
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 Sept. 30, 2018

or

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission File No. 001-35651

THE BANK OF NEW YORK MELLON CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

13-2614959

(I.R.S. Employer Identification No.)

240 Greenwich Street

New York, New York 10286

(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code -- (212) 495-1784

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
Non-accelerated filer

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

<u>Class</u>	<u>Outstanding as of</u> <u>Sept. 30, 2018</u>
Common Stock, \$0.01 par value	<u>988,777,495</u>

THE BANK OF NEW YORK MELLON CORPORATION

**Third Quarter 2018 Form 10-Q
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The Bank of New York Mellon Corporation (and its subsidiaries)

Consolidated Financial Highlights (unaudited)

<i>(dollars in millions, except per share amounts and unless otherwise noted)</i>	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
Results applicable to common shareholders of The Bank of New York Mellon Corporation:					
Net income	\$ 1,075	\$ 1,055	\$ 983	\$ 3,265	\$ 2,789
Basic earnings per share	\$ 1.07	\$ 1.04	\$ 0.94	\$ 3.21	\$ 2.66
Diluted earnings per share	\$ 1.06	\$ 1.03	\$ 0.94	\$ 3.20	\$ 2.64
Fee and other revenue	\$ 3,168	\$ 3,210	\$ 3,167	\$ 9,648	\$ 9,305
Income from consolidated investment management funds	10	12	10	11	53
Net interest revenue	891	916	839	2,726	2,457
Total revenue	\$ 4,069	\$ 4,138	\$ 4,016	\$ 12,385	\$ 11,815
Return on common equity <i>(annualized)</i>	11.2%	11.2%	10.6%	11.6%	10.4%
Return on tangible common equity <i>(annualized)</i> – Non-GAAP <i>(a)</i>	23.1%	23.5%	21.9%	24.1%	22.0%
Return on average assets <i>(annualized)</i>	1.28%	1.22%	1.13%	1.26%	1.09%
Fee revenue as a percentage of total revenue	78%	78%	78%	78%	79%
Percentage of non-U.S. total revenue	37%	37%	36%	37%	35%
Pre-tax operating margin	33%	34%	34%	34%	33%
Net interest margin	1.27%	1.26%	1.15%	1.25%	1.14%
Net interest margin on a fully taxable equivalent (“FTE”) basis – Non-GAAP <i>(b)</i>	1.28%	1.26%	1.16%	1.26%	1.16%
Assets under custody and/or administration (“AUC/A”) at period end <i>(in trillions)</i> <i>(c)</i>	\$ 34.5	\$ 33.6	\$ 32.2	\$ 34.5	\$ 32.2
Assets under management (“AUM”) at period end <i>(in billions)</i> <i>(d)</i>	\$ 1,828	\$ 1,805	\$ 1,824	\$ 1,828	\$ 1,824
Market value of securities on loan at period end <i>(in billions)</i> <i>(e)</i>	\$ 415	\$ 432	\$ 382	\$ 415	\$ 382
Average common shares and equivalents outstanding <i>(in thousands)</i>:					
Basic	999,808	1,010,179	1,035,337	1,008,967	1,037,431
Diluted	1,003,665	1,014,357	1,041,138	1,013,242	1,043,585
Selected average balances:					
Interest-earning assets	\$ 279,218	\$ 292,086	\$ 291,841	\$ 291,040	\$ 288,283
Assets of operations	\$ 331,867	\$ 345,840	\$ 344,966	\$ 344,970	\$ 340,588
Total assets	\$ 332,341	\$ 346,328	\$ 345,709	\$ 345,520	\$ 341,510
Interest-bearing deposits	\$ 148,636	\$ 152,799	\$ 142,490	\$ 152,354	\$ 141,558
Long-term debt	\$ 28,074	\$ 28,349	\$ 28,138	\$ 28,275	\$ 27,148
Noninterest-bearing deposits	\$ 60,677	\$ 64,768	\$ 70,168	\$ 65,446	\$ 72,524
Preferred stock	\$ 3,542	\$ 3,542	\$ 3,542	\$ 3,542	\$ 3,542
Total The Bank of New York Mellon Corporation common shareholders’ equity	\$ 38,036	\$ 37,750	\$ 36,780	\$ 37,795	\$ 35,876
Other information at period end:					
Cash dividends per common share	\$ 0.28	\$ 0.24	\$ 0.24	\$ 0.76	\$ 0.62
Common dividend payout ratio	26%	23%	26%	24%	23%
Common dividend yield <i>(annualized)</i>	2.2%	1.8%	1.8%	2.0%	1.6%
Closing stock price per common share	\$ 50.99	\$ 53.93	\$ 53.02	\$ 50.99	\$ 53.02
Market capitalization	\$ 50,418	\$ 53,927	\$ 54,294	\$ 50,418	\$ 54,294
Book value per common share	\$ 38.45	\$ 37.97	\$ 36.11	\$ 38.45	\$ 36.11
Tangible book value per common share – Non-GAAP <i>(a)</i>	\$ 19.35	\$ 19.00	\$ 18.19	\$ 19.35	\$ 18.19
Full-time employees	52,000	52,000	52,900	52,000	52,900
Common shares outstanding <i>(in thousands)</i>	988,777	999,945	1,024,022	988,777	1,024,022

Consolidated Financial Highlights (unaudited) (continued)

Regulatory capital and other ratios	Sept. 30, 2018	June 30, 2018	Dec. 31, 2017
Average liquidity coverage ratio (“LCR”)	121%	118%	118%
Regulatory capital ratios: (f)			
Advanced:			
Common Equity Tier 1 (“CET1”) ratio	11.2%	11.0%	10.3%
Tier 1 capital ratio	13.3	13.1	12.3
Total (Tier 1 plus Tier 2) capital ratio	14.1	13.8	13.0
Standardized:			
CET1 ratio	12.4%	11.9%	11.5%
Tier 1 capital ratio	14.7	14.1	13.7
Total (Tier 1 plus Tier 2) capital ratio	15.7	15.1	14.7
Tier 1 leverage ratio (f)	7.0%	6.7%	6.4%
Supplementary leverage ratio (“SLR”) (f)	6.4	6.1	5.9
BNY Mellon shareholders’ equity to total assets ratio	11.9%	11.8%	11.1%
BNY Mellon common shareholders’ equity to total assets ratio	10.9	10.8	10.1

- (a) Return on tangible common equity and tangible book value per common share, Non-GAAP measures, exclude goodwill and intangible assets, net of deferred tax liabilities. See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 41 for the reconciliation of Non-GAAP measures.
- (b) See “Average balances and interest rates” on page 9 for a reconciliation of this Non-GAAP measure.
- (c) Includes the AUC/A of CIBC Mellon Global Securities Services Company (“CIBC Mellon”), a joint venture with the Canadian Imperial Bank of Commerce, of \$1.4 trillion at Sept. 30, 2018 and June 30, 2018 and \$1.3 trillion at Sept. 30, 2017.
- (d) Excludes securities lending cash management assets and assets managed in the Investment Services business.
- (e) Represents the total amount of securities on loan in our agency securities lending program managed by the Investment Services business. Excludes securities for which BNY Mellon acts as an agent on behalf of CIBC Mellon clients, which totaled \$69 billion at Sept. 30, 2018, \$70 billion at June 30, 2018 and \$68 billion at Sept. 30, 2017.
- (f) For our CET1, Tier 1 capital and Total capital ratios, our effective capital ratios under U.S. capital rules are the lower of the ratios as calculated under the Standardized and Advanced Approaches. The risk-based regulatory capital ratios, Tier 1 leverage ratio and SLR are presented on a fully phased-in basis for Dec. 31, 2017. Beginning Jan. 1, 2018, regulatory ratios are fully phased-in. For additional information on our capital ratios, see “Capital” beginning on page 32.

Items 2. and 3. Management’s Discussion and Analysis of Financial Condition and Results of Operations; Quantitative and Qualitative Disclosures about Market Risk

General

In this Quarterly Report on Form 10-Q, references to “our,” “we,” “us,” “BNY Mellon,” the “Company” and similar terms refer to The Bank of New York Mellon Corporation and its consolidated subsidiaries. The term “Parent” refers to The Bank of New York Mellon Corporation but not its subsidiaries.

Certain business terms used in this report are defined in the Glossary included in our Annual Report on Form 10-K for the year ended Dec. 31, 2017 (“2017 Annual Report”).

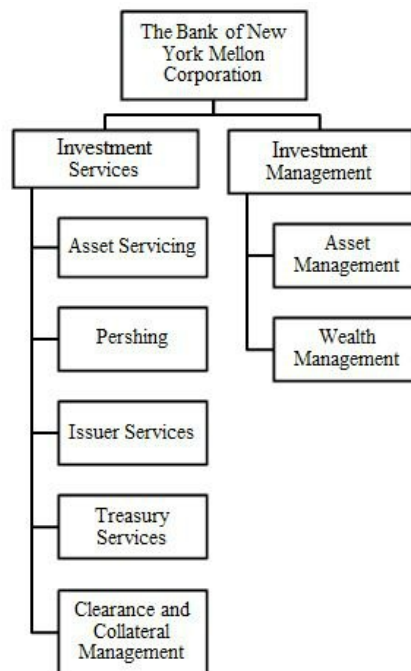
The following should be read in conjunction with the Consolidated Financial Statements included in this report. Investors should also read the section titled “Forward-looking Statements.”

Overview

Established in 1784 by Alexander Hamilton, we were the first company listed on the New York Stock Exchange (NYSE: BK). With a more than 230-year history, BNY Mellon is a global company that manages and services assets for financial institutions, corporations and individual investors in 35 countries.

BNY Mellon has two business segments, Investment Services and Investment Management, which offer a comprehensive set of capabilities and deep expertise across the investment lifecycle, enabling the company to provide solutions to buy-side and sell-side market participants, as well as leading institutional and wealth management clients globally.

The diagram below presents our two business segments and lines of business, with the remaining operations in the Other segment.



Highlights of third quarter 2018 results

We reported net income applicable to common shareholders of \$1.08 billion, or \$1.06 per diluted common share, in the third quarter of 2018. Net income applicable to common shareholders was \$983 million, or \$0.94 per diluted common share, in the third quarter of 2017. The highlights below are based on the third quarter of 2018 compared with the third quarter of 2017, unless otherwise noted.

- Total revenue of \$4.1 billion increased 1% primarily reflecting:
 - Fee revenue increased 1% primarily reflecting higher equity market values, growth in collateral management and clearance volumes and higher performance fees, partially offset by lower foreign currency hedging. (See “Fee and other revenue” beginning on page 6.)
 - Net interest revenue increased 6% primarily driven by higher rates, partially offset by lower deposits and other borrowings. (See “Net interest revenue” on page 8.)
- Noninterest expense of \$2.7 billion increased 3% primarily reflecting investments in technology and higher litigation expense, partially offset by

lower staff and distribution and servicing expenses. Litigation increased noninterest expense by 2%. (See “Noninterest expense” on page 11.)

- Effective tax rate of 16.5%. The impact of adjusting provisional estimates for U.S. tax legislation and other changes decreased the effective rate by approximately 4.5%. (See “Income taxes” on page 11.)

Capital and liquidity

- CET1 ratio under the Advanced Approach was 11.2% at Sept. 30, 2018 and 11.0% at June 30, 2018. The increase primarily reflects lower risk-weighted assets and capital generated through earnings, partially offset by capital deployed through common stock repurchases and dividend payments. (See “Capital” beginning on page 32.)
- Repurchased 12 million common shares for \$602 million and paid \$283 million in dividends to common shareholders.

Highlights of our principal businesses

Investment Services

- Total revenue increased 3%.
- Income before taxes decreased 6%, driven by litigation expense.
- AUC/A of \$34.5 trillion, up 7%, primarily reflecting net new business and higher equity market values, partially offset by the unfavorable impact of a stronger U.S. dollar.

Investment Management

- Total revenue increased 2%.
- Income before taxes increased 5%.
- AUM of \$1.8 trillion increased slightly, primarily reflecting higher market values, partially offset by the divestiture of CenterSquare Investment Management (“CenterSquare”) and other changes and the unfavorable impact of a stronger U.S. dollar (principally versus the British pound).

See “Review of businesses” and Note 19 of the Notes to Consolidated Financial Statements for additional information on our businesses.

Fee and other revenue

Fee and other revenue <i>(dollars in millions, unless otherwise noted)</i>	3Q18	2Q18	3Q17	3Q18 vs.		YTD18	YTD17	YTD18
				2Q18	3Q17			vs. YTD17
Investment services fees:								
Asset servicing (a)	\$ 1,157	\$ 1,157	\$ 1,105	— %	5%	\$ 3,482	\$ 3,253	7%
Clearing services	383	392	383	(2)	—	1,189	1,153	3
Issuer services	287	266	288	8	—	813	780	4
Treasury services	137	140	141	(2)	(3)	415	420	(1)
Total investment services fees	1,964	1,955	1,917	—	2	5,899	5,606	5
Investment management and performance fees	922	910	901	1	2	2,792	2,622	6
Foreign exchange and other trading revenue	155	187	173	(17)	(10)	551	502	10
Financing-related fees	52	53	54	(2)	(4)	157	162	(3)
Distribution and servicing	34	34	40	—	(15)	104	122	(15)
Investment and other income	41	70	63	N/M	N/M	193	262	N/M
Total fee revenue	3,168	3,209	3,148	(1)	1	9,696	9,276	5
Net securities gains (losses)	—	1	19	N/M	N/M	(48)	29	N/M
Total fee and other revenue	\$ 3,168	\$ 3,210	\$ 3,167	(1)%	—%	\$ 9,648	\$ 9,305	4%
Fee revenue as a percentage of total revenue	78%	78%	78%			78%	79%	
AUM at period end (in billions) (b)	\$ 1,828	\$ 1,805	\$ 1,824	1 %	—%	\$ 1,828	\$ 1,824	—%
AUC/A at period end (in trillions) (c)	\$ 34.5	\$ 33.6	\$ 32.2	3 %	7%	\$ 34.5	\$ 32.2	7%

(a) Asset servicing fees include securities lending revenue of \$58 million in the third quarter of 2018, \$60 million in the second quarter of 2018, \$47 million in the third quarter of 2017, \$173 million in the first nine months of 2018 and \$144 million in the first nine months of 2017.

(b) Excludes securities lending cash management assets and assets managed in the Investment Services business.

(c) Includes the AUC/A of CIBC Mellon of \$1.4 trillion at Sept. 30, 2018 and June 30, 2018 and \$1.3 trillion at Sept. 30, 2017.

N/M - Not meaningful.

Fee and other revenue increased slightly compared with the third quarter of 2017 and decreased 1% (unannualized) compared with the second quarter of 2018. The decrease compared with the second quarter of 2018 primarily reflects lower foreign exchange and other trading revenue and investment and other income, partially offset by seasonally higher Depository Receipts revenue.

Investment services fees

Investment services fees were impacted by the following compared with the third quarter of 2017 and the second quarter of 2018:

- Asset servicing fees increased 5% compared with the third quarter of 2017 and were unchanged compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects growth in collateral management and higher equity market values and securities lending volumes.
- Clearing services fees were unchanged compared with the third quarter of 2017 and decreased 2%

(unannualized) compared with the second quarter of 2018. Year-over-year, higher equity market values and long-term mutual funds balances were offset by the previously disclosed lost business. The decrease compared with the second quarter of 2018 primarily reflects lower clearance revenue.

- Issuer services fees decreased slightly compared with the third quarter of 2017 and increased 8% (unannualized) compared with the second quarter of 2018. The increase compared with the second quarter of 2018 primarily reflects seasonally higher Depository Receipts revenue.
- Treasury services fees decreased 3% compared with the third quarter of 2017 and 2% (unannualized) compared with the second quarter of 2018. The decrease compared with the third quarter of 2017 primarily reflects higher compensating balance credits provided to clients, which reduce fee revenue and increase net interest revenue. The decrease compared with the second quarter of 2018 primarily reflects lower payments revenue.

See the “Investment Services business” in “Review of businesses” for additional details.

Investment management and performance fees

Investment management and performance fees increased 2% compared with the third quarter of 2017 and 1% (unannualized) compared with the second quarter of 2018. On a constant currency basis (Non-GAAP), investment management and performance fees increased 3% compared with the third quarter of 2017. Performance fees were \$30 million in the third quarter of 2018, \$15 million in the third quarter of 2017 and \$12 million in the second quarter of 2018.

AUM was \$1.8 trillion, up slightly compared with Sept. 30, 2017 and 1% compared with June 30, 2018. See the “Investment Management business” in “Review of businesses” for additional details regarding the drivers of investment management and performance fees, AUM and AUM flows.

Foreign exchange and other trading revenue

Foreign exchange and other trading revenue					
<i>(in millions)</i>	3Q18	2Q18	3Q17	YTD18	YTD17
Foreign exchange	\$ 150	\$ 171	\$ 158	\$ 504	\$ 463
Other trading revenue	5	16	15	47	39
Total foreign exchange and other trading revenue	\$ 155	\$ 187	\$ 173	\$ 551	\$ 502

Foreign exchange revenue is primarily driven by the volume of client transactions and the spread realized on these transactions, both of which are impacted by market volatility, and the impact of foreign currency hedging activities. Foreign exchange revenue decreased 5% compared with the third quarter of 2017 and 12% (unannualized) compared with the second quarter of 2018. The decrease compared with third quarter of 2017 primarily reflects foreign currency hedging, partially offset by higher volumes. The decrease compared with the second quarter of 2018 primarily reflects lower volumes. Foreign exchange revenue is primarily reported in the Investment Services business and, to a lesser extent, the Investment Management business and the Other segment.

Distribution and servicing fees

The decrease in distribution and servicing fees compared with the third quarter of 2017 primarily reflects lower fees from money market funds.

Investment and other income

The following table provides the components of investment and other income.

