss	**–**	**–**	**–**	(3)	1	(2)
Foreign exchange and other	**19**	**(6)**	**13**	(51)	11	(40)
Net change	**103**	**(25)**	**78**	54	(28)	26
DVA on fair value option elected liabilities, net change:	**$ 163**	**$ (38)**	**$ 125**	$ (283)	$ 104	$ (179)
Total other comprehensive income/(loss)	**$ (3,069)**	**$ 675**	**$ (2,394)**	$ 1,398	$ (532)	$ 866

(a) The pre-tax amount is reported in investment securities losses in the Consolidated statements of income.
(b) 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.
(c) The pre-tax amounts are predominantly recorded in noninterest revenue, net interest income and compensation expense in the Consolidated statements of income.
(d) The pre-tax amount is reported in other expense in the Consolidated statements of income.
(e) Reclassifications of pre-tax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. During the nine months ended September 30, 2018, the Firm reclassified a net pre-tax loss of $174 million to other expense related to the liquidation of a legal entity, $23 million related to net investment hedge losses and $151 million related to cumulative translation adjustments. During the nine months ended September 30, 2017, the Firm reclassified a net pre-tax loss of $25 million to other expense related to the liquidation of a legal entity, $47 million related to net investment hedge gains and $72 million related to cumulative translation adjustments.

Note 18 – Restricted cash and other restricted assets

For a detailed discussion of the Firm's restricted cash and other restricted assets, refer to Note 25 of JPMorgan Chase's 2017 Annual Report.

As a result of the adoption of the restricted cash accounting guidance in the first quarter of 2018, restricted cash is included with unrestricted cash when reconciling the beginning and ending cash balances on the Consolidated statements of cash flows.

The following table presents the components of the Firm's restricted cash:

(in billions)	**September 30, 2018**	December 31, 2017
Cash reserves – Federal Reserve Banks	**$ 23.6**	$ 25.7
Segregated for the benefit of securities and futures brokerage customers	**15.3**	16.8
Cash reserves at non-U.S. central banks and held for other general purposes	**3.3**	3.3
Total restricted cash[(a)]	**$ 42.2**	$ 45.8

(a) Comprises $40.7 billion and $44.8 billion in deposits with banks, and $1.5 billion and $1.0 billion in cash and due from banks on the Consolidated balance sheets as of September 30, 2018 and December 31, 2017, respectively.

Also, as of September 30, 2018 and December 31, 2017, the Firm had:

- Cash and securities pledged with clearing organizations for the benefit of customers of $18.8 billion and $18.0 billion, respectively.
- Securities with a fair value of $2.2 billion and $3.5 billion, respectively, were also restricted in relation to customer activity.

Note 19 – Regulatory capital

For a detailed discussion on regulatory capital, refer to Note 26 of JPMorgan Chase's 2017 Annual Report.

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 insured depository institutions ("IDI"), including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios for CET1, Tier 1, Total, 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 by their respective primary regulators.

The following table represents the minimum and well-capitalized ratios to which the Firm and its IDI subsidiaries were subject as of September 30, 2018.

	Minimum capital ratios		Well-capitalized ratios	
	BHC[(a)(e)(f)]	IDI[(b)(e)(f)]	BHC[(c)]	IDI[(d)]
Capital ratios				
CET1	9.0%	6.375%	–%	6.5%
Tier 1	10.5	7.875	6.0	8.0
Total	12.5	9.875	10.0	10.0
Tier 1 leverage	4.0	4.0	5.0	5.0
SLR	5.0	6.0	–	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 Transitional minimum capital ratios applicable to the Firm under Basel III at September 30, 2018. At September 30, 2018, the CET1 minimum capital ratio includes 1.875% resulting from the phase in of the Firm's 2.5% capital conservation buffer, and 2.625% resulting from the phase in of the Firm's 3.5% GSIB surcharge.
(b) Represents requirements for JPMorgan Chase's IDI subsidiaries. The CET1 minimum capital ratio includes 1.875% resulting from the phase in of the 2.5% capital conservation buffer 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) For the period ended December 31, 2017, the CET1, Tier 1, Total and Tier 1 leverage minimum capital ratios applicable to the Firm were 7.5%, 9.0%, 11.0% and 4.0%, and the CET1, Tier 1, Total and Tier 1 leverage minimum capital ratios applicable to the Firm's IDI subsidiaries were 5.75%, 7.25%, 9.25% and 4.0%, respectively.
(f) Represents minimum SLR requirement of 3.0%, as well as, supplementary leverage buffers of 2.0% and 3.0% for BHC and IDI, respectively.

The following tables present the risk-based and leverage-based capital metrics for JPMorgan Chase and its significant IDI subsidiaries under both the Basel III Standardized and Basel III Advanced Approaches. As of September 30, 2018 and December 31, 2017, JPMorgan Chase and all of its IDI subsidiaries were well-capitalized and met all capital requirements to which each was subject.

September 30, 2018 (in millions, except ratios)	Basel III Standardized Transitional			Basel III Advanced Transitional		
	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	Chase Bank USA, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	Chase Bank USA, N.A.
Regulatory capital						
CET1 capital	**$ 184,972**	**$ 188,608**	**$ 23,136**	**$ 184,972**	**$ 188,608**	**$ 23,136**
Tier 1 capital	**210,589**	**188,608**	**23,136**	**210,589**	**188,608**	**23,136**
Total capital	**238,303**	**199,634**	**28,026**	**228,574**	**193,613**	**26,636**
Assets						
Risk-weighted	**1,545,326**	**1,362,039**	**109,138**	**1,438,529**	**1,211,473**	**182,177**
Adjusted average[a]	**2,552,612**	**2,141,332**	**116,411**	**2,552,612**	**2,141,332**	**116,411**
Capital ratios[b]						
CET1	**12.0%**	**13.8%**	**21.2%**	**12.9%**	**15.6%**	**12.7%**
Tier 1	**13.6**	**13.8**	**21.2**	**14.6**	**15.6**	**12.7**
Total	**15.4**	**14.7**	**25.7**	**15.9**	**16.0**	**14.6**
Tier 1 leverage[c]	**8.2**	**8.8**	**19.9**	**8.2**	**8.8**	**19.9**

December 31, 2017 (in millions, except ratios)	Basel III Standardized Transitional			Basel III Advanced Transitional		
	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	Chase Bank USA, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	Chase Bank USA, N.A.
Regulatory capital						
CET1 capital	$ 183,300	$ 184,375	$ 21,600	$ 183,300	$ 184,375	$ 21,600
Tier 1 capital	208,644	184,375	21,600	208,644	184,375	21,600
Total capital	238,395	195,839	27,691	227,933	189,510 [d]	26,250
Assets						
Risk-weighted	1,499,506	1,338,970 [d]	113,108	1,435,825	1,241,916 [d]	190,523
Adjusted average[a]	2,514,270	2,116,031	126,517	2,514,270	2,116,031	126,517
Capital ratios[b]						
CET1	12.2%	13.8%	19.1%	12.8%	14.8% [d]	11.3%
Tier 1	13.9	13.8	19.1	14.5	14.8 [d]	11.3
Total	15.9	14.6 [d]	24.5	15.9	15.3 [d]	13.8
Tier 1 leverage[c]	8.3	8.7	17.1	8.3	8.7	17.1

(a) Adjusted average assets, for purposes of calculating the Tier 1 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.
(b) For each of the risk-based capital ratios, the capital adequacy of the Firm and its IDI subsidiaries is evaluated against the lower of the two ratios as calculated under Basel III approaches (Standardized or Advanced).
(c) The Tier 1 leverage ratio is not a risk-based measure of capital.
(d) The prior period amounts have been revised to conform with the current period presentation.

(in millions, except ratios)	September 30, 2018			December 31, 2017		
	Basel III Advanced Fully Phased-In			Basel III Advanced Transitional		
	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	Chase Bank USA, N.A.	JPMorgan Chase & Co.	JPMorgan Chase Bank, N.A.	Chase Bank USA, N.A.
Total leverage exposure[a]	**$ 3,235,518**	**$ 2,765,905**	**$ 175,153**	$ 3,204,463	$ 2,775,041	$ 182,803
SLR[a]	**6.5%**	**6.8%**	**13.2%**	6.5%	6.6%	11.8%

(a) Effective January 1, 2018, the SLR was fully phased-in under Basel III. The December 31, 2017 amounts were calculated under the Basel III Transitional rules.

Note 20 – 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 are refinanced, extended, cancelled, or expire 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. For a further discussion of lending-related commitments and guarantees, and the Firm's related accounting policies, refer to Note 27 of JPMorgan Chase's 2017 Annual Report.

To provide for probable credit losses inherent in wholesale and certain consumer lending-related commitments, an allowance for credit losses on lending-related commitments is maintained. Refer to Note 12 for further information regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at September 30, 2018, and December 31, 2017. The amounts in the table below for credit card and home equity 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 lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close HELOCs when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity (in millions)	Contractual amount						Carrying value[g]	
	September 30, 2018					Dec 31, 2017	Sep 30, 2018	Dec 31, 2017
	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:								
Home equity	**$ 916**	**$ 1,110**	**$ 1,693**	**$ 16,942**	**$ 20,661**	$ 20,360	**$ 12**	$ 12
Residential mortgage[a]	**6,955**	**–**	**–**	**12**	**6,967**	5,736	**–**	–
Auto	**7,911**	**1,430**	**200**	**89**	**9,630**	9,255	**2**	2
Consumer & Business Banking	**12,127**	**647**	**111**	**487**	**13,372**	13,202	**19**	19
Total consumer, excluding credit card	**27,909**	**3,187**	**2,004**	**17,530**	**50,630**	48,553	**33**	33
Credit card	**600,728**	**–**	**–**	**–**	**600,728**	572,831	**–**	–
Total consumer[b]	**628,637**	**3,187**	**2,004**	**17,530**	**651,358**	621,384	**33**	33
Wholesale:								
Other unfunded commitments to extend credit[c]	**74,427**	**128,149**	**148,414**	**10,995**	**361,985**	331,160	**886**	840
Standby letters of credit and other financial guarantees[c]	**14,561**	**9,810**	**5,038**	**2,339**	**31,748**	35,226	**585**	636
Other letters of credit[c]	**3,344**	**137**	**102**	**–**	**3,583**	3,712	**7**	3
Total wholesale[d]	**92,332**	**138,096**	**153,554**	**13,334**	**397,316**	370,098	**1,478**	1,479
Total lending-related	**$ 720,969**	**$ 141,283**	**$ 155,558**	**$ 30,864**	**$ 1,048,674**	$ 991,482	**$ 1,511**	$ 1,512
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[e]	**$ 202,622**	**$ –**	**$ –**	**$ –**	**$ 202,622**	$ 179,490	**$ –**	$ –
Derivatives qualifying as guarantees	**2,800**	**361**	**12,384**	**40,349**	**55,894**	57,174	**370**	304
Unsettled reverse repurchase and securities borrowing agreements	**119,762**	**–**	**–**	**–**	**119,762**	76,859	**–**	–
Unsettled repurchase and securities lending agreements	**92,115**	**–**	**–**	**–**	**92,115**	44,205	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**89**	111
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**1,066**	1,169	**33**	38
Other guarantees and commitments[f]	**10,091**	**1,443**	**384**	**2,641**	**14,559**	11,867	**(53)**	(76)

(a) Includes certain commitments to purchase loans from correspondents.
(b) Predominantly all consumer lending-related commitments are in the U.S.
(c) At September 30, 2018, and December 31, 2017, reflected the contractual amount net of risk participations totaling $287 million and $334 million respectively, for other unfunded commitments to extend credit; $9.9 billion and $10.4 billion, respectively, for standby letters of credit and other financial guarantees; and $469 million and $405 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(d) At both September 30, 2018, and December 31, 2017, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 76%.
(e) At September 30, 2018, and December 31, 2017, collateral held by the Firm in support of securities lending indemnification agreements was $214.3 billion and $188.7 billion, respectively. Securities lending collateral primarily consists of cash and securities issued by governments that are members of G7 and U.S. government agencies.
(f) At September 30, 2018, and December 31, 2017, primarily includes letters of credit hedged by derivative transactions and managed on a market risk basis, unfunded commitments related to institutional lending and commitments associated with the Firm's membership in certain clearing houses. Additionally, includes unfunded commitments predominantly related to certain tax-oriented equity investments.
(g) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm in part is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure arises under secured clearance advance facilities that the Firm extended to its clients (i.e., cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. As of December 31, 2017 the secured clearance advance facility maximum outstanding commitment amount was $1.5 billion. As of September 30, 2018 the Firm no longer offers such arrangements to its clients.