Investment and other income					
<i>(in millions)</i>	3Q18	2Q18	3Q17	YTD18	YTD17
Corporate/bank-owned life insurance	\$ 36	\$ 31	\$ 37	\$ 103	\$ 110
Asset-related gains (losses)	7	15	1	68	(1)
Expense reimbursements from joint venture	17	19	18	52	49
Seed capital gains (a)	8	3	6	11	25
Equity investment income	3	2	—	5	33
Lease-related gains	—	—	—	—	52
Other (loss) income	(30)	—	1	(46)	(6)
Total investment and other income	\$ 41	\$ 70	\$ 63	\$ 193	\$ 262

(a) Excludes seed capital gains related to consolidated investment management funds, which are reflected in operations of consolidated investment management funds.

Investment and other income decreased compared with the third quarter of 2017 and second quarter of 2018. Both decreases primarily reflect our investments in renewable energy, including the impact of adjusting the provisional tax estimates. Pre-tax losses on our renewable energy investments are offset by corresponding tax benefits and credits.

Year-to-date 2018 compared with year-to-date 2017

Fee and other revenue increased 4% in the first nine months of 2018, compared with the first nine months of 2017, primarily reflecting higher asset servicing fees, investment management and performance fees, foreign exchange and other trading revenue, partially offset by net securities losses and lower investment and other income. The 7% increase in asset servicing fees primarily reflects higher equity market values, securities lending and other volumes and the favorable impact of a weaker U.S. dollar. The 6% increase in investment management and performance fees primarily reflects higher equity market values, the favorable impact of a weaker U.S. dollar (principally versus the British pound) and higher performance fees. The 10% increase in foreign

exchange and other trading revenue primarily reflects higher volumes, partially offset by foreign currency hedging. Net securities losses primarily reflect losses recorded in the first quarter of 2018 related to the sale of debt securities. The decrease in investment and other income primarily reflects lease-related gains

and a net gain related to an equity investment, both recorded in the first nine months of 2017, and lower other income due in part to our investments in renewable energy, partially offset by an increase in asset-related gains.

Net interest revenue

Net interest revenue							YTD18	
<i>(dollars in millions)</i>				3Q18 vs.				vs.
	3Q18	2Q18	3Q17	2Q18	3Q17	YTD18	YTD17	YTD17
Net interest revenue	\$ 891	\$ 916	\$ 839	(3)%	6%	\$ 2,726	\$ 2,457	11%
Add: Tax equivalent adjustment	5	5	12	N/M	N/M	16	36	N/M
Net interest revenue (FTE) – Non-GAAP (a)	\$ 896	\$ 921	\$ 851	(3)%	5%	\$ 2,742	\$ 2,493	10%
Average interest-earning assets	\$ 279,218	\$ 292,086	\$ 291,841	(4)%	(4)%	\$ 291,040	\$ 288,283	1%
Net interest margin	1.27%	1.26%	1.15%	1 bps	12 bps	1.25%	1.14%	11 bps
Net interest margin (FTE) – Non-GAAP (a)	1.28%	1.26%	1.16%	2 bps	12 bps	1.26%	1.16%	10 bps

(a) Net interest revenue (FTE) – Non-GAAP and net interest margin (FTE) – Non-GAAP include the tax equivalent adjustments on tax-exempt income which allows for comparisons of amounts arising from both taxable and tax-exempt sources and is consistent with industry practice. The adjustment to an FTE basis has no impact on net income.

N/M - Not meaningful.

bps - basis points.

Net interest revenue increased 6% compared with the third quarter of 2017 and decreased 3% (unannualized) compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects higher interest rates, partially offset by lower deposits and other borrowings. The decrease compared with the second quarter of 2018 was primarily driven by lower deposits and other borrowings, partially offset by higher interest rates.

Net interest margin increased 12 basis points compared with the third quarter of 2017 and 1 basis point compared with the second quarter of 2018. Both increases primarily reflect higher interest rates.

Average non-U.S. dollar deposits comprised approximately 30% of our average total deposits in the third quarter of 2018. Approximately 40% of the average non-U.S. dollar deposits in the third quarter of 2018 were euro-denominated.

Year-to-date 2018 compared with year-to-date 2017

Net interest revenue increased 11% in the first nine months of 2018 compared with the first nine months of 2017, primarily driven by higher interest rates. The net interest margin also increased primarily driven by higher interest rates.

Average balances and interest rates	Quarter ended								
	Sept. 30, 2018			June 30, 2018			Sept. 30, 2017		
	Average balance	Interest	Average rates	Average balance	Interest	Average rates	Average balance	Interest	Average rates
<i>(dollars in millions, presented on an FTE basis)</i>									
Assets									
Interest-earning assets:									
Interest-bearing deposits with banks (primarily foreign banks)	\$ 14,691	\$ 59	1.58%	\$ 15,748	\$ 56	1.41%	\$ 15,899	\$ 34	0.86%
Interest-bearing deposits held at the Federal Reserve and other central banks	61,216	125	0.80	69,676	136	0.77	70,430	89	0.50
Federal funds sold and securities purchased under resale agreements (a)	26,738	281	4.18	28,051	230	3.29	28,120	119	1.67
Margin loans	13,738	129	3.74	14,838	128	3.46	13,206	87	2.60
Non-margin loans:									
Domestic offices	28,628	258	3.59	29,970	257	3.44	29,950	216	2.87
Foreign offices	11,441	86	2.98	12,258	88	2.87	12,788	67	2.09
Total non-margin loans	40,069	344	3.42	42,228	345	3.27	42,738	283	2.64
Securities:									
U.S. Government obligations	24,423	129	2.09	23,199	116	2.02	25,349	106	1.67
U.S. Government agency obligations	64,612	384	2.40	63,022	374	2.37	61,710	309	2.00
State and political subdivisions – tax-exempt (b)	2,453	18	2.77	2,677	18	2.75	3,226	25	3.06
Other securities	27,017	138	1.98	28,863	126	1.75	28,804	98	1.34
Trading securities (b)	4,261	32	3.05	3,784	29	3.10	2,359	13	2.26
Total securities	122,766	701	2.28	121,545	663	2.19	121,448	551	1.81
Total interest-earning assets (b)	\$ 279,218	\$ 1,639	2.33%	\$ 292,086	\$ 1,558	2.14%	\$ 291,841	\$ 1,163	1.59%
Noninterest-earnings assets	53,123			54,242			53,868		
Total assets	\$ 332,341			\$ 346,328			\$ 345,709		
Liabilities									
Interest-bearing liabilities:									
Interest-bearing deposits:									
Domestic offices	\$ 57,942	\$ 142	0.97%	\$ 54,200	\$ 105	0.78%	\$ 44,212	\$ 31	0.28%
Foreign offices	90,694	95	0.42	98,599	68	0.28	98,278	26	0.10
Total interest-bearing deposits	148,636	237	0.63	152,799	173	0.45	142,490	57	0.16
Federal funds purchased and securities sold under repurchase agreements (a)	14,199	190	5.33	18,146	158	3.48	21,403	70	1.30
Trading liabilities	1,150	7	2.32	1,198	7	2.43	1,434	2	0.54
Other borrowed funds	2,747	16	2.33	2,399	14	2.40	2,197	7	1.38
Commercial paper	3,102	16	2.10	3,869	21	2.13	2,736	8	1.15
Payables to customers and broker-dealers	16,252	51	1.23	16,349	45	1.10	18,516	19	0.42
Long-term debt	28,074	226	3.17	28,349	219	3.06	28,138	149	2.07
Total interest-bearing liabilities	\$ 214,160	\$ 743	1.37%	\$ 223,109	\$ 637	1.14%	\$ 216,914	\$ 312	0.57%
Total noninterest-bearing deposits	60,677			64,768			70,168		
Other noninterest-bearing liabilities	15,660			16,857			17,763		
Total liabilities	290,497			304,734			304,845		
Temporary equity									
Redeemable noncontrolling interests	193			184			188		
Permanent equity									
Total The Bank of New York Mellon Corporation shareholders' equity	41,578			41,292			40,322		
Noncontrolling interests	73			118			354		
Total permanent equity	41,651			41,410			40,676		
Total liabilities, temporary equity and permanent equity	\$ 332,341			\$ 346,328			\$ 345,709		
Net interest revenue (FTE) – Non-GAAP	\$ 896			\$ 921			\$ 851		
Net interest margin (FTE) – Non-GAAP			1.28%			1.26%			1.16%
Less: Tax equivalent adjustment (c)	5			5			12		
Net interest revenue – GAAP	\$ 891			\$ 916			\$ 839		
Net interest margin – GAAP			1.27%			1.26%			1.15%

(a) Includes the impact of offsetting under enforceable netting agreements of approximately \$26 billion for the third quarter of 2018, \$18 billion for the second quarter of 2018 and \$7 billion for the third quarter of 2017.

(b) Interest income and average yields are presented on an FTE basis (Non-GAAP).

(c) The tax equivalent adjustment relates to tax-exempt securities, primarily state and political subdivisions, and is based on the federal statutory tax rate of 21% for the quarters in 2018 and 35% for the quarter in 2017, adjusted for applicable state income taxes, net of the related federal tax benefit.

Average balances and interest rates	Year-to-date					
	Sept. 30, 2018			Sept. 30, 2017		
	Average balance	Interest	Average rates	Average balance	Interest	Average rates
<i>(dollars in millions, presented on an FTE basis)</i>						
Assets						
Interest-earning assets:						
Interest-bearing deposits with banks (primarily foreign banks)	\$ 14,766	\$ 157	1.42%	\$ 15,153	\$ 83	0.73%
Interest-bearing deposits held at the Federal Reserve and other central banks	69,921	387	0.73	68,613	217	0.42
Federal funds sold and securities purchased under resale agreements (a)	27,560	681	3.31	26,779	272	1.36
Margin loans	14,743	372	3.38	14,663	249	2.27
Non-margin loans:						
Domestic offices	29,664	743	3.35	30,545	611	2.67
Foreign offices	12,068	251	2.78	13,126	189	1.93
Total non-margin loans	41,732	994	3.18	43,671	800	2.45
Securities:						
U.S. Government obligations	23,698	354	2.00	25,835	316	1.64
U.S. Government agency obligations	63,702	1,108	2.32	59,384	870	1.95
State and political subdivisions – tax-exempt (b)	2,667	55	2.71	3,298	77	3.09
Other securities	28,175	387	1.83	28,531	267	1.25
Trading securities (b)	4,076	89	2.92	2,356	48	2.74
Total securities	122,318	1,993	2.17	119,404	1,578	1.76
Total interest-earning assets (b)	\$ 291,040	\$ 4,584	2.10%	\$ 288,283	\$ 3,199	1.48%
Noninterest-earnings assets						
Total assets	\$ 345,520			\$ 341,510		
Liabilities						
Interest-bearing liabilities:						
Interest-bearing deposits:						
Domestic offices	\$ 54,608	\$ 318	0.78%	\$ 47,456	\$ 66	0.19%
Foreign offices	97,746	209	0.29	94,102	32	0.05
Total interest-bearing deposits	152,354	527	0.46	141,558	98	0.09
Federal funds purchased and securities sold under repurchase agreements (a)	17,085	455	3.56	19,465	132	0.90
Trading liabilities	1,304	23	2.33	1,188	6	0.65
Other borrowed funds	2,424	39	2.16	1,409	13	1.26
Commercial paper	3,367	49	1.96	2,374	18	1.01
Payables to customers and broker-dealers	16,564	127	1.02	19,360	42	0.29
Long-term debt	28,275	622	2.90	27,148	397	1.93
Total interest-bearing liabilities	\$ 221,373	\$ 1,842	1.11%	\$ 212,502	\$ 706	0.44%
Total noninterest-bearing deposits	65,446			72,524		
Other noninterest-bearing liabilities	17,019			16,428		
Total liabilities	303,838			301,454		
Temporary equity						
Redeemable noncontrolling interests	190			174		
Permanent equity						
Total The Bank of New York Mellon Corporation shareholders' equity	41,337			39,418		
Noncontrolling interests	155			464		
Total permanent equity	41,492			39,882		
Total liabilities, temporary equity and permanent equity	\$ 345,520			\$ 341,510		
Net interest revenue (FTE) – Non-GAAP		\$ 2,742			\$ 2,493	
Net interest margin (FTE) – Non-GAAP			1.26%			1.16%
Less: Tax equivalent adjustment (c)		16			36	
Net interest revenue – GAAP		\$ 2,726			\$ 2,457	
Net interest margin – GAAP			1.25%			1.14%

(a) Includes the impact of offsetting under enforceable netting agreements of approximately \$19 billion for the first nine months of 2018 and \$3 billion for the first nine months of 2017.

(b) Interest income and average yields are presented on an FTE basis (Non-GAAP).

(c) The tax equivalent adjustment relates to tax-exempt securities, primarily state and political subdivisions, and is based on the federal statutory tax rate of 21% for year-to-date 2018 and 35% for year-to-date 2017, adjusted for applicable state income taxes, net of the related federal tax benefit.

Noninterest expense

Noninterest expense <i>(dollars in millions)</i>	3Q18	2Q18	3Q17	3Q18 vs.		YTD18	YTD17	YTD18
				2Q18	3Q17			vs. YTD17
Staff (a)	\$ 1,478	\$ 1,489	\$ 1,485	(1)%	— %	\$ 4,543	\$ 4,405	3%
Professional, legal and other purchased services	332	328	305	1	9	951	937	1
Software	189	192	175	(2)	8	554	514	8
Net occupancy	139	156	141	(11)	(1)	434	417	4
Sub-custodian and clearing (b)	106	110	101	(4)	5	335	312	7
Distribution and servicing	99	106	109	(7)	(9)	311	313	(1)
Furniture and equipment	73	74	58	(1)	26	208	174	20
Business development	51	62	49	(18)	4	164	163	1
Bank assessment charges	49	47	51	4	(4)	148	167	(11)
Amortization of intangible assets	48	48	52	—	(8)	145	157	(8)
Other (a)(b)(c)	174	135	128	29	36	431	392	10
Total noninterest expense	\$ 2,738	\$ 2,747	\$ 2,654	— %	3 %	\$ 8,224	\$ 7,951	3%
Full-time employees at period end	52,000	52,000	52,900	— %	(2)%			

- (a) In the first quarter of 2018, we adopted new accounting guidance included in Accounting Standards Update (“ASU”) 2017-07, Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, which required the reclassification of the components of pension and other postretirement costs, other than the service cost component. As a result, staff expense increased and other expense decreased. Prior periods have been reclassified. See Note 2 of the Notes to Consolidated Financial Statements for additional information.
- (b) Beginning in the first quarter of 2018, clearing expense, which was previously included in other expense, was included with sub-custodian expense. Prior periods have been reclassified.
- (c) Beginning in the first quarter of 2018, merger and integration (“M&I”), litigation and restructuring charges are no longer separately disclosed. Expenses previously reported in this line have been reclassified to existing expense categories, primarily other expense.

Total noninterest expense increased 3% compared with the third quarter of 2017 and decreased slightly compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects investments in technology and higher litigation expense, partially offset by lower staff and distribution and servicing expenses. The investments in technology are included in staff, professional, legal and other purchased services, software and furniture and equipment expenses. The decrease compared with the second quarter of 2018 primarily reflects lower net occupancy, staff and business development expenses, partially offset by higher litigation expense. The decrease in net occupancy expense is primarily due to expenses associated with the continued consolidation of our real estate recorded in the second quarter of 2018.

We expect to continue to incur additional expenses as we invest in our technology infrastructure and platforms. We also expect to incur expenses related to relocating our corporate headquarters, which is estimated to total \$75 million, of which \$12 million was recorded in the second quarter of 2018. We expect the remaining expenses related to relocating our corporate headquarters to be recorded in the fourth quarter of 2018.

Year-to-date 2018 compared with year-to-date 2017

Total noninterest expense increased 3% compared with the first nine months of 2017. The increase primarily reflects investments in technology, the unfavorable impact of a weaker U.S. dollar, higher litigation, volume-related sub-custodian and clearing expenses and expenses associated with the continued consolidation of our real estate, partially offset by lower consulting expense and decreases in other expenses.

Income taxes

BNY Mellon recorded an income tax provision of \$220 million (16.5% effective tax rate) in the third quarter of 2018, including the impact of adjusting provisional estimates for U.S. tax legislation and other changes. The income tax provision was \$348 million (25.4% effective tax rate) in the third quarter of 2017 and \$286 million (20.5% effective tax rate) in the second quarter of 2018. For additional information, see Note 11 of the Notes to Consolidated Financial Statements.

Review of businesses

We have an internal information system that produces performance data along product and service lines for our two principal businesses, Investment Services and Investment Management, and the Other segment.

Business accounting principles

Our business data has been determined on an internal management basis of accounting, rather than the generally accepted accounting principles used for consolidated financial reporting. These measurement principles are designed so that reported results of the businesses will track their economic performance.

For information on the accounting principles of our businesses, the primary products and services in each line of business, the primary types of revenue by business and how our businesses are presented and analyzed, see Note 19 of the Notes to Consolidated Financial Statements.

Business results are subject to reclassification when organizational changes are made. There were no significant organizational changes in the third quarter of 2018. The results are also subject to refinements in revenue and expense allocation methodologies, which are typically reflected on a prospective basis.

The results of our businesses may be influenced by client and other activities that vary by quarter. In the first quarter, incentive expense typically increases reflecting the vesting of long-term stock awards for retirement-eligible employees. In the third quarter, Depositary Receipts revenue is typically higher due to an increased level of client dividend payments. Also in the third quarter, volume-related fees may decline due to reduced client activity. In the third

quarter, staff expense typically increases reflecting the annual employee merit increase. In the fourth quarter, we typically incur higher business development and marketing expenses. In our Investment Management business, performance fees are typically higher in the fourth quarter, as the fourth quarter represents the end of the measurement period for many of the performance fee-eligible relationships.