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 standby letters of credit and other letters of credit arrangements as of September 30, 2018, and December 31, 2017.

Standby letters of credit, other financial guarantees and other letters of credit

	September 30, 2018		December 31, 2017	
(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)]	**$ 25,038**	**$ 2,507**	$ 28,492	$ 2,646
Noninvestment-grade[(a)]	**6,710**	**1,076**	6,734	1,066
Total contractual amount	**$ 31,748**	**$ 3,583**	$ 35,226	$ 3,712
Allowance for lending-related commitments	**$ 171**	**$ 7**	$ 192	$ 3
Guarantee liability	**414**	**–**	444	–
Total carrying value	**$ 585**	**$ 7**	$ 636	$ 3
Commitments with collateral	**$ 16,074**	**$ 559**	$ 17,421	$ 878

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.

Derivatives qualifying as guarantees

The Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. For further information on these derivatives, refer to Note 27 of JPMorgan Chase's 2017 Annual Report.

The following table summarizes the derivatives qualifying as guarantees as of September 30, 2018, and December 31, 2017.

(in millions)	**September 30, 2018**	December 31, 2017
Notional amounts		
Derivative guarantees	**$ 55,894**	$ 57,174
Stable value contracts with contractually limited exposure	**28,574**	29,104
Maximum exposure of stable value contracts with contractually limited exposure	**2,954**	3,053
Fair value		
Derivative payables	**370**	304
Derivative receivables	**–**	–

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. For a further discussion of credit derivatives, refer to Note 4.

Loan sales- and securitization-related indemnifications

In connection with the Firm's mortgage loan sale and securitization activities with GSEs and in certain private label transactions, 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. For additional information, refer to Note 27 of JPMorgan Chase's 2017 Annual Report.

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves. For additional information regarding litigation, refer to Note 22 of this Form 10-Q and Note 29 of JPMorgan Chase's 2017 Annual Report.

Guarantees of subsidiary

The Parent Company has guaranteed certain long-term debt and structured notes of its subsidiaries, including JPMorgan Chase Financial Company LLC ("JPMFC"), a 100%-owned finance subsidiary. All securities issued by JPMFC are fully and unconditionally guaranteed by the Parent Company, and these guarantees rank on a parity with the Firm's unsecured and unsubordinated indebtedness.

Note 21 – Pledged assets and collateral

For a discussion of the Firm's pledged assets and collateral, refer to Note 28 of JPMorgan Chase's 2017 Annual Report.

Pledged assets

The Firm may pledge financial assets that it owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, collateralize repurchase and other securities financing agreements, and cover customer short sales. 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, 2018**	December 31, 2017
Assets that may be sold or repledged or otherwise used by secured parties	**$ 130.7**	$ 135.8
Assets that may not be sold or repledged or otherwise used by secured parties	**76.2**	68.1
Assets pledged at Federal Reserve banks and FHLBs	**488.9**	493.7
Total assets pledged	**$ 695.8**	$ 697.6

Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. Refer to Note 13 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities, refer to Note 10. For additional information on the Firm's long-term debt, refer to Note 19 of JPMorgan Chase's 2017 Annual Report.

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 agreements, securities borrowing agreements, customer margin loans and derivative agreements. Collateral is generally used under repurchase agreements, securities lending agreements or to cover customer short sales and to collateralize deposits and derivative agreements.

The following table presents the fair value of collateral accepted.

(in billions)	**September 30, 2018**	December 31, 2017
Collateral permitted to be sold or repledged, delivered, or otherwise used	**$ 1,114.1**	$ 968.8
Collateral sold, repledged, delivered or otherwise used	**927.5**	771.0

Certain prior period amounts for both collateral and pledged assets (including the corresponding pledged assets parenthetical disclosure for trading assets and other assets on the Consolidated balance sheets) have been revised to conform with the current period presentation.

Note 22 – Litigation

Contingencies

As of September 30, 2018, the Firm and its subsidiaries and affiliates are defendants or putative defendants 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 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 $1.6 billion at September 30, 2018. This estimated aggregate range of reasonably possible losses was based upon currently available information 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.

American Depositary Receipts Pre-Release Inquiry. The Staff of the U.S. Securities and Exchange Commission's Enforcement Division has been investigating depositary banks and broker-dealers, including the Firm, in connection with activity relating to pre-released American Depositary Receipts. The Staff's investigation focuses on the period of 2011 to 2015. The Firm continues to cooperate with this investigation and is currently engaged in settlement discussions. There is no assurance that such discussions will result in a settlement.

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. FX-related investigations and inquiries by government authorities, including competition authorities, are ongoing, and the Firm is cooperating with and working to resolve those matters. 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 Department of Labor has 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. Separately, in February 2017 the South Africa Competition Commission referred its FX investigation of the Firm and other banks to the South Africa Competition Tribunal, which is conducting civil proceedings concerning that matter.

The Firm is also one of a number of foreign exchange dealers named as defendants in a class action filed in the United States District Court for the Southern District of New York by U.S.-based plaintiffs, principally alleging violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action"). In January 2015, the Firm entered into a settlement agreement in the U.S. class action. Following this settlement, a number of additional putative class actions were filed seeking damages for persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (the "consumer action"), participants or beneficiaries of qualified ERISA plans (the "ERISA actions"), and purported indirect purchasers of FX instruments (the "indirect purchaser action"). Since then, the Firm has entered into a revised settlement agreement to resolve the consolidated U.S. class action, including the exchange-based actions. The Court granted final approval of

that settlement agreement in August 2018. Certain members of the settlement class have filed requests to the Court to be excluded from the class. The District Court has dismissed one of the ERISA actions, and the United States Court of Appeals for the Second Circuit affirmed that dismissal in July 2018. The District Court has also dismissed the indirect purchaser action, and the plaintiffs have sought leave to replead their complaint. The consumer action and a second ERISA action remain pending in the District Court.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid based on the filing of a UCC-3 termination statement relating to the Term Loan. In January 2015, following several court proceedings, the United States Court of Appeals for the Second Circuit reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. The proceedings in the Bankruptcy Court continue with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan that was unaffected by the filing of the termination statement at issue. In connection with that additional collateral, a trial in the Bankruptcy Court regarding the value of certain representative assets concluded in May 2017, and a ruling was issued in September 2017. The Bankruptcy Court found that 33 of the 40 representative assets are fixtures and that these fixtures generally should be valued on a "going concern" basis. The Creditors Committee sought leave to appeal the Bankruptcy Court's ruling that the fixtures should be valued on a "going concern" basis rather than on a liquidation basis, and in September 2018, the District Court denied that request. In addition, certain Term Loan lenders filed cross-claims in the Bankruptcy Court against JPMorgan Chase Bank, N.A. seeking indemnification and asserting various claims. The parties have engaged in mediation concerning, among other things, the characterization and value of the remaining additional collateral, in light of the Bankruptcy Court's ruling regarding the representative assets, as well as other issues, including the cross-claims. In September 2018, the Bankruptcy Court approved a schedule for continued proceedings concerning issues that the parties have been unable to resolve through mediation.

Interchange Litigation. A group 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 respective rules in violation of antitrust laws. The parties settled the cases for a cash payment, a temporary reduction of credit card interchange, and modifications to certain credit card network rules. In December 2013, the District Court granted final approval of the settlement.

A number of merchants appealed the settlement to the United States Court of Appeals for the Second Circuit, which, in June 2016, vacated the District Court's certification of the class action and reversed the approval of the class settlement. In March 2017, the U.S. Supreme Court declined petitions seeking review of the decision of the Court of Appeals. The case was remanded to the District Court 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, and the plaintiffs filed a motion seeking preliminary approval of the modified settlement. This settlement provides for the defendants to contribute an additional $900 million to the approximately $5.3 billion currently held in escrow from the original settlement. Upon preliminary approval by the District Court, $600 million of that additional amount will be funded from the litigation escrow account established under the Visa defendants' Retrospective Responsibility Plan, and $300 million will be paid by Mastercard and certain banks in accordance with an agreement among themselves regarding their respective shares. In June 2018, Visa deposited an additional $600 million into its litigation escrow account, which in turn led to a corresponding change in the conversion rate of Visa Class B to Class A shares. Of the Mastercard-related portion, the Firm's share is approximately $36 million. 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 those actions are proceeding.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the U.S. Commodity Futures Trading Commission ("CFTC") and various state attorneys general, as well as the European Commission ("EC"), the Swiss Competition Commission ("ComCo") and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates was submitted to the European Banking Federation ("EBF") in connection with

the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR") during similar time periods, as well as processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods, including through 2012. The Firm continues to cooperate with these investigations to the extent that they are ongoing. The Firm has recently reached a resolution with the CFTC concerning the CFTC's U.S. dollar ISDAFIX-related investigation. As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In December 2016, the Firm resolved ComCo inquiries relating to these same rates. ComCo's investigation relating to EURIBOR, to which the Firm and other banks are subject, continues. In December 2016, the EC 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 filed in various United States District Courts. 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. These matters are in various stages of litigation.

The Firm has agreed to settle putative class actions related to exchange-traded Eurodollar futures contracts, Swiss franc LIBOR, EURIBOR, the Singapore Interbank Offered Rate, the Singapore Swap Offer Rate and the Australian Bank Bill Swap Reference Rate. Those settlements are all subject to further documentation and court approval.

In actions related to U.S. dollar LIBOR, 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 antitrust claims, claims under the Commodity Exchange Act and common law claims to proceed. The plaintiffs whose antitrust claims were dismissed for lack of standing have filed an appeal. In February 2018, as to those actions which the Firm has not agreed to settle, the District Court (i) granted class certification with respect to certain antitrust claims related to bonds and interest rate swaps sold directly by the defendants, (ii) denied class certification with respect to state common law claims brought by the holders of those bonds and swaps and (iii) denied class certification with respect to the putative class action related to LIBOR-based loans held by plaintiff lending institutions.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. In April 2016, the Firm settled this litigation, along with certain other banks. Those settlements have been preliminarily approved by the Court.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3.0 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment was dismissed in August 2018, but appellants have filed a motion for rehearing which remains pending.

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. No date for trial has been set by the court. The Firm has been successful in legal challenges made to the Court of Cassation, France's highest court, with respect to the criminal proceedings. 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 ruled in September 2018 that a *mise en examen* is a prerequisite for an *ordonnance de renvoi* and remanded the case to the Court of Appeal to consider JPMorgan Chase Bank, N.A.'s application for the annulment of the *ordonnance de renvoi* referring JPMorgan Chase Bank, N.A. to the French *tribunal correctionnel*. Any further actions in the criminal proceedings are stayed pending the outcome of that

application. 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, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. The Firm's legal expense/(benefit) was $20 million and $(107) million for the three months ended September 30, 2018 and 2017, respectively, and $90 million and $172 million for the nine months ended September 30, 2018 and 2017. 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 23 – Business segments

The Firm is managed on a line of business 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 management. Results of these lines of business are presented on a managed basis. For a further discussion concerning JPMorgan Chase's business segments, refer to Segment results below, and Note 31 of JPMorgan Chase's 2017 Annual Report.