The results of our businesses may also be impacted by the translation of financial results denominated in foreign currencies to the U.S. dollar. We are primarily impacted by activities denominated in the British pound and the euro. On a consolidated basis and in our Investment Services business, we typically have more foreign currency-denominated expenses than revenues. However, our Investment Management business typically has more foreign currency-denominated revenues than expenses. Overall, currency fluctuations impact the year-over-year growth rate in the Investment Management business more than the Investment Services business. However, currency fluctuations, in isolation, are not expected to significantly impact net income on a consolidated basis.

Fee revenue in Investment Management, and to a lesser extent in Investment Services, is impacted by the value of market indices. At Sept. 30, 2018, we estimate that a 5% change in global equity markets, spread evenly throughout the year, would impact fee revenue by less than 1% and diluted earnings per common share by \$0.03 to \$0.05.

See Note 19 of the Notes to Consolidated Financial Statements for the consolidating schedules which show the contribution of our businesses to our overall profitability.

Investment Services business

(dollars in millions unless otherwise noted)	3Q18	2Q18	1Q18	4Q17	3Q17	3Q18 vs.		YTD18	YTD17	YTD18
						2Q18	3Q17			vs.
Revenue:										
Investment services fees:										
Asset servicing	\$ 1,136	\$ 1,135	\$ 1,143	\$ 1,106	\$ 1,081	— %	5 %	\$ 3,414	\$ 3,180	7 %
Clearing services	383	391	414	400	381	(2)	1	1,188	1,149	3
Issuer services	288	265	260	196	288	9	—	813	779	4
Treasury services	136	140	138	136	141	(3)	(4)	414	419	(1)
Total investment services fees	1,943	1,931	1,955	1,838	1,891	1	3	5,829	5,527	5
Foreign exchange and other trading revenue	161	172	169	168	154	(6)	5	502	452	11
Other (a)	126	130	126	135	142	(3)	(11)	382	407	(6)
Total fee and other revenue	2,230	2,233	2,250	2,141	2,187	—	2	6,713	6,386	5
Net interest revenue	827	874	844	813	777	(5)	6	2,545	2,245	13
Total revenue	3,057	3,107	3,094	2,954	2,964	(2)	3	9,258	8,631	7
Provision for credit losses	1	1	(7)	(2)	(2)	N/M	N/M	(5)	(5)	N/M
Noninterest expense (excluding amortization of intangible assets)	1,995	1,931	1,913	2,060	1,837	3	9	5,839	5,538	5
Amortization of intangible assets	35	36	36	37	37	(3)	(5)	107	112	(4)
Total noninterest expense	2,030	1,967	1,949	2,097	1,874	3	8	5,946	5,650	5
Income before taxes	\$ 1,026	\$ 1,139	\$ 1,152	\$ 859	\$ 1,092	(10)%	(6)%	\$ 3,317	\$ 2,986	11 %
Pre-tax operating margin	34%	37%	37%	29%	37%			36%	35%	
Securities lending revenue	\$ 52	\$ 55	\$ 48	\$ 45	\$ 41	(5)%	27 %	\$ 155	\$ 123	26 %
Total revenue by line of business:										
Asset Servicing	\$ 1,458	\$ 1,520	\$ 1,519	\$ 1,459	\$ 1,420	(4)%	3 %	\$ 4,497	\$ 4,144	9 %
Pershing	558	558	581	569	542	—	3	1,697	1,611	5
Issuer Services	453	431	418	352	442	5	2	1,302	1,236	5
Treasury Services	324	329	321	322	316	(2)	3	974	929	5
Clearance and Collateral Management	264	269	255	252	244	(2)	8	788	711	11
Total revenue by line of business	\$ 3,057	\$ 3,107	\$ 3,094	\$ 2,954	\$ 2,964	(2)%	3 %	\$ 9,258	\$ 8,631	7 %
Metrics:										
Average loans	\$ 35,044	\$ 38,002	\$ 39,200	\$ 38,845	\$ 38,038	(8)%	(8)%	\$ 37,400	\$ 40,578	(8)%
Average deposits	\$ 192,741	\$ 203,064	\$ 214,130	\$ 204,680	\$ 198,299	(5)%	(3)%	\$ 203,233	\$ 198,796	2 %
AUC/A at period end (in trillions) (b)	\$ 34.5	\$ 33.6	\$ 33.5	\$ 33.3	\$ 32.2	3 %	7 %	\$ 34.5	\$ 32.2	7 %
Market value of securities on loan at period end (in billions) (c)	\$ 415	\$ 432	\$ 436	\$ 408	\$ 382	(4)%	9 %	\$ 415	\$ 382	9 %
Pershing:										
Average active clearing accounts (U.S. platform) (in thousands)	6,108	6,080	6,075	6,126	6,203	— %	(2)%			
Average long-term mutual fund assets (U.S. platform)	\$ 527,336	\$ 512,645	\$ 514,542	\$ 508,873	\$ 500,998	3 %	5 %			
Average investor margin loans (U.S. platform)	\$ 10,696	\$ 10,772	\$ 10,930	\$ 9,822	\$ 8,886	(1)%	20 %			
Clearance and Collateral Management:										
Average tri-party collateral management balances (in billions)	\$ 2,995	\$ 2,801	\$ 2,698	\$ 2,606	\$ 2,534	7 %	18 %			

(a) Other revenue includes investment management fees, financing-related fees, distribution and servicing revenue and investment and other income.

(b) Includes the AUC/A of CIBC Mellon of \$1.4 trillion at Sept. 30, 2018 and June 30, 2018, and \$1.3 trillion at March 31, 2018, Dec. 31, 2017 and Sept. 30, 2017.

(c) Represents the total amount of securities on loan in our agency securities lending program managed by the Investment Services business. Excludes securities for which BNY Mellon acts as agent on behalf of CIBC Mellon clients, which totaled \$69 billion at Sept. 30, 2018, \$70 billion at June 30, 2018, \$73 billion at March 31, 2018, \$71 billion at Dec. 31, 2017 and \$68 billion at Sept. 30, 2017.

N/M - Not meaningful.

Business description

BNY Mellon Investment Services provides business services and technology solutions to entities including financial institutions, corporations, foundations and endowments, public funds and government agencies. Our lines of business include: Asset Servicing, Pershing, Issuer Services, Treasury Services and Clearance and Collateral Management.

We are one of the leading global investment services providers with \$34.5 trillion of AUC/A at Sept. 30, 2018.

- We are the primary provider of U.S. government securities clearance and a provider of non-U.S. government securities clearance.
- We are a leading provider of tri-party collateral management services with an average of \$3.0 trillion serviced globally including approximately \$2.1 trillion of the U.S. tri-party repo market.
- Our agency securities lending program is one of the largest lenders of U.S. and non-U.S. securities, servicing a lendable asset pool of approximately \$3.7 trillion in 34 separate markets.

The Asset Servicing business provides a comprehensive suite of solutions. As one of the largest global custody and fund accounting providers and a trusted partner, we offer services for the safekeeping of assets in capital markets globally as well as alternative investment and structured product strategies. We provide custody and foreign exchange services, support exchange-traded funds and unit investment trusts and provide our clients outsourcing capabilities. We deliver securities lending and financing solutions on both an agency and principal basis. Our market leading liquidity services portal enables cash investments for institutional clients and includes fund research and analytics.

Pershing provides clearing, custody, business and technology solutions, delivering dependable operational support to financial organizations globally.

The Issuer Services business includes Corporate Trust and Depositary Receipts. Our Corporate Trust business delivers a full range of issuer and related investor services, including trustee, paying agency, fiduciary, escrow and other financial

services. We are a leading provider to the debt capital markets, providing customized and market-driven solutions to investors, bondholders and lenders. Our Depositary Receipts business drives global investing by providing servicing and value-added solutions that enable, facilitate and enhance cross-border trading, clearing, settlement and ownership. We are one of the largest providers of depositary receipts services in the world, partnering with leading companies from more than 50 countries.

Our Treasury Services business includes customizable solutions and innovative technology that deliver high-quality cash management, payment and trade support for corporate and institutional global treasury needs.

Our Clearance and Collateral Management business clears and settles equity and fixed-income transactions globally and serves as custodian for tri-party repo collateral worldwide. Our collateral services include collateral management, administration and segregation.

We offer innovative solutions and industry expertise which help financial institutions and institutional investors to mine opportunities from liquidity, financing, risk and balance sheet challenges.

Review of financial results

AUC/A increased 7% compared with Sept. 30, 2017 to \$34.5 trillion, primarily reflecting net new business and higher equity market values, partially offset by the unfavorable impact of a stronger U.S. dollar. AUC/A consisted of 37% equity securities and 63% fixed-income securities at both Sept. 30, 2018 and Sept. 30, 2017.

Total revenue of \$3.1 billion increased 3% compared with the third quarter of 2017 and decreased 2% (unannualized) compared with the second quarter of 2018. Net interest revenue increased, compared with the third quarter of 2017, in all businesses, primarily driven by higher interest rates. The drivers of fee revenue by line of business are indicated below.

Asset Servicing revenue of \$1.5 billion increased 3% compared with the third quarter of 2017 and decreased 4% (unannualized) compared with the second quarter of 2018. The increase compared with

the third quarter of 2017 primarily reflects higher equity market values, securities lending volumes, net interest revenue and foreign exchange volumes. The decrease compared with second quarter of 2018 primarily reflects lower net interest revenue, primarily driven by lower deposit balances, and lower foreign exchange volumes.

Pershing revenue of \$558 million increased 3% compared with the third quarter of 2017 and was unchanged compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects higher net interest revenue, equity market values and long-term mutual funds balances, partially offset by the previously disclosed lost business.

Issuer Services revenue of \$453 million increased 2% compared with the third quarter of 2017 and 5% (unannualized) compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects higher net interest revenue in Corporate Trust. The increase compared with the second quarter of 2018 primarily reflects seasonality in Depository Receipts.

Treasury Services revenue of \$324 million increased 3% compared with the third quarter of 2017 and decreased 2% (unannualized) compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects higher net interest revenue and transaction volumes. The decrease compared with the second quarter of 2018 primarily reflects lower net interest revenue.

Clearance and Collateral Management revenue of \$264 million increased 8% compared with the third quarter of 2017 and decreased 2% (unannualized) compared with the second quarter of 2018. The increase compared with the third quarter of 2017 primarily reflects growth in collateral management, clearance volumes and net interest revenue. The decrease compared with the second quarter of 2018 primarily reflects lower net interest revenue.

Market and regulatory trends are driving investable assets toward lower fee asset management products at reduced margins for our clients. These dynamics are also negatively impacting our investment services

fees. However, at the same time, these trends are providing additional outsourcing opportunities as clients and other market participants seek to comply with new regulations and reduce their operating costs.

Noninterest expense of \$2.0 billion increased 8% compared with the third quarter of 2017 and 3% (unannualized) compared with the second quarter of 2018. Both increases were primarily driven by investments in technology and higher litigation expense, partially offset by lower staff expense. Litigation increased noninterest expense by 3%.

Year-to-date 2018 compared with year-to-date 2017

Total revenue of \$9.3 billion increased 7% compared with the first nine months of 2017. Net interest revenue increased in all lines of business primarily driven by higher interest rates. Asset Servicing revenue of \$4.5 billion increased 9% compared with the first nine months of 2017 primarily reflecting higher net interest revenue, higher foreign exchange and securities lending volumes, equity market values and the favorable impact of a weaker U.S. dollar. Pershing revenue of \$1.7 billion increased 5% compared with the first nine months of 2017 primarily reflecting higher net interest revenue, and higher fees due to growth in long-term mutual fund balances, partially offset by the impact of previously disclosed lost business. Issuer Services revenue of \$1.3 billion increased 5% compared with the first nine months of 2017 primarily reflecting higher net interest revenue in Corporate Trust and higher Depository Receipts revenue. Treasury Services revenue of \$974 million increased 5% compared with the first nine months of 2017 primarily reflecting higher net interest revenue and transaction volumes. Clearance and Collateral Management revenue of \$788 million increased 11% compared with the first nine months of 2017 primarily reflecting growth in collateral management, higher clearance volumes and higher net interest revenue.

Noninterest expense of \$5.9 billion increased 5% compared with the first nine months of 2017 primarily reflecting investments in technology, higher litigation expense and the unfavorable impact of a weaker U.S. dollar.

Investment Management business

(dollars in millions)	3Q18	2Q18	1Q18	4Q17	3Q17	3Q18 vs.		YTD18	YTD17	YTD18
						2Q18	3Q17			vs.
Revenue:										
Investment management fees (a)	\$ 879	\$ 885	\$ 898	\$ 898	\$ 871	(1)%	1%	\$ 2,662	\$ 2,530	5 %
Performance fees	30	12	48	50	15	N/M	100	90	44	105
Investment management and performance fees (b)	909	897	946	948	886	1	3	2,752	2,574	7
Distribution and servicing	47	48	50	51	51	(2)	(8)	145	156	(7)
Other (a)	(18)	(4)	16	(25)	(19)	N/M	N/M	(6)	(36)	N/M
Total fee and other revenue (a)	938	941	1,012	974	918	—	2	2,891	2,694	7
Net interest revenue	77	77	76	74	82	—	(6)	230	255	(10)
Total revenue	1,015	1,018	1,088	1,048	1,000	—	2	3,121	2,949	6
Provision for credit losses	(2)	2	2	1	(2)	N/M	N/M	2	1	N/M
Noninterest expense (excluding amortization of intangible assets)	688	685	692	756	687	—	—	2,065	2,038	1
Amortization of intangible assets	13	12	13	15	15	8	(13)	38	45	(16)
Total noninterest expense	701	697	705	771	702	1	—	2,103	2,083	1
Income before taxes	\$ 316	\$ 319	\$ 381	\$ 276	\$ 300	(1)%	5%	\$ 1,016	\$ 865	17 %
Pre-tax operating margin	31%	31%	35%	26%	30%			33%	29%	
Adjusted pre-tax operating margin – Non-GAAP (c)	35%	35%	39%	29%	34%			36%	33%	
Total revenue by line of business:										
Asset Management	\$ 704	\$ 702	\$ 770	\$ 738	\$ 693	— %	2%	\$ 2,176	\$ 2,037	7 %
Wealth Management	311	316	318	310	307	(2)	1	945	912	4
Total revenue by line of business	\$ 1,015	\$ 1,018	\$ 1,088	\$ 1,048	\$ 1,000	— %	2%	\$ 3,121	\$ 2,949	6 %
Average balances:										
Average loans	\$16,763	\$ 16,974	\$ 16,876	\$ 16,813	\$ 16,724	(1)%	—%	\$16,871	\$ 16,481	2 %
Average deposits	\$14,634	\$ 14,252	\$ 13,363	\$ 11,633	\$ 12,374	3 %	18%	\$14,088	\$ 14,283	(1)%

- (a) Total fee and other revenue includes the impact of the consolidated investment management funds, net of noncontrolling interests. Additionally, other revenue includes asset servicing, treasury services, foreign exchange and other trading revenue and investment and other income.
- (b) On a constant currency basis, investment management and performance fees increased 3% (Non-GAAP) compared with the third quarter of 2017. See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 41 for the reconciliation of this Non-GAAP measure.
- (c) Net of distribution and servicing expense. See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 41 for the reconciliation of this Non-GAAP measure. In the first quarter of 2018, the adjusted pre-tax margin – Non-GAAP for prior periods was restated to include amortization of intangible assets and the provision for credit losses.
- N/M - Not meaningful.

AUM trends (a) (dollars in billions)	3Q18	2Q18	1Q18	4Q17	3Q17	3Q18 vs.		
						2Q18	3Q17	
AUM at period end, by product type:								
Equity	\$ 167	\$ 160	\$ 161	\$ 161	\$ 158	4%	6%	
Fixed income	202	197	206	206	206	3	(2)	
Index	352	334	333	350	333	5	6	
Liability-driven investments (b)	652	663	700	667	622	(2)	5	
Multi-asset and alternative investments	184	181	185	214	207	2	(11)	
Cash	271	270	283	295	298	—	(9)	
Total AUM by product type	\$ 1,828	\$ 1,805	\$ 1,868	\$ 1,893	\$ 1,824	1%	—%	
Changes in AUM:								
Beginning balance of AUM	\$ 1,805	\$ 1,868	\$ 1,893	\$ 1,824	\$ 1,771			
Net inflows (outflows):								
Long-term strategies:								
Equity	(2)	(3)	—	(6)	(2)			
Fixed income	2	(4)	7	(2)	4			
Liability-driven investments (b)	16	2	13	23	(2)			
Multi-asset and alternative investments	2	(3)	(3)	2	3			
Total long-term active strategies inflows (outflows)	18	(8)	17	17	3			
Index	(3)	(7)	(13)	(1)	(3)			
Total long-term strategies inflows (outflows)	15	(15)	4	16	—			
Short-term strategies:								
Cash	—	(11)	(14)	(4)	10			
Total net inflows (outflows)	15	(26)	(10)	12	10			
Net market impact	18	17	(14)	47	17			
Net currency impact	(10)	(53)	29	10	26			
Divestitures/Other	—	(1)	(30) (c)	—	—			
Ending balance of AUM	\$ 1,828	\$ 1,805	\$ 1,868	\$ 1,893	\$ 1,824	1%	—%	
Wealth Management client assets (d)	\$ 261	\$ 254	\$ 246	\$ 251	\$ 245	3%	7%	

(a) Excludes securities lending cash management assets and assets managed in the Investment Services business.

(b) Includes currency overlay AUM.

(c) Primarily reflects a change in methodology beginning in the first quarter of 2018 to exclude AUM related to equity method investments as well as the CenterSquare divestiture.

(d) Includes AUM and AUC/A in the Wealth Management business.