Segment results

The following table provides a summary of the Firm's segment results as of or for the three and nine months ended September 30, 2018 and 2017, 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. This allows management to assess the comparability of revenue from year-to-year arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Business segment capital allocation

The amount of capital assigned to each business is referred to as equity. On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. For additional information on business segment capital allocation, refer to Line of business equity on pages 88-89 of JPMorgan Chase's 2017 Annual Report.

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

Net income in 2018 for the business segments reflects the favorable impact of the reduction in the U.S. federal statutory income tax rate as a result of the TCJA.

Segment results and reconciliation[(a)]

As of or for the three months ended September 30, (in millions, except ratios)	Consumer & Community Banking		Corporate & Investment Bank		Commercial Banking		Asset & Wealth Management	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017
Noninterest revenue	**$ 4,176**	$ 3,898	**$ 6,505**	$ 6,119	**$ 576**	$ 592	**$ 2,680**	$ 2,617
Net interest income	**9,114**	8,135	**2,300**	2,496	**1,695**	1,554	**879**	855
Total net revenue	**13,290**	12,033	**8,805**	8,615	**2,271**	2,146	**3,559**	3,472
Provision for credit losses	**980**	1,517	**(42)**	(26)	**(15)**	(47)	**23**	8
Noninterest expense	**6,982**	6,495	**5,175**	4,793	**853**	800	**2,585**	2,408
Income before income tax expense	**5,328**	4,021	**3,672**	3,848	**1,433**	1,393	**951**	1,056
Income tax expense	**1,242**	1,468	**1,046**	1,302	**344**	512	**227**	382
Net income	**$ 4,086**	$ 2,553	**$ 2,626**	$ 2,546	**$ 1,089**	$ 881	**$ 724**	$ 674
Average equity	**$ 51,000**	$ 51,000	**$ 70,000**	$ 70,000	**$ 20,000**	$ 20,000	**$ 9,000**	$ 9,000
Total assets	**560,432**	537,459	**928,148**	851,808	**217,194**	220,064	**166,716**	149,170
Return on equity	**31%**	19%	**14%**	13%	**21%**	17%	**31%**	29%
Overhead ratio	**53**	54	**59**	56	**38**	37	**73**	69

As of or for the three months ended September 30, (in millions, except ratios)	Corporate		Reconciling Items[(a)]		Total	
	2018	2017	**2018**	2017	**2018**	2017
Noninterest revenue	**$ (177)**	$ 109	**$ (408)**	$ (555)	**$ 13,352**	$ 12,780
Net interest income	**74**	77	**(154)**	$ (319)	**13,908**	12,798
Total net revenue	**(103)**	186	**(562)**	$ (874)	**27,260**	25,578
Provision for credit losses	**2**	–	**–**	–	**948**	1,452
Noninterest expense	**28**	74	**–**	–	**15,623**	14,570
Income/(loss) before income tax expense/(benefit)	**(133)**	112	**(562)**	(874)	**10,689**	9,556
Income tax expense/(benefit)	**12**	34	**(562)**	(874)	**2,309**	2,824
Net income/(loss)	**$ (145)**	$ 78	**$ –**	**$ –**	**$ 8,380**	$ 6,732
Average equity	**$ 80,439**	$ 81,861	**$ –**	$ –	**$ 230,439**	$ 231,861
Total assets	**742,693**	804,573	**NA**	NA	**2,615,183**	2,563,074
Return on equity	**NM**	NM	**NM**	NM	**14%**	11%
Overhead ratio	**NM**	NM	**NM**	NM	**57**	57

(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.

Segment results and reconciliation[a]

As of or for the nine months ended September 30, (in millions, except ratios)	Consumer & Community Banking		Corporate & Investment Bank		Commercial Banking		Asset & Wealth Management	
	2018	2017	**2018**	2017	**2018**	2017	**2018**	2017
Noninterest revenue	**$ 12,063**	$ 10,899	**$ 21,954**	$ 19,598	**$ 1,758**	$ 1,774	**$ 7,997**	$ 7,677
Net interest income	**26,321**	23,516	**7,257**	7,541	**4,995**	4,478	**2,640**	2,520
Total net revenue	**38,384**	34,415	**29,211**	27,139	**6,753**	6,252	**10,637**	10,197
Provision for credit losses	**3,405**	4,341	**(142)**	(175)	**23**	(214)	**40**	30
Noninterest expense	**20,770**	19,390	**16,237**	14,854	**2,541**	2,415	**7,732**	7,606
Income before income tax expense	**14,209**	10,684	**13,116**	12,460	**4,189**	4,051	**2,865**	2,561
Income tax expense	**3,385**	3,920	**3,318**	3,963	**988**	1,469	**616**	878
Net income	**$ 10,824**	$ 6,764	**$ 9,798**	$ 8,497	**$ 3,201**	$ 2,582	**$ 2,249**	$ 1,683
Average equity	**$ 51,000**	$ 51,000	**$ 70,000**	$ 70,000	**$ 20,000**	$ 20,000	**$ 9,000**	$ 9,000
Total assets	**560,432**	537,459	**928,148**	851,808	**217,194**	220,064	**166,716**	149,170
Return on equity	**27%**	17%	**18%**	15%	**20%**	16%	**32%**	24%
Overhead ratio	**54**	56	**56**	55	**38**	39	**73**	75

As of or for the nine months ended September 30, (in millions, except ratios)	Corporate		Reconciling Items[a]		Total	
	2018	2017	**2018**	2017	**2018**	2017
Noninterest revenue	**$ (220)**	$ 963	**$ (1,337)**	$ (1,733)	**$ 42,215**	$ 39,178
Net interest income	**(35)**	2	**(473)**	$ (987)	**40,705**	37,070
Total net revenue	**(255)**	965	**(1,810)**	$ (2,720)	**82,920**	76,248
Provision for credit losses	**(3)**	–	**–**	–	**3,323**	3,982
Noninterest expense	**394**	355	**–**	–	**47,674**	44,620
Income/(loss) before income tax expense/(benefit)	**(646)**	610	**(1,810)**	(2,720)	**31,923**	27,646
Income tax expense/(benefit)	**18**	(73)	**(1,810)**	(2,720)	**6,515**	7,437
Net income/(loss)	**$ (664)**	$ 683	**$ –**	**$ –**	**$ 25,408**	$ 20,209
Average equity	**$ 78,995**	$ 79,937	**$ –**	$ –	**$ 228,995**	$ 229,937
Total assets	**742,693**	804,573	**NA**	NA	**2,615,183**	2,563,074
Return on equity	**NM**	NM	**NM**	NM	**14%**	11%
Overhead ratio	**NM**	NM	**NM**	NM	**57**	59