Business description

Our Investment Management business consists of two lines of business, Asset Management and Wealth Management. The Asset Management business offers diversified investment management strategies and distribution of investment products. The Wealth Management business provides investment management, custody, wealth and estate planning and private banking services. See pages 19 and 20 of our 2017 Annual Report for additional information on our Investment Management business.

Review of financial results

AUM increased slightly compared with Sept. 30, 2017 reflecting higher market values, partially offset by the divestiture of CenterSquare and other changes and the unfavorable impact of a stronger U.S. dollar (principally versus the British pound).

Net long-term inflows of \$15 billion in the third quarter of 2018 were a result of \$18 billion of inflows from actively managed strategies, primarily liability-driven investments, and \$3 billion of outflows from index funds. Market and regulatory trends have resulted in increased demand for lower fee asset management products, and for performance-based fees.

Total revenue of \$1.0 billion increased 2% compared with the third quarter of 2017 and decreased slightly compared with the second quarter of 2018.

Asset Management revenue of \$704 million increased 2% compared with the third quarter of 2017 and increased slightly compared with the second quarter of 2018. The increase compared with the third quarter of 2017 reflects higher equity market values and performance fees, partially offset by the impact of net outflows and the divestiture of CenterSquare.

Wealth Management revenue of \$311 million increased 1% compared with the third quarter of 2017 and decreased 2% (unannualized) compared with the second quarter of 2018. The decrease compared with the second quarter of 2018 primarily reflects lower net interest revenue, partially offset by higher equity market values.

Revenue generated in the Investment Management business included 42% from non-U.S. sources in the third quarter of 2018, compared with 41% in the third quarter of 2017 and second quarter of 2018.

Year-to-date 2018 compared with year-to-date 2017

Total revenue of \$3.1 billion increased 6% compared with the first nine months of 2017. Asset

Other segment

<i>(in millions)</i>	3Q18	2Q18	1Q18	4Q17	3Q17	YTD18	YTD17
Fee revenue (loss)	\$ 7	\$ 40	\$ 57	\$ (221)	\$ 50	\$ 104	\$ 225
Net securities gains (losses)	—	1	(49)	(26)	19	(48)	29
Total fee and other revenue (loss)	7	41	8	(247)	69	56	254
Net interest (expense)	(13)	(35)	(1)	(36)	(20)	(49)	(43)
Total (loss) revenue	(6)	6	7	(283)	49	7	211
Provision for credit losses	(2)	(6)	—	(5)	(2)	(8)	(14)
Noninterest expense	6	81	87	135	77	174	212
(Loss) income before taxes	\$ (10)	\$ (69)	\$ (80)	\$ (413)	\$ (26)	\$ (159)	\$ 13
Average loans and leases	\$ 2,000	\$ 2,090	\$ 2,530	\$ 1,114	\$ 1,182	\$ 2,204	\$ 1,275

See pages 25 and 26 of our 2017 Annual Report for additional information on the Other segment.

Review of financial results

Fee revenue decreased \$43 million compared with the third quarter of 2017 and decreased \$33 million compared with the second quarter of 2018. Both decreases primarily reflect our investments in renewable energy, including the impact of adjusting the provisional tax estimates (offset in income tax and de minimis to net income), and foreign currency hedging.

Net interest expense decreased \$7 million compared with the third quarter of 2017 and \$22 million compared with the second quarter of 2018. Both decreases primarily resulted from corporate treasury activity.

Management revenue of \$2.2 billion increased 7% compared with the first nine months of 2017, primarily reflecting higher equity market values, the favorable impact of a weaker U.S. dollar (principally versus the British pound) and higher performance fees. Wealth management revenue of \$945 million increased 4%, primarily reflecting higher equity market values, partially offset by lower net interest revenue.

Noninterest expense of \$2.1 billion increased 1% primarily reflecting the unfavorable impact of a weaker U.S. dollar and investments in technology.

Noninterest expense decreased \$71 million compared with the third quarter of 2017 and \$75 million compared with the second quarter of 2018. Both decreases primarily reflect lower staff expense. The sequential decrease also reflects the expenses associated with the consolidation of our real estate recorded in second quarter of 2018. We expect to record the remaining expense related to relocating our corporate headquarters in the fourth quarter of 2018.

Year-to-date 2018 compared with year-to-date 2017

Income before taxes decreased \$172 million compared with the first nine months of 2017. Total revenue decreased \$204 million, primarily reflecting lease-related gains and a net gain related to an equity investment, both recorded in 2017, net securities losses, losses on our investments in renewable energy and lower foreign currency hedging. Noninterest expense decreased \$38 million, primarily reflecting

lower pension expense and a methodological change in 2017 for allocating employee benefits expense to the business segments with no impact to consolidated results, partially offset by higher net occupancy expense, including the expenses associated with the continued consolidation of our real estate.

Critical accounting estimates

Our significant accounting policies are described in Note 1 of the Notes to Consolidated Financial Statements in our 2017 Annual Report. Our critical accounting estimates are those related to the allowance for loan losses and allowance for lending-related commitments, fair value of financial instruments and derivatives, other-than-temporary impairment (“OTTI”), goodwill and other intangibles, and pension accounting, as referenced below.

Critical policy	Reference
Allowance for loan losses and allowance for lending-related commitments	2017 Annual Report, pages 29-30
Fair value of financial instruments and derivatives	2017 Annual Report, pages 30-32
OTTI	2017 Annual Report, pages 32-33
Goodwill and other intangibles	2017 Annual Report, pages 33-34
Pension accounting	2017 Annual Report, pages 34-35

Consolidated balance sheet review

One of our key risk management objectives is to maintain a balance sheet that remains strong throughout market cycles to meet the expectations of our major stakeholders, including our shareholders, clients, creditors and regulators.

We also seek to verify that the overall liquidity risk, including intraday liquidity risk, that we undertake stays within our risk appetite. The objective of our balance sheet management strategy is to maintain a balance sheet that is characterized by strong liquidity and asset quality, ready access to external funding sources at competitive rates and a strong capital structure that supports our risk-taking activities and is adequate to absorb potential losses. In managing the balance sheet, appropriate consideration is given to balancing the competing needs of maintaining sufficient levels of liquidity and complying with applicable regulations and supervisory expectations while optimizing profitability.

At Sept. 30, 2018, total assets were \$350 billion compared with \$372 billion at Dec. 31, 2017. The decrease in total assets was primarily driven by lower interest-bearing deposits with the Federal Reserve and other central banks and loans. Deposits totaled \$232 billion at Sept. 30, 2018 and \$244 billion at Dec. 31, 2017. The decrease primarily reflects lower interest-bearing deposits in non-U.S. offices and noninterest-bearing deposits principally in U.S. offices, partially offset by higher interest-bearing deposits in U.S. offices. At Sept. 30, 2018, total interest-bearing deposits were 56% of total interest-earning assets, compared with 51% at Dec. 31, 2017.

At Sept. 30, 2018, we had \$43 billion of liquid funds (which include interest-bearing deposits with banks and federal funds sold and securities purchased under resale agreements) and \$80 billion of cash (including \$75 billion of overnight deposits with the Federal Reserve and other central banks) for a total of \$123 billion of available funds. This compares with available funds of \$137 billion at Dec. 31, 2017. Total available funds as a percentage of total assets were 35% at Sept. 30, 2018 and 37% at Dec. 31, 2017. For additional information on our liquid funds and available funds, see “Liquidity and dividends.”

Securities were \$119 billion, or 34% of total assets, at Sept. 30, 2018, compared with \$120 billion, or 32% of total assets, at Dec. 31, 2017. The decrease primarily reflects declines in sovereign debt/sovereign guaranteed securities, other securities and securities issued by state and political subdivisions, partially offset by increases in agency commercial mortgage-backed securities (“MBS”) and U.S. government agency securities. For additional information on our securities portfolio, see “Securities” and Note 4 of the Notes to Consolidated Financial Statements.

Loans were \$54 billion, or 15% of total assets, at Sept. 30, 2018, compared with \$62 billion, or 17% of total assets, at Dec. 31, 2017. The decrease in loans was primarily driven by lower loans to financial institutions and margin loans. For additional information on our loan portfolio, see “Loans” and Note 5 of the Notes to Consolidated Financial Statements.

Long-term debt totaled \$28 billion at both Sept. 30, 2018 and Dec. 31, 2017. The balance reflects issuances of \$4.2 billion, offset by maturities of \$3.4 billion and a decrease in the fair value of hedged

long-term debt. For additional information on long-term debt, see “Liquidity and dividends.”

The Bank of New York Mellon Corporation total shareholders’ equity increased to \$42 billion from \$41 billion at Dec. 31, 2017. For additional information on our capital, see “Capital.”

Country risk exposure

We have exposure to certain countries with higher risk profiles. Exposure described below reflects the country of operations and risk of the immediate counterparty. Ratings of our counterparties are capped at the rating of the country. We continue to monitor our exposure to these and other countries as part of our risk management process. See “Risk management” in our 2017 Annual Report for additional information on how our exposures are managed.

BNY Mellon has a limited economic interest in the performance of assets of consolidated investment management funds, and therefore they are excluded from this disclosure.

Italy and Spain

We had net exposure of \$1.3 billion to Italy and \$1.8 billion to Spain at Sept. 30, 2018 and \$1.8 billion to Italy and \$2.1 billion to Spain at Dec. 31, 2017. At both Sept. 30, 2018 and Dec. 31, 2017, exposure to Italy and Spain primarily consisted of investment grade sovereign debt. Securities exposure totaled \$984 million to Italy and \$1.5 billion to Spain at Sept. 30, 2018 and \$1.3 billion to Italy and \$1.6 billion to Spain at Dec. 31, 2017.

Brazil

We have operations in Brazil providing investment services and investment management services. At Sept. 30, 2018 and Dec. 31, 2017, we had total net exposure to Brazil of \$1.6 billion and \$1.4 billion, respectively. This included \$1.5 billion and \$1.3 billion, respectively, in loans, which are primarily short-term trade finance loans extended to large established financial institutions. At Sept. 30, 2018 and Dec. 31, 2017, we held \$102 million and \$136 million, respectively, of non-investment grade sovereign debt.

Turkey

We mainly provide treasury and issuer services, as well as foreign exchange products primarily to the top-ten largest financial institutions in the country. As of Sept. 30, 2018 and Dec. 31, 2017, our exposure totaled \$415 million and \$707 million, respectively, consisting primarily of syndicated credit facilities and trade finance loans.

Securities

In the discussion of our securities portfolio, we have included certain credit ratings information because the information can indicate the degree of credit risk to which we are exposed. Significant changes in ratings classifications for our securities portfolio could indicate increased credit risk for us and could be accompanied by a reduction in the fair value of our securities portfolio.

The following table shows the distribution of our total securities portfolio.

Securities portfolio <i>(dollars in millions)</i>	June 30, 2018	3Q18 change in unrealized gain (loss)	Sept. 30, 2018		Fair value as a % of amortized cost (a)	Unrealized gain (loss)	Ratings (b)				
	Fair value		Amortized cost	Fair value			AAA/ AA-	A+/ A-	BBB+/ BBB-	BB+ and lower	Not rated
Agency RMBS	\$ 49,741	\$ (214)	\$ 50,934	\$ 49,555	97%	\$ (1,379)	100%	—%	—%	—%	—%
U.S. Treasury	23,962	(61)	24,827	24,622	99	(205)	100	—	—	—	—
Sovereign debt/sovereign guaranteed (c)	13,069	(45)	12,338	12,386	100	48	74	6	19	1	—
Agency commercial MBS	11,019	(2)	11,129	11,050	99	(79)	100	—	—	—	—
CLOs	3,177	(3)	3,368	3,363	100	(5)	98	—	—	1	1
U.S. government agencies	3,269	(1)	3,143	3,127	99	(16)	100	—	—	—	—
Foreign covered bonds (d)	2,976	(8)	3,066	3,054	100	(12)	100	—	—	—	—
State and political subdivisions	2,646	(13)	2,372	2,352	99	(20)	78	18	—	—	4
Non-agency RMBS (e)	1,621	(17)	1,265	1,529	121	264	7	9	10	64	10
Non-agency commercial MBS	1,391	1	1,484	1,473	99	(11)	96	4	—	—	—
Corporate bonds	1,146	(1)	1,140	1,118	98	(22)	12	72	16	—	—
Other (f)	4,484	(3)	4,480	4,464	100	(16)	98	—	—	—	2
Total securities	\$ 118,501 (g)	\$ (367)	\$ 119,546	\$ 118,093 (g)	99%	\$ (1,453) (g)(h)	94%	2%	3%	1%	—%

(a) Amortized cost reflects historical impairments.

(b) Represents ratings by S&P or the equivalent.

(c) Primarily consists of exposure to UK, France, Germany, Spain, Italy, the Netherlands and Ireland.

(d) Primarily consists of exposure to Canada, UK, Australia and Sweden.

(e) Includes residential mortgage-backed securities ("RMBS") that were included in the former Grantor Trust of \$943 million at June 30, 2018 and \$889 million at Sept. 30, 2018.

(f) Includes commercial paper with a fair value of \$699 million at June 30, 2018. There was no commercial paper at Sept. 30, 2018.

(g) Includes net unrealized gains on derivatives hedging securities available-for-sale of \$373 million at June 30, 2018 and \$593 million at Sept. 30, 2018.

(h) Unrealized losses of \$311 million at Sept. 30, 2018 related to available-for-sale securities, net of hedges.

The fair value of our securities portfolio, including related hedges, was \$118.1 billion at Sept. 30, 2018, compared with \$119.9 billion at Dec. 31, 2017. The decrease primarily reflects declines in sovereign debt/sovereign guaranteed securities, other securities driven by the reclassification of money market fund investments to trading assets and securities issued by states and political subdivisions, partially offset by increases in agency commercial mortgage-backed and U.S. government agency securities.

At Sept. 30, 2018, the total securities portfolio had a net unrealized loss of \$1.5 billion, compared with a net unrealized loss of \$85 million at Dec. 31, 2017,

including the impact of related hedges. The increase in the net unrealized pre-tax loss was primarily driven by higher interest rates.

The unrealized loss, net of tax, on our available-for-sale securities portfolio included in accumulated other comprehensive income ("OCI") was \$228 million at Sept. 30, 2018, compared with an unrealized gain of \$184 million at Dec. 31, 2017.

At Sept. 30, 2018, 94% of the securities in our portfolio were rated AAA/AA-, compared with 93% at Dec. 31, 2017.

The following table presents the amortizable purchase premium (net of discount) related to the securities portfolio and accretible discount related to the 2009 restructuring of the securities portfolio.

Net premium amortization and discount accretion of securities (a) <i>(dollars in millions)</i>	3Q18	2Q18	1Q18	4Q17	3Q17
Amortizable purchase premium (net of discount) relating to securities:					
Balance at period end	\$ 1,536	\$ 1,642	\$ 1,827	\$ 1,987	\$ 2,053
Estimated average life remaining at period end <i>(in years)</i>	5.2	5.3	5.2	5.0	5.0
Amortization	\$ 108	\$ 115	\$ 122	\$ 135	\$ 140
Accretible discount related to the prior restructuring of the securities portfolio:					
Balance at period end	\$ 224	\$ 239	\$ 250	\$ 274	\$ 302
Estimated average life remaining at period end <i>(in years)</i>	6.3	6.3	6.3	6.3	6.5
Accretion	\$ 20	\$ 24	\$ 25	\$ 26	\$ 24

(a) Amortization of purchase premium decreases net interest revenue while accretion of discount increases net interest revenue. Both were recorded on a level yield basis.

We routinely test our securities for OTTI. See “Critical accounting estimates” for additional information regarding OTTI.

On a quarterly basis, we perform our impairment analysis using several factors, including projected loss severities and default rates. In the third quarter of 2018, this analysis resulted in other-than-temporary credit losses of less than \$1 million, primarily in our non-agency RMBS portfolio. At Sept. 30, 2018, if we were to increase or decrease each of our projected loss severity and default rates by 100 basis points on each of the positions in our

non-agency RMBS portfolio, including the securities previously held by the Grantor Trust, credit-related impairment charges on these securities would have increased or decreased by less than \$1 million (pre-tax). See Note 4 of the Notes to Consolidated Financial Statements for the projected weighted-average default rates and loss severities.

See Note 4 of the Notes to Consolidated Financial Statements for the pre-tax net securities gains (losses) by security type. See Note 15 of the Notes to Consolidated Financial Statements for details of securities by level in the fair value hierarchy.

Loans

Total exposure – consolidated <i>(in billions)</i>	Sept. 30, 2018			Dec. 31, 2017		
	Loans	Unfunded commitments	Total exposure	Loans	Unfunded commitments	Total exposure
Non-margin loans:						
Financial institutions	\$ 10.4	\$ 34.0	\$ 44.4	\$ 13.1	\$ 32.5	\$ 45.6
Commercial	2.1	15.3	17.4	2.9	18.0	20.9
Subtotal institutional	12.5	49.3	61.8	16.0	50.5	66.5
Wealth management loans and mortgages	16.0	0.9	16.9	16.5	1.1	17.6
Commercial real estate	5.0	3.6	8.6	4.9	3.5	8.4
Lease financings	1.3	—	1.3	1.3	—	1.3
Other residential mortgages	0.6	—	0.6	0.7	—	0.7
Overdrafts	3.8	—	3.8	5.1	—	5.1
Other	1.3	—	1.3	1.2	—	1.2
Subtotal non-margin loans	40.5	53.8	94.3	45.7	55.1	100.8
Margin loans	13.5	—	13.5	15.8	—	15.8
Total	\$ 54.0	\$ 53.8	\$ 107.8	\$ 61.5	\$ 55.1	\$ 116.6

At Sept. 30, 2018, total exposures of \$107.8 billion decreased 8% compared with Dec. 31, 2017, primarily reflecting lower exposure in the

commercial, margin loan and financial institutions portfolios as well as lower overdrafts.