(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.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

Results of Review of Financial Statements

We have reviewed the accompanying consolidated balance sheet of JPMorgan Chase & Co. and its subsidiaries (the "Firm") as of September 30, 2018, and the related consolidated statements of income and comprehensive income for the three-month and nine-month periods ended September 30, 2018 and 2017 and the consolidated statements of changes in stockholders' equity and of cash flows for the nine-month periods ended September 30, 2018 and 2017, 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, 2017, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and of cash flows for the year then ended (not presented herein), and in our report dated February 27, 2018, 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, 2017, 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

October 31, 2018

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, 2018			Three months ended September 30, 2017		
	Average balance	Interest[f]	Rate (annualized)	Average balance	Interest[f]	Rate (annualized)
Assets						
Deposits with banks	**$ 408,595**	**$ 1,585**	**1.54%**	$ 456,673	$ 1,259	1.09%
Federal funds sold and securities purchased under resale agreements	**208,439**	**952**	**1.81**	188,594	622	1.31
Securities borrowed	**117,057**	**200**	**0.68**	95,597	–	–
Trading assets – debt instruments	**258,027**	**2,170**	**3.34**	240,876	1,974	3.25
Taxable securities	**187,942**	**1,402**	**2.96**	216,011	1,362	2.50
Nontaxable securities[a]	**42,045**	**490**	**4.62**	45,106	676	5.95
Total investment securities	**229,987**	**1,892**	**3.26** [g]	261,117	2,038	3.10 [g]
Loans	**951,724**	**12,250**	**5.11**	909,580	10,591	4.62
All other interest-earning assets[b]	**46,429**	**945**	**8.07**	41,737	522	4.96
Total interest-earning assets	**2,220,258**	**19,994**	**3.57**	2,194,174	17,006	3.07
Allowance for loan losses	**(13,207)**			(13,290)		
Cash and due from banks	**21,101**			20,289		
Trading assets – equity instruments	**102,962**			119,463		
Trading assets – derivative receivables	**62,075**			59,839		
Goodwill, MSRs and other intangible assets	**54,652**			53,788		
Other assets	**151,780**			134,968		
Total assets	**$ 2,599,621**			$ 2,569,231		
Liabilities						
Interest-bearing deposits	**$ 1,057,262**	**$ 1,621**	**0.61%**	$ 1,029,534	$ 837	0.32%
Federal funds purchased and securities loaned or sold under repurchase agreements	**184,377**	**827**	**1.78**	181,851	451	0.98
Short-term borrowings[c]	**61,042**	**288**	**1.87**	52,958	149	1.12
Trading liabilities – debt and other interest-bearing liabilities[d][e]	**177,091**	**1,018**	**2.28**	168,738	570	1.34
Beneficial interests issued by consolidated VIEs	**19,921**	**122**	**2.41**	29,832	123	1.62
Long-term debt	**275,979**	**2,056**	**2.96**	294,626	1,759	2.37
Total interest-bearing liabilities	**1,775,672**	**5,932**	**1.33**	1,757,539	3,889	0.88
Noninterest-bearing deposits	**395,600**			401,489		
Trading liabilities – equity instruments[e]	**36,309**			20,905		
Trading liabilities – derivative payables	**44,810**			44,627		
All other liabilities, including the allowance for lending-related commitments	**90,539**			86,742		
Total liabilities	**2,342,930**			2,311,302		
Stockholders' equity						
Preferred stock	**26,252**			26,068		
Common stockholders' equity	**230,439**			231,861		
Total stockholders' equity	**256,691**			257,929		
Total liabilities and stockholders' equity	**$ 2,599,621**			$ 2,569,231		
Interest rate spread			**2.24%**			2.19%
Net interest income and net yield on interest-earning assets		**$ 14,062**	**2.51**		$ 13,117	2.37

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

(a) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(b) Includes held-for-investment margin loans, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated balance sheets.
(c) Includes commercial paper.
(d) Other interest-bearing liabilities include brokerage customer payables.
(e) The combined balance of trading liabilities – debt and equity instruments were $106.4 billion and $89.4 billion for the three months ended September 30, 2018 and 2017, respectively.
(f) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(g) For the three months ended September 30, 2018 and 2017, the annualized rates for securities, based on amortized cost, were 3.29% and 3.14%, respectively; this 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, 2018			Nine months ended September 30, 2017		
	Average balance	Interest[f]	Rate (annualized)	Average balance	Interest[f]	Rate (annualized)
Assets						
Deposits with banks	**$ 419,392**	**$ 4,449**	**1.42%**	$ 439,974	$ 3,002	0.91%
Federal funds sold and securities purchased under resale agreements	**203,969**	**2,490**	**1.63**	192,922	1,676	1.16
Securities borrowed	**113,112**	**410**	**0.49**	93,708	(65) [h]	(0.09)
Trading assets – debt instruments	**256,872**	**6,415**	**3.34**	233,884	5,691	3.25
Taxable securities	**190,970**	**4,098**	**2.87**	228,580	4,202	2.46
Nontaxable securities[a]	**42,911**	**1,494**	**4.65**	45,123	2,086	6.18
Total investment securities	**233,881**	**5,592**	**3.20** [g]	273,703	6,288	3.07 [g]
Loans	**939,408**	**35,047**	**4.99**	902,216	30,479	4.52
All other interest-earning assets[b]	**48,743**	**2,474**	**6.79**	41,113	1,295	4.21
Total interest-earning assets	**2,215,377**	**56,877**	**3.43**	2,177,520	48,366	2.97
Allowance for loan losses	**(13,303)**			(13,453)		
Cash and due from banks	**21,771**			20,003		
Trading assets – equity instruments	**107,580**			120,307		
Trading assets – derivative receivables	**61,188**			59,824		
Goodwill, MSRs and other intangible assets	**54,656**			53,978		
Other assets	**152,325**			135,830		
Total assets	**$ 2,599,594**			$ 2,554,009		
Liabilities						
Interest-bearing deposits	**$ 1,054,419**	**$ 4,021**	**0.51%**	$ 1,007,345	$ 1,949	0.26%
Federal funds purchased and securities loaned or sold under repurchase agreements	**190,832**	**2,164**	**1.52**	189,236	1,131	0.80
Short-term borrowings[c]	**60,341**	**757**	**1.68**	44,273	318	0.96
Trading liabilities – debt and other interest-bearing liabilities[d][e]	**176,507**	**2,579**	**1.95**	172,949	1,490	1.15
Beneficial interests issued by consolidated VIEs	**21,449**	**366**	**2.28**	34,197	386	1.51
Long-term debt	**276,865**	**5,812**	**2.81**	294,248	5,035	2.29
Total interest-bearing liabilities	**1,780,413**	**15,699**	**1.18**	1,742,248	10,309	0.79
Noninterest-bearing deposits	**398,728**			403,704		
Trading liabilities – equity instruments[e]	**33,206**			20,441		
Trading liabilities – derivative payables	**42,919**			45,900		
All other liabilities, including the allowance for lending-related commitments	**89,203**			85,711		
Total liabilities	**2,344,469**			2,298,004		
Stockholders' equity						
Preferred stock	**26,130**			26,068		
Common stockholders' equity	**228,995**			229,937		
Total stockholders' equity	**255,125**			256,005		
Total liabilities and stockholders' equity	**$ 2,599,594**			$ 2,554,009		
Interest rate spread			**2.25%**			2.18%
Net interest income and net yield on interest-earning assets		**$ 41,178**	**2.49**		$ 38,057	2.34

Effective January 1, 2018, the Firm adopted several new accounting standards. Certain of the new accounting standards were applied retrospectively and, accordingly, prior period amounts were revised. For additional information, refer to Note 1.

(a) Represents securities which are tax-exempt for U.S. federal income tax purposes.
(b) Includes held-for-investment margin loans, which are classified in accrued interest and accounts receivable, and all other interest-earning assets, which are classified in other assets on the Consolidated balance sheets.
(c) Includes commercial paper.
(d) Other interest-bearing liabilities include brokerage customer payables.
(e) The combined balance of trading liabilities – debt and equity instruments were $105.1 billion and $91.3 billion for the nine months ended September 30, 2018 and 2017, respectively.
(f) Interest includes the effect of certain related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(g) For the nine months ended September 30, 2018 and 2017, the annualized rates for securities, based on amortized cost, were 3.23% and 3.11%, respectively; this does not give effect to changes in fair value that are reflected in AOCI.
(h) Negative interest income and yield is related to client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense and reported within trading liabilities – debt and other interest-bearing liabilities

2017 Annual Report or 2017 Form 10-K: Annual report on Form 10-K for year ended December 31, 2017, 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 loans: represents period-end allowance for loan losses divided by retained loans.

AOCI: Accumulated other comprehensive income/(loss)

ARM(s): Adjustable rate mortgage(s)

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

CB: Commercial Banking

CBB: Consumer & Business Banking

CCAR: Comprehensive Capital Analysis and Review

CCB: Consumer & Community Banking

CCP: "Central counterparty" is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

CDS: Credit default swaps

CEO: Chief Executive Officer

CET1 Capital: Common equity Tier 1 Capital

CFTC: Commodity Futures Trading Commission

CFO: Chief Financial Officer

Chase Bank USA, N.A.: Chase Bank USA, National Association

CIB: Corporate & Investment Bank

CIO: Chief Investment Office

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.

CLO: Collateralized loan obligations

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 solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.

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.

Core loans: represents loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit.

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

DFAST: Dodd-Frank Act Stress Test

Dodd-Frank Act: Wall Street Reform and Consumer Protection Act

DOJ: U.S. Department of Justice

DOL: U.S. Department of Labor

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.

Fannie Mae: Federal National Mortgage Association

FASB: Financial Accounting Standards Board

FCA: Financial Conduct Authority

FCC: Firmwide Control Committee

FDIA: Federal Depository Insurance Act

FDIC: Federal Deposit Insurance Corporation

Federal Reserve: The Board of the Governors of the Federal Reserve System

Fee share: Proportion of fee revenue based on estimates of investment banking fees generated across the industry from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FFELP: Federal Family Education Loan Program

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.

Forward points: represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Freddie Mac: Federal Home Loan Mortgage Corporation

Free-standing derivatives: is a derivative contract entered into either separate and apart from any of the Firm's other financial instruments or equity transactions. Or, in conjunction with some other transaction and is legally detachable and separately exercisable.

FSB: Financial Stability Board

FTE: Fully taxable-equivalent

FVA: Funding valuation adjustment

FX: Foreign exchange

G7: "Group of Seven nations": Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government securities: Securities issued by the government of one of the G7 nations.

Ginnie Mae: Government National Mortgage Association

GSE: Fannie Mae and Freddie Mac

GSIB: Global systemically important banks

HAMP: Home affordable modification program

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

HELOAN: Home equity loan

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

IDI: Insured depository institutions

IHC: JPMorgan Chase Holdings LLC, an intermediate holding company

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

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

Loss emergence period: represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss.

LTIP: Long-term incentive plan

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.

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.

MBS: Mortgage-backed securities

MD&A: Management's discussion and analysis

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.

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.
- **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

NOL: Net operating loss

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected, regardless of delinquency status, or when principal and interest 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)

OEP: One Equity Partners

OIS: Overnight index swap

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.

PCA: Prompt corrective action

PCI: "Purchased credit-impaired" loans represents certain loans that were acquired and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the FASB. The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

PD: Probability of default

PRA: Prudential Regulatory 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

Receivables from customers: primarily represents margin loans to brokerage customers that are collateralized through assets maintained in the clients' brokerage accounts, as such no allowance is held against these receivables. These receivables are reported within accrued interest and accounts receivable on the Firm's Consolidated balance sheets.