Our financial institutions and commercial portfolios comprise our largest concentrated risk. These portfolios comprised 57% of our total exposure at

both Sept. 30, 2018 and Dec. 31, 2017. Additionally, most of our overdrafts relate to financial institutions.

Financial institutions

The financial institutions portfolio is shown below.

Financial institutions portfolio exposure (dollars in billions)	Sept. 30, 2018						Dec. 31, 2017		
	Loans	Unfunded commitments	Total exposure	% Inv. grade	% due <1 yr.	Loans	Unfunded commitments	Total exposure	
Securities industry	\$ 2.3	\$ 21.4	\$ 23.7	99%	99%	\$ 3.6	\$ 19.2	\$ 22.8	
Asset managers	1.3	6.3	7.6	98	85	1.4	6.4	7.8	
Banks	5.9	1.3	7.2	69	93	7.0	1.2	8.2	
Insurance	0.1	3.1	3.2	100	11	0.1	3.5	3.6	
Government	0.1	0.5	0.6	100	48	0.1	0.9	1.0	
Other	0.7	1.4	2.1	97	62	0.9	1.3	2.2	
Total	\$ 10.4	\$ 34.0	\$ 44.4	94%	87%	\$ 13.1	\$ 32.5	\$ 45.6	

The financial institutions portfolio exposure was \$44.4 billion at Sept. 30, 2018, a 3% decrease compared with \$45.6 billion at Dec. 31, 2017, primarily reflecting lower exposure in the banks, insurance and government portfolios, partially offset by an increase in securities industry exposure.

Financial institution exposures are high-quality, with 94% of the exposures meeting the investment grade equivalent criteria of our internal credit rating classification at Sept. 30, 2018. Each customer is assigned an internal credit rating, which is mapped to an equivalent external rating agency grade based upon a number of dimensions, which are continually evaluated and may change over time. The exposure to financial institutions is generally short-term. Of these exposures, 87% expire within one year and 64% expire within 90 days. In addition, 80% of the financial institutions exposure is secured. For example, securities industry clients and asset managers often borrow against marketable securities held in custody.

For ratings of non-U.S. counterparties, our internal credit rating is generally capped at a rating equivalent to the sovereign rating of the country where the counterparty resides, regardless of the internal credit rating assigned to the counterparty or the underlying collateral.

At Sept. 30, 2018, the secured intraday credit provided to dealers in connection with their tri-party repo activity totaled \$20.9 billion and was primarily included in the securities industry portfolio. Dealers secure the outstanding intraday credit with high-quality liquid collateral having a market value in excess of the amount of the outstanding credit.

Our bank exposure primarily relates to our global trade finance. These exposures are short-term in nature, with 93% due in less than one year. The investment grade percentage of our bank exposure was 69% at Sept. 30, 2018, compared with 68% at Dec. 31, 2017. Our non-investment grade exposures are primarily to Brazil and Turkey. These loans are primarily trade finance loans and syndicated credit facilities.

The asset manager portfolio exposure was high-quality, with 98% of the exposures meeting our investment grade equivalent ratings criteria as of Sept. 30, 2018. These exposures are generally short-term liquidity facilities, with the majority to regulated mutual funds.

Commercial

The commercial portfolio is presented below.

Commercial portfolio exposure (dollars in billions)	Sept. 30, 2018						Dec. 31, 2017		
	Loans	Unfunded commitments	Total exposure	% Inv. grade	% due <1 yr.	Loans	Unfunded commitments	Total exposure	
Manufacturing	\$ 0.9	\$ 5.2	\$ 6.1	95%	9%	\$ 1.3	\$ 6.1	\$ 7.4	
Services and other	0.6	4.7	5.3	97	27	0.9	6.0	6.9	
Energy and utilities	0.5	4.2	4.7	95	12	0.7	4.4	5.1	
Media and telecom	0.1	1.2	1.3	94	9	—	1.5	1.5	
Total	\$ 2.1	\$ 15.3	\$ 17.4	95%	15%	\$ 2.9	\$ 18.0	\$ 20.9	

The commercial portfolio exposure was \$17.4 billion at Sept. 30, 2018, a 17% decrease compared with \$20.9 billion at Dec. 31, 2017, primarily reflecting lower exposure in the services and other and manufacturing portfolios.

Utilities-related exposure represents approximately 77% of the energy and utilities portfolio at Sept. 30, 2018. The remaining exposure in the energy and utilities portfolio, which includes exposure to refining, exploration and production companies, integrated companies and pipelines, was 82% investment grade at Sept. 30, 2018, and 77% at Dec. 31, 2017.

Our credit strategy is to focus on investment grade clients that are active users of our non-credit services. The following table summarizes the percentage of the financial institutions and commercial portfolio exposures that are investment grade.

Percentage of the portfolios that are investment grade					
	Sept. 30, 2018	June 30, 2018	March 31, 2018	Dec. 31, 2017	Sept. 30, 2017
Financial institutions	94%	94%	93%	93%	93%
Commercial	95%	96%	95%	95%	95%

Wealth management loans and mortgages

Our wealth management exposure was \$16.9 billion at Sept. 30, 2018, compared with \$17.6 billion at Dec. 31, 2017. Wealth management loans and mortgages primarily consist of loans to high-net-worth individuals, which are secured by marketable securities and/or residential property. Wealth management mortgages are primarily interest-only, adjustable-rate mortgages with a weighted-average

loan-to-value ratio of 62% at origination. Less than 1% of the mortgages were past due at Sept. 30, 2018.

At Sept. 30, 2018, the wealth management mortgage portfolio consisted of the following geographic concentrations: California - 24%; New York - 18%; Massachusetts - 11%; Florida - 8%; and other - 39%.

Commercial real estate

Our commercial real estate exposure totaled \$8.6 billion at Sept. 30, 2018, compared with \$8.4 billion at Dec. 31, 2017. Our income-producing commercial real estate facilities are focused on experienced owners and are structured with moderate leverage based on existing cash flows. Our commercial real estate lending activities also include construction and renovation facilities. Our client base consists of experienced developers and long-term holders of real estate assets. Loans are approved on the basis of existing or projected cash flows and supported by appraisals and knowledge of local market conditions. Development loans are structured with moderate leverage, and in many instances, involve some level of recourse to the developer.

At Sept. 30, 2018, 58% of our commercial real estate portfolio was secured. The secured portfolio is diverse by project type, with 42% secured by residential buildings, 36% secured by office buildings, 13% secured by retail properties and 9% secured by other categories. Approximately 98% of the unsecured portfolio consists of real estate investment trusts (“REITs”) and real estate operating companies, which are both predominantly investment grade.

At Sept. 30, 2018, our commercial real estate portfolio consists of the following concentrations:

REITs and real estate operating companies - 41%;
New York metro - 39%; and other - 20%.

Lease financings

The leasing portfolio exposure totaled \$1.3 billion at both Sept. 30, 2018 and Dec. 31, 2017. At Sept. 30, 2018, the lease financings portfolio consisted of exposures backed by well-diversified assets, including large-ticket transportation equipment, and approximately 96% of the leasing portfolio exposure was investment grade, or investment grade equivalent.

Other residential mortgages

The other residential mortgages portfolio primarily consists of 1-4 family residential mortgage loans and totaled \$623 million at Sept. 30, 2018 and \$708 million at Dec. 31, 2017. Included in this portfolio at Sept. 30, 2018 are \$140 million of mortgage loans purchased in 2005, 2006 and the first quarter of 2007 that are predominantly prime mortgage loans, with a small portion of Alt-A loans. As of Sept. 30, 2018, the purchased loans in this portfolio had a weighted-average loan-to-value ratio of 76% at origination and 12% of the serviced loan balance was at least 60 days delinquent. The properties securing the prime and Alt-A mortgage loans were located (in order of concentration) in California, Florida, Virginia, the tri-state area (New York, New Jersey and Connecticut) and Maryland.

To determine the projected loss on the prime and Alt-A mortgage portfolios, we calculate the total estimated defaults of these mortgages and multiply

that amount by an estimate of realizable value upon sale in the marketplace (severity).

Overdrafts

Overdrafts primarily relate to custody and securities clearance clients. Overdrafts occur on a daily basis primarily in the custody and securities clearance business and are generally repaid within two business days.

Other loans

Other loans primarily include loans to consumers that are fully collateralized with equities, mutual funds and fixed-income securities.

Margin loans

Margin loans are collateralized with marketable securities, and borrowers are required to maintain a daily collateral margin in excess of 100% of the value of the loan. Margin loans included \$2.3 billion at Sept. 30, 2018 and \$4.2 billion at Dec. 31, 2017 related to a term loan program that offers fully collateralized loans to broker-dealers.

Asset quality and allowance for credit losses

Our credit strategy is to focus on investment grade clients who are active users of our non-credit services. Our primary exposure to the credit risk of a customer consists of funded loans, unfunded contractual commitments to lend, standby letters of credit ("SBLC") and overdrafts associated with our custody and securities clearance businesses.

The following table details changes in our allowance for credit losses.

Allowance for credit losses activity <i>(dollars in millions)</i>	Sept. 30, 2018	June 30, 2018	Dec. 31, 2017	Sept. 30, 2017
Non-margin loans	\$ 40,519	\$ 42,719	\$ 45,755	\$ 45,196
Margin loans	13,468	15,057	15,785	13,872
Total loans	\$ 53,987	\$ 57,776	\$ 61,540	\$ 59,068
Beginning balance of allowance for credit losses	\$ 254	\$ 256	\$ 265	\$ 270
Provision for credit losses	(3)	(3)	(6)	(6)
Net recoveries:				
Other residential mortgages	—	1	2	1
Net recoveries	—	1	2	1
Ending balance of allowance for credit losses	\$ 251	\$ 254	\$ 261	\$ 265
Allowance for loan losses	\$ 140	\$ 145	\$ 159	\$ 161
Allowance for lending-related commitments	111	109	102	104
Allowance for loan losses as a percentage of total loans	0.26%	0.25%	0.26%	0.27%
Allowance for loan losses as a percentage of non-margin loans	0.35	0.34	0.35	0.36
Total allowance for credit losses as a percentage of total loans	0.46	0.44	0.42	0.45
Total allowance for credit losses as a percentage of non-margin loans	0.62	0.59	0.57	0.59

The allowance for credit losses decreased \$10 million compared with Dec. 31, 2017 and \$14 million compared with Sept. 30, 2017. Both decreases were driven by the credit to provision for credit losses, partially offset by the impact of an update to the usage given default parameter in the second quarter of 2018. The usage given default parameter associated with the estimate of the probability of drawdown at default was updated, resulting in an \$11 million increase to the allowance for lending-related commitments in the second quarter of 2018.

We had \$13.5 billion of secured margin loans on our balance sheet at Sept. 30, 2018 compared with \$15.8 billion at Dec. 31, 2017 and \$13.9 billion at Sept. 30, 2017. We have rarely suffered a loss on these types of loans and do not allocate any of our allowance for credit losses to them. As a result, we believe that the ratio of total allowance for credit losses as a percentage of non-margin loans is a more appropriate metric to measure the adequacy of the reserve.

The allowance for loan losses and allowance for lending-related commitments represent management's estimate of losses inherent in our credit portfolio. This evaluation process is subject to numerous estimates and judgments. To the extent actual results differ from forecasts or management's judgment, the allowance for credit losses may be greater or less than future charge-offs.

Based on an evaluation of the allowance for credit losses as discussed in "Critical accounting estimates" and Note 1 of the Notes to Consolidated Financial

Statements, both in our 2017 Annual Report, we have allocated our allowance for credit losses as follows.

Allocation of allowance	Sept. 30, 2018	June 30, 2018	Dec. 31, 2017	Sept. 30, 2017
Commercial	30%	30%	30%	31%
Commercial real estate	29	29	29	28
Foreign	13	13	13	13
Financial institutions	10	10	9	9
Wealth management (a)	9	9	8	8
Other residential mortgages	7	7	8	8
Lease financing	2	2	3	3
Total	100%	100%	100%	100%

(a) Includes the allowance for wealth management mortgages.

The allocation of the allowance for credit losses is inherently judgmental, and the entire allowance for credit losses is available to absorb credit losses regardless of the nature of the losses.

The credit rating assigned to each credit is a significant variable in determining the allowance. If each credit were rated one grade better, the allowance would have decreased by \$61 million, while if each credit were rated one grade worse, the allowance would have increased by \$100 million. Similarly, if the loss given default were one rating worse, the allowance would have increased by \$39 million, while if the loss given default were one rating better, the allowance would have decreased by \$28 million. For impaired credits, if the net carrying value of the loans was 10% higher or lower, the allowance would have decreased or increased by less than \$1 million, respectively.

Nonperforming assets

Total nonperforming assets were \$81 million at Sept. 30, 2018 compared with \$90 million at Dec. 31, 2017. The decrease primarily reflects lower other residential mortgage loans driven by paydowns and sales. See Note 5 of the Notes to Consolidated Financial Statements for additional information on nonperforming assets.

Deposits

Total deposits were \$231.6 billion at Sept. 30, 2018, a decrease of 5% compared with \$244.3 billion at Dec. 31, 2017. The decrease primarily reflects lower interest-bearing deposits in non-U.S. offices and noninterest-bearing deposits principally in U.S. offices, partially offset by higher interest-bearing deposits in U.S. offices.

Noninterest-bearing deposits were \$65.8 billion at Sept. 30, 2018 compared with \$82.7 billion at Dec. 31, 2017. Interest-bearing deposits were \$165.8 billion at Sept. 30, 2018 compared with \$161.6 billion at Dec. 31, 2017.

Short-term borrowings

We fund ourselves primarily through deposits and, to a lesser extent, other short-term borrowings and long-term debt. Short-term borrowings consist of federal funds purchased and securities sold under repurchase agreements, payables to customers and broker-dealers, commercial paper and other borrowed funds. Certain other borrowings, for example, securities sold under repurchase agreements, require the delivery of securities as collateral.

See “Liquidity and dividends” for a discussion of long-term debt and liquidity metrics that we monitor.

Information related to federal funds purchased and securities sold under repurchase agreements is presented below.

Federal funds purchased and securities sold under repurchase agreements

(dollars in millions)	Quarter ended		
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017
Maximum month-end balance during the quarter	\$ 13,020	\$ 14,138	\$ 21,850
Average daily balance (a)	\$ 14,199	\$ 18,146	\$ 21,403
Weighted-average rate during the quarter (a)	5.33%	3.48%	1.30%
Ending balance (b)	\$ 10,158	\$ 13,200	\$ 10,314
Weighted-average rate at period end (b)	7.33%	4.24%	1.35%

(a) Includes the impact of offsetting under enforceable netting agreements of \$25,922 million for the third quarter of 2018, \$17,975 million for the second quarter of 2018 and \$6,518 million for the third quarter of 2017.

(b) Includes the impact of offsetting under enforceable netting agreements of \$58,540 million at Sept. 30, 2018, \$36,766 million at June 30, 2018 and \$19,171 million at Sept. 30, 2017.

Fluctuations of federal funds purchased and securities sold under repurchase agreements between periods reflect changes in overnight borrowing opportunities. The increase in the weighted-average rates, compared with both June 30, 2018 and Sept. 30, 2017, primarily reflects the impact of offsetting under enforceable netting agreements on the balance sheet and higher interest rates.

Information related to payables to customers and broker-dealers is presented below.

Payables to customers and broker-dealers

(dollars in millions)	Quarter ended		
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017
Maximum month-end balance during the quarter	\$ 19,232	\$ 20,349	\$ 21,563
Average daily balance (a)	\$ 19,073	\$ 19,402	\$ 21,280
Weighted-average rate during the quarter (a)	1.23%	1.10%	0.42%
Ending balance	\$ 18,683	\$ 19,123	\$ 21,176
Weighted-average rate at period end	1.30%	1.08%	0.43%

(a) The weighted-average rate is calculated based on, and is applied to, the average interest-bearing payables to customers and broker-dealers, which were \$16,252 million in the third quarter of 2018, \$16,349 million in the second quarter of 2018 and \$18,516 million in the third quarter of 2017.

Payables to customers and broker-dealers represent funds awaiting re-investment and short sale proceeds payable on demand. Payables to customers and broker-dealers are driven by customer trading activity levels and market volatility.

Information related to commercial paper is presented below.

Commercial paper <i>(dollars in millions)</i>	Quarter ended		
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017
Maximum month-end balance during the quarter	\$ 4,422	\$ 4,470	\$ 4,277
Average daily balance	\$ 3,102	\$ 3,869	\$ 2,736
Weighted-average rate during the quarter	2.10%	2.13%	1.15%
Ending balance	\$ 735	\$ 2,508	\$ 2,501
Weighted-average rate at period end	2.06%	2.24%	1.18%

The Bank of New York Mellon, our largest bank subsidiary, issues commercial paper that matures within 397 days from date of issue and is not redeemable prior to maturity or subject to voluntary prepayment. The decrease in the commercial paper ending balance, compared with both June 30, 2018 and Sept. 30, 2017, primarily reflects management of overall liquidity. The increase in weighted-average rates, compared with the third quarter of 2017, primarily reflects increases in the Fed Funds effective rate and the issuance of higher-yielding term commercial paper.

Information related to other borrowed funds is presented below.

Other borrowed funds <i>(dollars in millions)</i>	Quarter ended		
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017
Maximum month-end balance during the quarter	\$ 3,269	\$ 3,053	\$ 3,353
Average daily balance	\$ 2,747	\$ 2,399	\$ 2,197
Weighted-average rate during the quarter	2.33%	2.40%	1.38%
Ending balance	\$ 2,934	\$ 3,053	\$ 3,353
Weighted-average rate at period end	2.48%	2.53%	1.56%

Other borrowed funds primarily include borrowings from the Federal Home Loan Bank (“FHLB”), overdrafts of sub-custodian account balances in our Investment Services businesses, capital lease obligations and borrowings under lines of credit by our Pershing subsidiaries. Overdrafts typically relate to timing differences for settlements. The decrease in the ending balance of other borrowed funds, compared with Sept. 30, 2017 primarily reflects a decline in overdrafts and lower capital lease obligations due the purchase of the leased asset,

partially offset by an increase in borrowings from the FHLB.

Liquidity and dividends

BNY Mellon defines liquidity as the ability of the Parent and its subsidiaries to access funding or convert assets to cash quickly and efficiently, or to roll over or issue new debt, especially during periods of market stress, at a reasonable cost and in order to meet its short-term (up to one year) obligations. Funding liquidity risk is the risk that BNY Mellon cannot meet its cash and collateral obligations at a reasonable cost for both expected and unexpected cash flow and collateral needs without adversely affecting daily operations or our financial condition. Funding liquidity risk can arise from funding mismatches, market constraints from the inability to convert assets to cash, the inability to hold or raise cash, low overnight deposits, deposit run-off or contingent liquidity events.

We also manage liquidity risks on an intraday basis. Intraday liquidity risk is the risk that BNY Mellon cannot access funds during the business day to make payments or settle immediate obligations, usually in real time. Intraday liquidity risk can arise from timing mismatches, market constraints from the inability to convert assets to cash, the inability to raise cash intraday, low overnight deposits and/or adverse stress events.

Changes in economic conditions or exposure to credit, market, operational, legal and reputational risks also can affect BNY Mellon’s liquidity risk profile and are considered in our liquidity risk framework.

The Parent’s policy is to have access to sufficient unencumbered cash and cash equivalents at each quarter-end to cover forecasted debt redemptions, net interest payments and net tax payments for the following 18-month period, and to provide sufficient collateral to satisfy transactions subject to Section 23A of the Federal Reserve Act. As of Sept. 30, 2018, the Parent was in compliance with this policy. For additional information on our liquidity policy, see “Risk Management - Liquidity risk” in our 2017 Annual Report. Our overall approach to liquidity management is further described in “Liquidity and dividends” in our 2017 Annual Report.

We define available funds for internal liquidity management purposes as liquid funds (which include interest-bearing deposits with banks and federal funds sold and securities purchased under resale agreements), cash and due from banks, and interest-

bearing deposits with the Federal Reserve and other central banks. The following table presents our total available funds, including liquid funds, at period end and on an average basis.

Available and liquid funds <i>(in millions)</i>	Sept. 30, 2018	Dec. 31, 2017	Average		
			3Q18	2Q18	3Q17
Available funds:					
Liquid funds:					
Interest-bearing deposits with banks	\$ 14,519	\$ 11,979	\$ 14,691	\$ 15,748	\$ 15,899
Federal funds sold and securities purchased under resale agreements	28,722	28,135	26,738	28,051	28,120
Total liquid funds	43,241	40,114	41,429	43,799	44,019
Cash and due from banks	5,047	5,382	5,000	4,916	4,961
Interest-bearing deposits with the Federal Reserve and other central banks	74,725	91,510	61,216	69,676	70,430
Total available funds	\$ 123,013	\$ 137,006	\$ 107,645	\$ 118,391	\$ 119,410
Total available funds as a percentage of total assets	35%	37%	32%	34%	35%

We had \$43.2 billion of liquid funds at Sept. 30, 2018 and \$40.1 billion at Dec. 31, 2017. Of the \$43.2 billion in liquid funds held at Sept. 30, 2018, \$14.5 billion was placed in interest-bearing deposits with large, highly-rated global financial institutions with a weighted-average life to maturity of approximately 20 days. Of the \$14.5 billion, \$2.1 billion was placed with banks in the Eurozone.

Total available funds were \$123.0 billion at Sept. 30, 2018, compared with \$137.0 billion at Dec. 31, 2017. The decrease was primarily due to a decrease in interest-bearing deposits with the Federal Reserve and other central banks.

Average non-core sources of funds, such as federal funds purchased and securities sold under repurchase agreements, trading liabilities, commercial paper and other borrowed funds, were \$24.2 billion for the nine months ended Sept. 30, 2018 and \$24.4 billion for the nine months ended Sept. 30, 2017. The decrease primarily reflects a decrease in federal funds purchased and securities sold under repurchase agreements, partially offset by an increase in other borrowed funds and commercial paper.

Average foreign deposits, primarily from our European-based Investment Services business, were \$97.7 billion for the nine months ended Sept. 30, 2018, compared with \$94.1 billion for the nine months ended Sept. 30, 2017. Average interest-bearing domestic deposits were \$54.6 billion for the nine months ended Sept. 30, 2018 and \$47.5 billion for the nine months ended Sept. 30, 2017. The

increase primarily reflects an increase in demand deposits.

Average payables to customers and broker-dealers were \$16.6 billion for the nine months ended Sept. 30, 2018 and \$19.4 billion for the nine months ended Sept. 30, 2017. Payables to customers and broker-dealers are driven by customer trading activity and market volatility.

Average long-term debt was \$28.3 billion for the nine months ended Sept. 30, 2018 and \$27.1 billion for the nine months ended Sept. 30, 2017, with the increase primarily reflecting issuances of long-term debt.

Average noninterest-bearing deposits decreased to \$65.4 billion for the nine months ended Sept. 30, 2018 from \$72.5 billion for the nine months ended Sept. 30, 2017, reflecting a decrease in client deposits.

A significant reduction in our Investment Services business would reduce our access to deposits. See “Asset/liability management” for additional factors that could impact our deposit balances.

Sources of liquidity

The Parent’s three major sources of liquidity are access to the debt and equity markets, dividends from its subsidiaries, and cash on hand and cash otherwise made available in business-as-usual circumstances to the Parent through a committed credit facility with our intermediate holding company (“IHC”).

Our ability to access the capital markets on favorable terms, or at all, is partially dependent on our credit ratings, which are as follows:

Credit ratings at Sept. 30, 2018				
	Moody's	S&P	Fitch	DBRS
Parent:				
Long-term senior debt	A1	A	AA-	AA (low)
Subordinated debt	A2	A-	A+	A (high)
Preferred stock	Baa1	BBB	BBB	A (low)
Outlook - Parent:	Stable	Stable	Stable	Stable
The Bank of New York Mellon:				
Long-term senior debt	Aa2	AA-	AA	AA
Subordinated debt	Aa3	A	A+	NR
Long-term deposits	Aa1	AA-	AA+	AA
Short-term deposits	P1	A-1+	F1+	R-1 (high)
Commercial paper	P1	A-1+	F1+	R-1 (high)
BNY Mellon, N.A.:				
Long-term senior debt	Aa2	AA-	AA ^(a)	AA
Long-term deposits	Aa1	AA-	AA+	AA
Short-term deposits	P1	A-1+	F1+	R-1 (high)
Outlook - Banks:	Stable	Stable	Stable	Stable

(a) Represents senior debt issuer default rating.

NR - Not rated.

Long-term debt totaled \$28.1 billion at Sept. 30, 2018 and \$28.0 billion at Dec. 31, 2017. The balance reflects issuances of \$4.2 billion, offset by maturities of \$3.4 billion and a decrease in the fair value of hedged long-term debt. The Parent has \$250 million of long-term debt that will mature in the fourth quarter of 2018.

In August 2018, we issued \$750 million of fixed rate senior notes maturing in 2023 at an annual interest rate of 3.45% and \$400 million of fixed rate senior notes maturing in 2028 at an annual interest rate of 3.85%.

In the second quarter of 2018, BNY Mellon established programs for the issuance of notes and certificates of deposit (“CDs”) issued by The Bank of New York Mellon, our largest bank subsidiary. These programs are designed to improve diversity of our funding sources and provide additional flexibility in our liquidity planning. There were no notes or CDs issued through these programs in the third quarter of 2018.

The Bank of New York Mellon, our largest bank subsidiary, issues commercial paper that matures within 397 days from date of issue and is not redeemable prior to maturity or subject to voluntary prepayment. The average commercial paper borrowings were \$3.1 billion for the three months

ended Sept. 30, 2018 and \$2.7 billion for the three months ended Sept. 30, 2017. Commercial paper outstanding was \$735 million at Sept. 30, 2018 and \$3.1 billion at Dec. 31, 2017.

Subsequent to Sept. 30, 2018, our U.S. bank subsidiaries could declare dividends to the Parent of approximately \$4.8 billion, without the need for a regulatory waiver. In addition, at Sept. 30, 2018, non-bank subsidiaries of the Parent had liquid assets of approximately \$1.7 billion. Restrictions on our ability to obtain funds from our subsidiaries are discussed in more detail in “Supervision and Regulation - Capital Planning and Stress Testing - Payment of Dividends, Stock Repurchases and Other Capital Distributions” and in Note 17 of the Notes to Consolidated Financial Statements in our 2017 Annual Report.

Pershing LLC has uncommitted lines of credit in place for liquidity purposes which are guaranteed by the Parent. Pershing LLC has eight separate uncommitted lines of credit amounting to \$1.5 billion in aggregate. There were no borrowings under these lines in the third quarter of 2018. Pershing Limited, an indirect UK-based subsidiary of BNY Mellon, has two separate uncommitted lines of credit amounting to \$250 million in aggregate. Average borrowings under these lines were \$1 million, in aggregate, in the third quarter of 2018.

The double leverage ratio is the ratio of our equity investment in subsidiaries divided by our consolidated parent company equity, which includes our noncumulative perpetual preferred stock. In short, the double leverage ratio measures the extent to which equity in subsidiaries is financed by Parent company debt. As the double leverage ratio increases, this can reflect greater demands on a company's cash flows in order to service interest payments and debt maturities. BNY Mellon's double leverage ratio is managed in a range considering the high level of unencumbered available liquid assets held in its principal subsidiaries (such as central bank deposits and government securities), the Company's cash generating fee-based business model, with fee revenue representing 78% of total revenue in the third quarter of 2018, and the dividend capacity of our banking subsidiaries. Our double leverage ratio was 120.0% at Sept. 30, 2018 and 122.5% at Dec. 31, 2017, and within the range targeted by management.

Uses of funds

The Parent's major uses of funds are payment of dividends, repurchases of common stock, principal and interest payments on its borrowings, acquisitions and additional investments in its subsidiaries.

In August 2018, a quarterly cash dividend of \$0.28 per common share was paid to common shareholders. Our common stock dividend payout ratio was 24% for the first nine months of 2018.

In the third quarter of 2018, we repurchased 12 million common shares at an average price of \$51.50 per common share for a total cost of \$602 million.

Liquidity coverage ratio

U.S. regulators have established an LCR that requires certain banking organizations, including BNY Mellon, to maintain a minimum amount of unencumbered high-quality liquid assets ("HQLA") sufficient to withstand the net cash outflow under a hypothetical standardized acute liquidity stress scenario for a 30-day time horizon.

The following table presents the consolidated HQLA at Sept. 30, 2018, and the average HQLA and average LCR for the third quarter of 2018.

Consolidated HQLA and LCR <i>(dollars in billions)</i>	Sept. 30, 2018
Securities (a)	\$ 106
Cash (b)	68
Total consolidated HQLA (c)	\$ 174
Total consolidated HQLA - average (c)	\$ 158
Average LCR	121%

- (a) Primarily includes securities of U.S. government-sponsored enterprises, U.S. Treasury, sovereign securities, U.S. agency and investment-grade corporate debt.
- (b) Primarily includes cash on deposit with central banks.
- (c) Consolidated HQLA presented before adjustments. After haircuts and the impact of trapped liquidity, consolidated HQLA totaled \$130 billion at Sept. 30, 2018 and averaged \$117 billion for the third quarter of 2018.

The U.S. LCR rule requires BNY Mellon and each of our affected domestic bank subsidiaries to meet an LCR of at least 100%. BNY Mellon and each of our affected domestic bank subsidiaries were compliant with the U.S. LCR requirements throughout the first nine months of 2018.

We also perform liquidity stress tests ("LSTs") to evaluate whether the Company and certain domestic bank subsidiaries maintain sufficient liquidity resources under multiple stress scenarios. LSTs are based on scenarios that measure liquidity risks under unlikely but plausible conditions. We perform these tests under various time horizons ranging from one day to one year in a base case, as well as supplemental tests to determine whether the Company and certain domestic subsidiaries' liquidity is sufficient for severe market events and firm-specific events. The Parent's LST framework includes a test known as the Resolution Liquidity Adequacy and Positioning ("RLAP"). The RLAP test is designed to ensure that the liquidity needs of certain key subsidiaries in a stress environment can be met by available resources held at the entity or at the Parent or IHC, as applicable. Under our scenario testing program, the results of the tests indicate that we have sufficient liquidity.

Statement of cash flows

The following summarizes the activity reflected on the consolidated statement of cash flows. While this information may be helpful to highlight certain macro trends and business strategies, the cash flow analysis may not be as relevant when analyzing changes in our net earnings and net assets. We believe that in addition to the traditional cash flow analysis, the discussion related to liquidity and dividends and

asset/liability management herein may provide more useful context in evaluating our liquidity position and related activity.

Net cash provided by operating activities was \$2.8 billion in the nine months ended Sept. 30, 2018, compared with \$3.4 billion in the nine months ended Sept. 30, 2017. In the first nine months of 2018, net cash provided by operations primarily resulted from earnings, partially offset by changes in trading activities. In the first nine months of 2017, net cash provided by operations was principally the result of earnings.

Net cash provided by investing activities was \$18.0 billion in the nine months ended Sept. 30, 2018, compared with net cash used for investing activities of \$13.5 billion in the nine months ended Sept. 30, 2017. In the first nine months of 2018, net cash provided by investing activities primarily reflects changes in interest-bearing deposits with the Federal Reserve and other central banks and changes in loans,

partially offset by changes in interest-bearing deposits with banks. In the first nine months of 2017, changes in interest-bearing deposits with the Federal Reserve and other central banks was a significant use of funds.

Net cash used for financing activities was \$21.6 billion in the nine months ended Sept. 30, 2018, compared with net cash provided by financing activities of \$11.2 billion in the nine months ended Sept. 30, 2017. In the first nine months of 2018, net cash used for financing activities primarily reflects changes in deposits, changes in federal funds purchased and securities sold under repurchase agreements, repayment of long-term debt, a decrease in commercial paper and common stock repurchases, partially offset by net proceeds from the issuance of long-term debt. In the first nine months of 2017, the proceeds from the issuance of long-term debt, changes in deposits and increases in commercial paper and other borrowed funds were significant sources of funds, partially offset by common stock repurchases.

Capital

Capital data (dollars in millions except per share amounts; common shares in thousands)	Sept. 30, 2018	June 30, 2018	Dec. 31, 2017
Average common equity to average assets	11.4%	10.9%	10.5%
At period end:			
BNY Mellon shareholders' equity to total assets ratio	11.9%	11.8%	11.1%
BNY Mellon common shareholders' equity to total assets ratio	10.9%	10.8%	10.1%
Total BNY Mellon shareholders' equity	\$ 41,560	\$ 41,505	\$ 41,251
Total BNY Mellon common shareholders' equity (a)	\$ 38,018	\$ 37,963	\$ 37,709
BNY Mellon tangible common shareholders' equity – Non-GAAP (a)	\$ 19,135	\$ 19,000	\$ 18,486
Book value per common share (a)	\$ 38.45	\$ 37.97	\$ 37.21
Tangible book value per common share – Non-GAAP (a)	\$ 19.35	\$ 19.00	\$ 18.24
Closing stock price per common share	\$ 50.99	\$ 53.93	\$ 53.86
Market capitalization	\$ 50,418	\$ 53,927	\$ 54,584
Common shares outstanding	988,777	999,945	1,013,442
Cash dividends per common share	\$ 0.28	\$ 0.24	\$ 0.24
Common dividend payout ratio	26%	23%	22%
Common dividend yield (annualized)	2.2%	1.8%	1.8%

(a) See "Supplemental information – Explanation of GAAP and Non-GAAP financial measures" beginning on page 41 for a reconciliation of GAAP to Non-GAAP.

The Bank of New York Mellon Corporation total shareholders' equity increased to \$41.6 billion at Sept. 30, 2018 from \$41.3 billion at Dec. 31, 2017. The increase primarily reflects earnings, partially offset by common stock repurchases, dividend payments and unrealized losses on securities available-for-sale.

In the third quarter of 2018, we repurchased 12 million common shares at an average price of \$51.50 per common share for a total cost of \$602 million under the current program.

The unrealized loss, net of tax, on our available-for-sale securities portfolio included in accumulated OCI

was \$228 million at Sept. 30, 2018, compared with a net unrealized gain of \$184 million at Dec. 31, 2017. The decrease in the unrealized gain, net of tax, was primarily driven by higher interest rates.

Capital adequacy

Regulators establish certain levels of capital for BHCs and banks, including BNY Mellon and our bank subsidiaries, in accordance with established quantitative measurements. For the Parent to maintain its status as a financial holding company, our U.S. bank subsidiaries and BNY Mellon must, among other things, qualify as “well capitalized.” As of Sept. 30, 2018 and Dec. 31, 2017, BNY Mellon and our U.S. bank subsidiaries were “well capitalized.”

Failure to satisfy regulatory standards, including “well capitalized” status or capital adequacy rules more generally, could result in limitations on our activities and adversely affect our financial condition. See the discussion of these matters in “Supervision and Regulation - Regulated Entities of BNY Mellon

and Ancillary Regulatory Requirements” and “Risk Factors - Operational Risk - Failure to satisfy regulatory standards, including “well capitalized” and “well managed” status or capital adequacy and liquidity rules more generally, could result in limitations on our activities and adversely affect our business and financial condition” in our 2017 Annual Report.