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

RSU(s): Restricted stock units

RWA: "Risk-weighted assets": Basel III establishes two comprehensive approaches for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced.

S&P: Standard and Poor's 500 Index

SAR(s): Stock appreciation rights

SCCL: Single-counterparty credit limits

Scored portfolio: The scored portfolio predominantly includes residential real estate loans, credit card loans and certain auto and business banking loans where credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring and decision-support tools.

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.

Single-name: Single reference-entities

SLR: Supplementary leverage ratio

SMBS: Stripped mortgage-backed securities

SPEs: Special purpose entities

Structural interest rate risk: represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are financial instruments whose cash flows are linked to the movement in one or more indexes, interest rates, foreign exchange rates, commodities prices, prepayment rates, 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.

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. GAAP: Accounting principles generally accepted in the United States of America.

U.S. GSE(s): "U.S. government-sponsored enterprises": In the U.S., GSEs are quasi-governmental, privately-held entities established by 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, which is directly owned by the U.S. Department of Housing and Urban Development. 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 trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

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 production revenue: includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue: includes the following components**:**

a) Operating revenue predominantly represents the return on Home Lending Servicing's MSR asset and includes:
   - Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
   - The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

b) Risk management represents the components of Home Lending Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

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.

Card Services: includes the Card and Merchant Services businesses.

Card: is a business that primarily issues credit cards to consumers and small businesses.

Merchant Services: is a business that primarily processes transactions for merchants.

Net revenue rate: represents Card Services net revenue (annualized) expressed as a percentage of average loans for the period.

Auto loan and lease origination volume: Dollar amount of auto loans and leases originated.

CORPORATE & INVESTMENT BANK ("CIB")

Definition of selected CIB revenue:

Investment Banking: incorporates all revenue associated with investment banking activities, and is reported net of investment banking revenue shared with other lines of business.

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, ACH, lockbox, disbursement and reconciliation services, check deposits, and currency-related services.

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. Lending also includes 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.

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 clearance, collateral management and depositary receipts business which provides broker-dealer clearing and custody services, including tri-party repo transactions, 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")

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking: covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking: covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending: primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking: provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other: primarily includes lending and investment-related activities within the Community Development Banking business.

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.

Treasury services: 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.

For a discussion of the quantitative and qualitative disclosures about market risk, refer to the Market Risk Management section of Management's discussion and analysis and pages 121-128 of JPMorgan Chase's 2017 Annual Report.

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 Certification statements issued by the Chairman and Chief Executive Officer and Chief Financial Officer.

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 do 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 controls in the future. For further information, refer to "Management's report on internal control over financial reporting" on page 146 of JPMorgan Chase's 2017 Annual Report. 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, 2018, 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.

For information that updates the disclosures set forth under Part I, Item 3: Legal Proceedings, in JPMorgan Chase's 2017 Annual Report on Form 10-K, refer to the discussion of the Firm's material legal proceedings in Note 22 of this Form 10-Q.

Item 1A. Risk Factors.

For a discussion of certain risk factors affecting the Firm, refer to Part I, Item 1A: Risk Factors on pages 8–26 of JPMorgan Chase's 2017 Annual Report on Form 10-K and Forward-Looking Statements on page 85 of this Form 10-Q.

Supervision and regulation

For information on Supervision and Regulation, refer to Recent regulatory developments on page 44 of this Form 10-Q and the Supervision and regulation section on pages 1–8 of JPMorgan Chase's 2017 Form 10-K.

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, 2018.

Repurchases under the common equity repurchase program

For information regarding repurchases under the Firm's common equity repurchase program, refer to Capital Risk Management on pages 44-48 of this Form 10-Q and pages 82-91 of JPMorgan Chase's 2017 10-K.

Shares repurchased pursuant to the common equity repurchase program during the nine months ended September 30, 2018, were as follows.

Nine months ended September 30, 2018	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	41,419,035	$ 112.78	$ 4,671	$ 5,156	[b]
Second quarter	45,299,370	109.67	4,968	188	[c]
July	15,450,734	107.83	1,666	19,059	
August	12,302,781	115.67	1,423	17,636	
September	11,528,761	115.07	1,327	16,309	
Third quarter	39,282,276	112.41	4,416	16,309	
Year-to-date	126,000,681	$ 111.55	$ 14,055	$ 16,309	

(a) Excludes commissions cost.
(b) Represents the amount remaining under the $19.4 billion repurchase program that was authorized by the Board of Directors on June 28, 2017.
(c) The $188 million unused portion under the prior Board authorization was canceled when the $20.7 billion program was authorized.

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]

(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, 2018, 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, 2018 and 2017, (ii) the Consolidated statements of comprehensive income (unaudited) for the three and nine months ended September 30, 2018 and 2017, (iii) the Consolidated balance sheets (unaudited) as of September 30, 2018, and December 31, 2017, (iv) the Consolidated statements of changes in stockholders' equity (unaudited) for the nine months ended September 30, 2018 and 2017, (v) the Consolidated statements of cash flows (unaudited) for the nine months ended September 30, 2018 and 2017, 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 Corporate Controller
(Principal Accounting Officer)

Date: October 31, 2018

INDEX TO EXHIBITS

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101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

† 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

October 31, 2018

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Re: JPMorgan Chase & Co.
Registration Statements on Form S-3
(No. 333-222672)
(No. 333-222672-01)
(No. 333-209681)

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. 333-145108)
(No. 333-142109)
(No. 333-125827)
(No. 333-112967)

Commissioners:

We are aware that our report dated October 31, 2018 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,

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: October 31, 2018

/s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Exhibit 31.2
JPMorgan Chase & Co.

CERTIFICATION

I, Marianne Lake, 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: October 31, 2018

/s/ Marianne Lake

Marianne Lake
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, 2018 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: October 31, 2018

By: /s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Date: October 31, 2018

By: /s/ Marianne Lake

Marianne Lake
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.