The U.S. banking agencies’ capital rules are based on the framework adopted by the Basel Committee on Banking Supervision, as amended from time to time. For additional information on these capital requirements, see “Supervision and Regulation” in our 2017 Annual Report. BNY Mellon is subject to the U.S. capital rules, which are being gradually phased-in over a multi-year period through Jan. 1, 2019. The phase-in requirements for capital were completed on Jan. 1, 2018.

Our risk-based capital adequacy is determined using the higher of risk-weighted assets (“RWAs”) determined using the Advanced Approach and Standardized Approach.

The table below presents our consolidated and largest bank subsidiary regulatory capital ratios.

Consolidated and largest bank subsidiary regulatory capital ratios	Sept. 30, 2018			June 30, 2018	Dec. 31, 2017	
	Well capitalized	Minimum required (a)	Capital ratios		Fully phased-in	Transitional (b)
Consolidated regulatory capital ratios: (c)(d)						
Advanced Approach:						
CET1 ratio	N/A (e)	7.5%	11.2%	11.0%	10.3%	10.7%
Tier 1 capital ratio	6%	9	13.3	13.1	12.3	12.7
Total capital ratio	10%	11	14.1	13.8	13.0	13.4
Standardized Approach:						
CET1 ratio	N/A (e)	7.5%	12.4%	11.9%	11.5%	11.9%
Tier 1 capital ratio	6%	9	14.7	14.1	13.7	14.2
Total capital ratio	10%	11	15.7	15.1	14.7	15.1
Tier 1 leverage ratio	N/A (e)	4	7.0	6.7	6.4	6.6
SLR (f)	N/A (e)	5	6.4	6.1	5.9	6.1
The Bank of New York Mellon regulatory capital ratios: (c)						
Advanced Approach:						
CET1 ratio	6.5%	6.375%	14.9%	14.9%	N/A	14.1%
Tier 1 capital ratio	8	7.875	15.2	15.2	N/A	14.4
Total capital ratio	10	9.875	15.6	15.6	N/A	14.7
Tier 1 leverage ratio	5	4	8.2	7.9	N/A	7.6
SLR (f)	6	3	7.4	7.1	6.7	6.9

(a) Minimum requirements for Sept. 30, 2018 include minimum thresholds plus currently applicable buffers.

(b) Reflects transitional adjustments to CET1, Tier 1 capital, Tier 2 capital required in 2017 under the U.S. capital rules.

(c) For our CET1, Tier 1 capital and Total capital ratios, our effective capital ratios under U.S. capital rules are the lower of the ratios as calculated under the Standardized and Advanced Approaches. The Tier 1 leverage ratio is based on Tier 1 capital and quarterly average total assets.

(d) See page 36 for the capital ratios with the phase-in of the capital conservation buffer and the U.S. G-SIB surcharge, as well as the introduction of the SLR buffer.

(e) The Federal Reserve's regulations do not establish well capitalized thresholds for these measures for BHCs.

(f) SLR became a binding measure on Jan. 1, 2018. The SLR is based on Tier 1 capital and total leverage exposure, which includes certain off-balance sheet exposures.

Our CET1 ratio determined under the Advanced Approach was 11.2% at Sept. 30, 2018 and 10.7%, on a transitional basis, at Dec. 31, 2017. The ratio increased compared to Dec. 31, 2017, primarily reflecting lower RWAs and capital generated through earnings, partially offset by the final phase-in requirements under the U.S. capital rules and the capital deployed through common stock repurchases and dividend payments.

Our SLR was 6.4% at Sept. 30, 2018 and 6.1%, on a transitional basis, at Dec. 31, 2017.

For additional information on the U.S. capital rules, see "Supervision and Regulation - Capital Requirements - Generally" in our 2017 Annual Report and "Recent regulatory developments" in our Quarterly Reports on Form 10-Q for the first and second quarters of 2018.

The Advanced Approach capital ratios are significantly impacted by RWAs for operational risk. Our operational loss risk model is informed by external losses, including fines and penalties levied against institutions in the financial services industry, particularly those that relate to businesses in which we operate, and as a result external losses have impacted and could in the future impact the amount of capital that we are required to hold.

Our capital ratios are necessarily subject to, among other things, anticipated compliance with all necessary enhancements to model calibration, approval by regulators of certain models used as part of RWA calculations, other refinements, further implementation guidance from regulators, market practices and standards and any changes BNY Mellon may make to its businesses. As a consequence of these factors, our capital ratios may materially change, and may be volatile over time and from period to period.

The following table presents our capital components and RWAs.

Capital components and risk-weighted assets <i>(in millions)</i>	Sept. 30, 2018	June 30, 2018	Dec. 31, 2017	
			Fully phased-in	Transitional Approach <i>(a)</i>
CET1:				
Common shareholders' equity	\$ 38,018	\$ 37,963	\$ 37,709	\$ 37,859
Adjustments for:				
Goodwill and intangible assets <i>(b)</i>	(18,883)	(18,963)	(19,223)	(18,684)
Net pension fund assets	(218)	(216)	(211)	(169)
Equity method investments	(368)	(363)	(387)	(372)
Deferred tax assets	(42)	(41)	(41)	(33)
Other	10	6	(9)	(8)
Total CET1	18,517	18,386	17,838	18,593
Other Tier 1 capital:				
Preferred stock	3,542	3,542	3,542	3,542
Deferred tax assets	—	—	—	(8)
Net pension fund assets	—	—	—	(42)
Other	(57)	(51)	(41)	(41)
Total Tier 1 capital	\$ 22,002	\$ 21,877	\$ 21,339	\$ 22,044
Tier 2 capital:				
Subordinated debt	\$ 1,250	\$ 1,250	\$ 1,250	\$ 1,250
Allowance for credit losses	251	254	261	261
Other	(6)	(6)	(12)	(12)
Total Tier 2 capital – Standardized Approach	1,495	1,498	1,499	1,499
Excess of expected credit losses	53	53	31	31
Less: Allowance for credit losses	251	254	261	261
Total Tier 2 capital – Advanced Approach	\$ 1,297	\$ 1,297	\$ 1,269	\$ 1,269
Total capital:				
Standardized Approach	\$ 23,497	\$ 23,375	\$ 22,838	\$ 23,543
Advanced Approach	\$ 23,299	\$ 23,174	\$ 22,608	\$ 23,313
Risk-weighted assets:				
Standardized Approach	\$ 149,348	\$ 154,612	\$ 155,324	\$ 155,621
Advanced Approach:				
Credit Risk	\$ 93,499	\$ 95,888	\$ 101,366	\$ 101,681
Market Risk	3,988	3,804	3,657	3,657
Operational Risk	67,650	67,888	68,688	68,688
Total Advanced Approach	\$ 165,137	\$ 167,580	\$ 173,711	\$ 174,026
Average assets for Tier 1 leverage ratio	\$ 312,779	\$ 326,700	\$ 330,894	\$ 331,600
Total leverage exposure for SLR	\$ 341,566	\$ 355,773	\$ 360,543	\$ 361,249

(a) Reflects transitional adjustments to CET1, Tier 1 capital, Tier 2 capital required in 2017 under the U.S. capital rules.

(b) Reduced by deferred tax liabilities associated with intangible assets and tax deductible goodwill.

The table below presents the factors that impacted the CET1 capital.

CET1 generation <i>(in millions)</i>	Sept. 30, 2018
CET1 – Beginning of period	\$ 18,386
Net income applicable to common shareholders of The Bank of New York Mellon Corporation	1,075
Goodwill and intangible assets, net of related deferred tax liabilities	80
Gross CET1 generated	1,155
Capital deployed:	
Common stock dividends	(283)
Common stock repurchased	(602)
Total capital deployed	(885)
Other comprehensive income:	
Foreign currency translation	(58)
Unrealized loss on assets available-for-sale	(144)
Defined benefit plans	18
Unrealized gain on cash flow hedges	(4)
Total other comprehensive income	(188)
Additional paid-in capital (a)	53
Other (deductions) additions:	
Net pension fund assets	(2)
Deferred tax assets	(1)
Embedded goodwill	(5)
Other	4
Total other deductions	(4)
Net CET1 generated	131
CET1 – End of period	\$ 18,517

(a) Primarily related to stock awards, the exercise of stock options and stock issued for employee benefit plans.

Minimum capital ratios and capital buffers

The U.S. capital rules include a series of buffers and surcharges over required minimums that apply to BHCs, including BNY Mellon, which are being phased-in over time. Banking organizations with a risk-based ratio or SLR above the minimum required level, but with a risk-based ratio or SLR below the minimum level with buffers, will face constraints on dividends, equity repurchases and discretionary executive compensation based on the amount of the shortfall. Different regulatory capital buffers apply to our banking subsidiaries.

The following table presents the principal minimum capital ratio requirements with buffers and surcharges, as phased-in, applicable to the Parent and The Bank of New York Mellon. This table does not include the imposition of a countercyclical capital buffer. Buffers and surcharges are not applicable to the Tier 1 leverage ratio. These buffers, other than the SLR buffer, and surcharge will be fully implemented on Jan. 1, 2019.

Capital ratio requirements	Well capitalized	Minimum ratios	Minimum ratios with buffers, as phased-in (a)	
			2018	2019
Capital conservation buffer (CET1)			1.875%	2.5%
U.S. G-SIB surcharge (CET1) (b)(c)			1.125%	1.5%
Consolidated:				
CET1 ratio	N/A	4.5%	7.5%	8.5%
Tier 1 capital ratio	6.0%	6.0%	9.0%	10.0%
Total capital ratio	10.0%	8.0%	11.0%	12.0%
Enhanced SLR buffer (Tier 1 capital)	N/A		2.0%	2.0%
SLR	N/A	3.0%	5.0%	5.0%
Bank subsidiaries: (c)				
CET1 ratio	6.5%	4.5%	6.375%	7.0%
Tier 1 capital ratio	8.0%	6.0%	7.875%	8.5%
Total capital ratio	10.0%	8.0%	9.875%	10.5%
SLR	6.0%	3.0%	6.0% (d)	6.0% (d)

(a) Countercyclical capital buffer currently set to 0%.

(b) The fully phased-in U.S. G-SIB surcharge of 1.5% applicable to BNY Mellon is subject to change.

(c) The U.S. G-SIB surcharge is not applicable to the regulatory capital ratios of the bank subsidiaries.

(d) Well capitalized threshold.

The following table shows the impact on the consolidated capital ratios at Sept. 30, 2018 of a \$100 million increase or decrease in common equity, or a \$1 billion increase or decrease in RWAs, quarterly average assets or total leverage exposure.

<i>(in basis points)</i>	Sensitivity of consolidated capital ratios at Sept. 30, 2018	
	Increase or decrease of	
	\$100 million in common equity	\$1 billion in RWA, quarterly average assets or total leverage exposure
CET1:		
Standardized Approach	7 bps	8 bps
Advanced Approach	6	7
Tier 1 capital:		
Standardized Approach	7	10
Advanced Approach	6	8
Total capital:		
Standardized Approach	7	11
Advanced Approach	6	9
Tier 1 leverage	3	2
SLR	3	2

Capital ratios vary depending on the size of the balance sheet at quarter-end and the levels and types of investments in assets. The balance sheet size fluctuates from quarter to quarter based on levels of customer and market activity. In general, when servicing clients are more actively trading securities, deposit balances and the balance sheet as a whole are higher. In addition, when markets experience significant volatility or stress, our balance sheet size may increase considerably as client deposit levels increase.

Trading activities and risk management

Our trading activities are focused on acting as a market-maker for our customers, facilitating customer trades and risk mitigating hedging in compliance with the Volcker Rule. The risk from market-making activities for customers is managed by our traders and limited in total exposure through a system of position limits, value-at-risk (“VaR”) methodology and other market sensitivity measures. VaR is the potential loss in value due to adverse market movements over a defined time horizon with a specified confidence level. The calculation of our VaR used by management and presented below assumes a one-day holding period, utilizes a 99% confidence level, and incorporates non-linear product characteristics. VaR

facilitates comparisons across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk at the firm-wide level.

VaR represents a key risk management measure and it is important to note the inherent limitations to VaR, which include:

- VaR does not estimate potential losses over longer time horizons where moves may be extreme;
- VaR does not take account of potential variability of market liquidity; and
- Previous moves in market risk factors may not produce accurate predictions of all future market moves.

See Note 17 of the Notes to Consolidated Financial Statements for additional information on the VaR methodology.

The following tables indicate the calculated VaR amounts for the trading portfolio for the designated periods using the historical simulation VaR model.

VaR (a) <i>(in millions)</i>	3Q18			Sept. 30, 2018
	Average	Minimum	Maximum	
Interest rate	\$ 3.6	\$ 3.0	\$ 5.0	\$ 3.7
Foreign exchange	3.6	2.9	5.6	5.5
Equity	0.5	—	0.8	0.1
Credit	0.8	0.6	1.1	0.9
Diversification	(3.8)	N/M	N/M	(4.6)
Overall portfolio	4.7	3.6	6.3	5.6

VaR (a) <i>(in millions)</i>	2Q18			June 30, 2018
	Average	Minimum	Maximum	
Interest rate	\$ 4.0	\$ 3.3	\$ 5.2	\$ 3.5
Foreign exchange	3.7	2.9	5.7	3.5
Equity	0.7	0.5	1.0	0.5
Credit	0.8	0.6	1.0	1.0
Diversification	(3.9)	N/M	N/M	(3.9)
Overall portfolio	5.3	4.3	7.0	4.6

VaR (a) <i>(in millions)</i>	3Q17			Sept. 30, 2017
	Average	Minimum	Maximum	
Interest rate	\$ 3.3	\$ 2.8	\$ 4.2	\$ 2.7
Foreign exchange	3.7	3.1	5.6	4.8
Equity	0.9	0.8	1.1	0.9
Credit	1.0	0.6	1.4	1.0
Diversification	(5.1)	N/M	N/M	(5.3)
Overall portfolio	3.8	3.2	5.3	4.1

VaR (a) (in millions)	YTD18		
	Average	Minimum	Maximum
Interest rate	\$ 4.0	\$ 3.0	\$ 5.5
Foreign exchange	4.2	2.9	8.3
Equity	0.7	—	1.2
Credit	1.0	0.6	2.6
Diversification	(4.4)	N/M	N/M
Overall portfolio	5.5	3.6	10.4

VaR (a) (in millions)	YTD17		
	Average	Minimum	Maximum
Interest rate	\$ 3.5	\$ 2.8	\$ 4.9
Foreign exchange	3.9	2.6	5.8
Equity	0.4	0.1	1.1
Credit	1.1	0.5	1.7
Diversification	(4.9)	N/M	N/M
Overall portfolio	4.0	3.2	5.4

(a) VaR exposure does not include the impact of the Company's consolidated investment management funds and seed capital investments.

N/M - Because the minimum and maximum may occur on different days for different risk components, it is not meaningful to compute a minimum and maximum portfolio diversification effect.

The interest rate component of VaR represents instruments whose values predominantly vary with the level or volatility of interest rates. These instruments include, but are not limited to: sovereign debt, swaps, swaptions, forward rate agreements, exchange-traded futures and options, and other interest rate derivative products.

The foreign exchange component of VaR represents instruments whose values predominantly vary with the level or volatility of currency exchange rates or interest rates. These instruments include, but are not limited to: currency balances, spot and forward transactions, currency options, exchange-traded futures and options, and other currency derivative products.

The equity component of VaR consists of instruments that represent an ownership interest in the form of domestic and foreign common stock or other equity-linked instruments. These instruments include, but are not limited to: common stock, exchange-traded funds, preferred stock, listed equity options (puts and calls), over-the-counter ("OTC") equity options, equity total return swaps, equity index futures and other equity derivative products.

The credit component of VaR represents instruments whose values predominantly vary with the credit

worthiness of counterparties. These instruments include, but are not limited to, credit derivatives (credit default swaps and exchange-traded credit index instruments) and exposures from corporate credit spreads, and mortgage prepayments. Credit derivatives are used to hedge various credit exposures.

The diversification component of VaR is the risk reduction benefit that occurs when combining portfolios and offsetting positions, and from the correlated behavior of risk factor movements.

During the third quarter of 2018, interest rate risk generated 42% of average gross VaR, foreign exchange risk generated 42% of average gross VaR, equity risk accounted for 6% of average gross VaR and credit risk generated 10% of average gross VaR. During the third quarter of 2018, our daily trading loss did not exceed our calculated VaR amount of the overall portfolio on any occasion.

The following table of total daily trading revenue or loss illustrates the number of trading days in which our trading revenue or loss fell within particular ranges during the past five quarters.

(dollars in millions)	Distribution of trading revenue (loss) (a)				
	Quarter ended				
	Sept. 30, 2018	June 30, 2018	March 31, 2018	Dec. 31, 2017	Sept. 30, 2017
Revenue range:	Number of days				
Less than \$(2.5)	—	1	—	2	—
\$(2.5) – \$0	6	3	2	4	1
\$0 – \$2.5	30	21	18	23	29
\$2.5 – \$5.0	20	30	32	22	29
More than \$5.0	7	9	10	11	4

(a) Trading revenue (loss) includes realized and unrealized gains and losses primarily related to spot and forward foreign exchange transactions, derivatives and securities trades for our customers and excludes any associated commissions, underwriting fees and net interest revenue.

Trading assets include debt and equity instruments and derivative assets, primarily interest rate and foreign exchange contracts, not designated as hedging instruments. Trading assets were \$7.8 billion at Sept. 30, 2018 and \$6.0 billion at Dec. 31, 2017. The increase was impacted by the reclassification of money market fund investments of approximately \$1 billion primarily from available-for-sale securities.

Trading liabilities include debt and equity instruments and derivative liabilities, primarily interest rate and foreign exchange contracts, not designated as hedging instruments. Trading liabilities were \$3.5 billion at Sept. 30, 2018 and \$4.0 billion at Dec. 31, 2017.

Under our fair value methodology for derivative contracts, an initial “risk-neutral” valuation is performed on each position assuming time-discounting based on a AA credit curve. In addition, we consider credit risk in arriving at the fair value of our derivatives.

We reflect external credit ratings as well as observable credit default swap spreads for both ourselves and our counterparties when measuring the fair value of our derivative positions. Accordingly, the valuation of our derivative positions is sensitive to the current changes in our own credit spreads, as well as those of our counterparties.

At Sept. 30, 2018, our OTC derivative assets, including those in hedging relationships, of \$2.3 billion included a credit valuation adjustment (“CVA”) deduction of \$18 million. Our OTC derivative liabilities, including those in hedging relationships, of \$2.2 billion included a debit valuation adjustment (“DVA”) of \$2 million related to our own credit spread. Net of hedges, the CVA increased by \$1 million and the DVA was unchanged in the third quarter of 2018, which decreased foreign exchange and other trading revenue. The net impact was an increase of \$2 million in the second quarter of 2018 and an increase of \$1 million in the third quarter of 2017.

The table below summarizes the risk ratings for our foreign exchange and interest rate derivative counterparty credit exposure during the past five quarters. This information indicates the degree of risk to which we are exposed. Significant changes in ratings classifications for our foreign exchange and other trading activity could result in increased risk for us.

Foreign exchange and other trading counterparty risk rating profile (a)

	Quarter ended				
	Sept. 30, 2018	June 30, 2018	March 31, 2018	Dec. 31, 2017	Sept. 30, 2017
Rating:					
AAA to AA-	48%	37%	48%	44%	41%
A+ to A-	30	41	27	31	30
BBB+ to BBB-	19	18	20	20	24
Non-investment grade (BB+ and lower)	3	4	5	5	5
Total	100%	100%	100%	100%	100%

(a) Represents credit rating agency equivalent of internal credit ratings.

Asset/liability management

Our diversified business activities include processing securities, accepting deposits, investing in securities, lending, raising money as needed to fund assets and other transactions. The market risks from these activities include interest rate risk and foreign exchange risk. Our primary market risk is exposure to movements in U.S. dollar interest rates and certain foreign currency interest rates. We actively manage interest rate sensitivity and use earnings simulation and discounted cash flow models to identify interest rate exposures.

An earnings simulation model is the primary tool used to assess changes in pre-tax net interest revenue. The model incorporates management’s assumptions regarding interest rates, market spreads, changes in the prepayment behavior of loans and securities and the impact of derivative financial instruments used for interest rate risk management purposes. These assumptions have been developed through a combination of historical analysis and future expected pricing behavior and are inherently uncertain. Actual results may differ materially from projected results due to timing, magnitude and frequency of interest rate changes, and changes in market conditions and management’s strategies, among other factors.

In the table below, we use the earnings simulation model to run various interest rate ramp scenarios from a baseline scenario. The interest rate ramp scenarios examine the impact of large interest rate movements. In each scenario, all currencies’ interest rates are shifted higher or lower. The baseline scenario is based on our quarter-end balance sheet and the spot yield curve. The 100 basis point ramp scenario assumes rates increase 25 basis points above the yield curve in each of the next four quarters and the 200 basis point ramp scenario assumes a 50 basis

point per quarter increase. Interest rate sensitivity is quantified by calculating the change in pre-tax net interest revenue between the scenarios over a 12-month measurement period.

The following table shows net interest revenue sensitivity for BNY Mellon.

Estimated changes in net interest revenue (in millions)	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017
Up 200 bps parallel rate ramp vs. baseline (a)	\$ 362	\$ 372	\$ 364
Up 100 bps parallel rate ramp vs. baseline (a)	180	183	214
Long-term up 50 bps, short-term unchanged (b)	83	72	113
Long-term down 50 bps, short-term unchanged (b)	(96)	(89)	(129)

(a) In the parallel rate ramp, both short-term and long-term rates move in four equal quarterly increments.

(b) Long-term is equal to or greater than one year.

Sensitivities in the 200 bps and 100 bps parallel rate ramp scenarios decreased in the third quarter of 2018 from the second quarter of 2018 primarily driven by lower deposit and loan balances, partially offset by higher interest rates. In the first quarter of 2018, we changed the net interest revenue sensitivity methodology to assume static deposit levels. Previously, our sensitivities included assumptions about deposit runoff which were difficult to predict. Prior period results have been restated to conform to the current methodology.

To illustrate the net interest revenue sensitivity to deposit runoff, we note that a \$5 billion reduction of U.S. dollar denominated non-interest bearing deposits would reduce the net interest revenue sensitivity results in the ramp up 100 basis point and 200 basis point scenarios in the table above by approximately \$140 million and approximately \$175 million, respectively. The impact would be smaller if the runoff was assumed to be a mixture of interest-bearing and noninterest-bearing deposits.

For a discussion of factors impacting the growth or contraction of deposits, see “Risk Factors - Our business, financial condition and results of operations could be adversely affected if we do not effectively manage our liquidity,” in our 2017 Annual Report.

Off-balance sheet arrangements

Off-balance sheet arrangements discussed in this section are limited to guarantees, retained or contingent interests and obligations arising out of unconsolidated variable interest entities (“VIEs”). For BNY Mellon, these items include certain guarantees. Guarantees include SBLCs issued as part of our corporate banking business and securities lending indemnifications issued as part of our Investment Services business. See Note 18 of the Notes to Consolidated Financial Statements for a further discussion of our off-balance sheet arrangements.

Supplemental information - Explanation of GAAP and Non-GAAP financial measures

BNY Mellon has included in this Form 10-Q certain Non-GAAP financial measures on a tangible basis, as a supplement to GAAP information. Tangible common shareholders' equity excludes goodwill and intangible assets, net of deferred tax liabilities. BNY Mellon believes that the return on tangible common equity measure is an additional useful measure for investors because it presents a measure of those assets that can generate income. BNY Mellon has provided a measure of tangible book value per common share, which it believes provides additional useful information as to the level of tangible assets in relation to shares of common stock outstanding.

The presentation of the growth rates of investment management and performance fees on a constant

currency basis permits investors to assess the significance of changes in foreign currency exchange rates. Growth rates on a constant currency basis were determined by applying the current period foreign currency exchange rates to the prior period revenue. BNY Mellon believes that this presentation, as a supplement to GAAP information, gives investors a clearer picture of the related revenue results without the variability caused by fluctuations in foreign currency exchange rates.

BNY Mellon has presented the operating margin for the Investment Management business net of distribution and servicing expense that was passed to third parties who distribute or service our managed funds. BNY Mellon believes that this measure is useful when evaluating the performance of the Investment Management business relative to industry competitors.

The following table presents the reconciliation of the return on common equity and tangible common equity.

Return on common equity and tangible common equity reconciliation <i>(dollars in millions)</i>	3Q18	2Q18	3Q17	YTD18	YTD17
Net income applicable to common shareholders of The Bank of New York Mellon Corporation – GAAP	\$ 1,075	\$ 1,055	\$ 983	\$ 3,265	\$ 2,789
Add: Amortization of intangible assets	48	48	52	145	157
Less: Tax impact of amortization of intangible assets	11	11	17	34	54
Adjusted net income applicable to common shareholders of The Bank of New York Mellon Corporation, excluding amortization of intangible assets – Non-GAAP	\$ 1,112	\$ 1,092	\$ 1,018	\$ 3,376	\$ 2,892
Average common shareholders' equity	\$ 38,036	\$ 37,750	\$ 36,780	\$ 37,795	\$ 35,876
Less: Average goodwill	17,391	17,505	17,497	17,492	17,415
Average intangible assets	3,283	3,341	3,487	3,340	3,532
Add: Deferred tax liability – tax deductible goodwill (a)	1,066	1,054	1,561	1,066	1,561
Deferred tax liability – intangible assets (a)	699	709	1,092	699	1,092
Average tangible common shareholders' equity – Non-GAAP	\$ 19,127	\$ 18,667	\$ 18,449	\$ 18,728	\$ 17,582
Return on common equity (annualized) – GAAP	11.2%	11.2%	10.6%	11.6%	10.4%
Return on tangible common equity (annualized) – Non-GAAP	23.1%	23.5%	21.9%	24.1%	22.0%

(a) Deferred tax liabilities for the periods in 2017 are based on fully phased-in U.S. capital rules.

The following table presents the reconciliation of the book value and tangible book value per common share.

Book value and tangible book value per common share reconciliation <i>(dollars in millions except common shares)</i>	Sept. 30, 2018	June 30, 2018	Dec. 31, 2017	Sept. 30, 2017
BNY Mellon shareholders' equity at period end – GAAP	\$ 41,560	\$ 41,505	\$ 41,251	\$ 40,523
Less: Preferred stock	3,542	3,542	3,542	3,542
BNY Mellon common shareholders' equity at period end – GAAP	38,018	37,963	37,709	36,981
Less: Goodwill	17,390	17,418	17,564	17,543
Intangible assets	3,258	3,308	3,411	3,461
Add: Deferred tax liability – tax deductible goodwill (a)	1,066	1,054	1,034	1,561
Deferred tax liability – intangible assets (a)	699	709	718	1,092
BNY Mellon tangible common shareholders' equity at period end – Non-GAAP	\$ 19,135	\$ 19,000	\$ 18,486	\$ 18,630
Period-end common shares outstanding <i>(in thousands)</i>	988,777	999,945	1,013,442	1,024,022
Book value per common share – GAAP	\$ 38.45	\$ 37.97	\$ 37.21	\$ 36.11
Tangible book value per common share – Non-GAAP	\$ 19.35	\$ 19.00	\$ 18.24	\$ 18.19

(a) Deferred tax liabilities at Dec. 31, 2017 and Sept. 30, 2017 are based on fully phased-in U.S. capital rules.

The following table presents the impact of changes in foreign currency exchange rates on our consolidated investment management and performance fees.

Constant currency reconciliation – Consolidated <i>(dollars in millions)</i>	3Q18	3Q17	3Q18 vs. 3Q17
Investment management and performance fees	\$ 922	\$ 901	2%
Impact of changes in foreign currency exchange rates	—	(4)	
Adjusted investment management and performance fees – Non-GAAP	\$ 922	\$ 897	3%

The following table presents the impact of changes in foreign currency exchange rates on investment management and performance fees reported in the Investment Management business.

Constant currency reconciliation – Investment Management business <i>(dollars in millions)</i>	3Q18	3Q17	3Q18 vs. 3Q17
Investment management and performance fees	\$ 909	\$ 886	3%
Impact of changes in foreign currency exchange rates	—	(4)	
Adjusted investment management and performance fees – Non-GAAP	\$ 909	\$ 882	3%

The following table presents the reconciliation of the pre-tax operating margin for the Investment Management business.

Pre-tax operating margin reconciliation - Investment Management business <i>(dollars in millions)</i>	3Q18	2Q18	1Q18	4Q17	3Q17	YTD18	YTD17
Income before income taxes – GAAP	\$ 316	\$ 319	\$ 381	\$ 276	\$ 300	\$ 1,016	\$ 865
Total revenue – GAAP	\$ 1,015	\$ 1,018	\$ 1,088	\$ 1,048	\$ 1,000	\$ 3,121	\$ 2,949
Less: Distribution and servicing expense	99	103	110	107	110	312	315
Adjusted total revenue, net of distribution and servicing expense – Non-GAAP	\$ 916	\$ 915	\$ 978	\$ 941	\$ 890	\$ 2,809	\$ 2,634
Pre-tax operating margin – GAAP (a)	31%	31%	35%	26%	30%	33%	29%
Adjusted pre-tax operating margin, net of distribution and servicing expense – Non-GAAP (a)	35%	35%	39%	29%	34%	36%	33%

(a) Income before taxes divided by total revenue.

Recent accounting and regulatory developments

Recently issued accounting standards

The following ASUs issued by the Financial Accounting Standards Board (“FASB”) have not yet been adopted.

ASU 2016-02, Leases

In February 2016, the FASB issued an ASU, *Leases*. The primary objective of this ASU is to increase transparency and comparability by recognizing lease assets and liabilities on the balance sheet and expand related disclosures. This ASU requires a “right-of-use” asset and a payment obligation liability on the balance sheet for most leases and subleases. Additionally, depending on the lease classification under the standard, it may result in different expense recognition patterns and classification than under existing accounting principles. For leases classified as finance leases, it will result in higher expense recognition in the earlier periods and lower expense in the later periods of the lease. The standard is effective for the first quarter of 2019, with early adoption permitted. As permitted under a recently approved ASU, we expect to elect the alternative transition method which allows for the recognition of leases using a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption of the standard. While we continue to assess the impact on our consolidated financial statements, we currently expect to recognize right-of-use assets and additional lease liabilities of less than \$2 billion each, based on the present value of the expected remaining lease payments.

ASU 2018-02, Income Statement—Reporting Comprehensive Income: Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income

In February 2018, the FASB issued an ASU, *Income Statement—Reporting Comprehensive Income: Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. This ASU permits a reclassification from accumulated other comprehensive income to retained earnings for the tax effects of items within accumulated other comprehensive income that do not reflect the lower statutory tax rate which was enacted by the U.S. tax legislation. This ASU is effective for the first quarter of 2019, with early adoption permitted. The guidance

in this ASU may be applied retrospectively to the period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. We are assessing the impacts of the new standard, but would not expect this ASU to have a material impact.

ASU 2016-13, Financial Instruments – Credit Losses: Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued an ASU, *Financial Instruments – Credit Losses: Measurement of Credit Losses on Financial Instruments*. This ASU introduces a new current expected credit losses model, which will apply to financial assets subject to credit losses and measured at amortized cost, including held-to-maturity securities and certain off-balance sheet credit exposures. The guidance will also change current practice for the impairment model for available-for-sale debt securities. The available-for-sale debt securities model will require the use of an allowance to record estimated credit losses and subsequent recoveries. This ASU is effective for the first quarter of 2020, with early application permitted beginning with the first quarter of 2019. BNY Mellon has begun its implementation efforts and is currently working through key interpretive issues, and in 2018, we are addressing credit loss forecasting models and related processes. The extent of the impact to our financial statements upon adoption depends on several factors including the remaining expected life of financial instruments at the time of adoption, the establishment of an allowance for expected credit loss on held-to-maturity securities, and the macroeconomic conditions and forecasts that exist at that date. We do not expect to early adopt this ASU.

Recent regulatory developments

For a summary of regulatory matters relevant to our operations, see “Supervision and Regulation” in our 2017 Annual Report and “Recent regulatory developments” in our Quarterly Report on Form 10-Q for the first and second quarters of 2018.

Business continuity and operational resiliency

Business continuity and operational resiliency are priorities for the Company. Core elements of our business continuity and operational resiliency strategies include advance planning, maintaining multiple data centers, testing our capabilities, maintaining diversity of business operations and telecommunications infrastructure, and reviewing the business continuity and information security capabilities of our service providers. These capabilities are intended to enable the Company to maintain its operations and appropriately respond to events that could damage our physical facilities, cause delays or disruptions to operational functions (including telecommunications networks), or impair the ability of our employees to work, of our vendors to provide services to us, or of our clients and counterparties to communicate and transact with us. Those events include information security incidents, technology disruptions, acts of terrorism, natural disasters, pandemics and global conflicts.

We continue to evaluate and strengthen our business continuity and operational resiliency capabilities and have increased our investments in technology to steadily enhance those capabilities, including our ability to resume and sustain our operations.

Website information

Our website is www.bnymellon.com. We currently make available the following information under the Investor Relations portion of our website. With respect to filings with the Securities and Exchange Commission (“SEC”), we post such information as soon as reasonably practicable after we electronically file such materials with, or furnish them to, the SEC.

- All of our SEC filings, including annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to these reports, as well as proxy statements and SEC Forms 3, 4 and 5;
- Financial statements and footnotes prepared using eXtensible Business Reporting Language (“XBRL”);
- Our earnings materials and selected management conference calls and presentations;
- Other regulatory disclosures, including: Pillar 3 Disclosures (and Market Risk Disclosure contained therein); Liquidity Coverage Ratio Disclosures; Federal Financial Institutions Examination Council - Consolidated Reports of Condition and Income for a Bank With Domestic and Foreign Offices; Consolidated Financial Statements for Bank Holding Companies; and the Dodd-Frank Act Stress Test Results for BNY Mellon and The Bank of New York Mellon; and
- Our Corporate Governance Guidelines, Amended and Restated By-laws, Directors Code of Conduct and the Charters of the Audit, Finance, Corporate Governance, Nominating and Social Responsibility, Human Resources and Compensation, Risk and Technology Committees of our Board of Directors.

We may use our website, our Twitter account (twitter.com/BNYMellon) and other social media channels as additional means of disclosing information to the public. The information disclosed through those channels may be considered to be material. The contents of our website or social media channels referenced herein are not incorporated by reference into this Quarterly Report on Form 10-Q.

Item 1. Financial Statements

The Bank of New York Mellon Corporation (and its subsidiaries)

Consolidated Income Statement (unaudited)

(in millions)	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
Fee and other revenue					
Investment services fees:					
Asset servicing	\$ 1,157	\$ 1,157	\$ 1,105	\$ 3,482	\$ 3,253
Clearing services	383	392	383	1,189	1,153
Issuer services	287	266	288	813	780
Treasury services	137	140	141	415	420
Total investment services fees	1,964	1,955	1,917	5,899	5,606
Investment management and performance fees	922	910	901	2,792	2,622
Foreign exchange and other trading revenue	155	187	173	551	502
Financing-related fees	52	53	54	157	162
Distribution and servicing	34	34	40	104	122
Investment and other income	41	70	63	193	262
Total fee revenue	3,168	3,209	3,148	9,696	9,276
Net securities gains (losses) — including other-than-temporary impairment	—	1	18	(48)	28
Noncredit-related portion of other-than-temporary impairment (recognized in other comprehensive income)	—	—	(1)	—	(1)
Net securities gains (losses)	—	1	19	(48)	29
Total fee and other revenue	3,168	3,210	3,167	9,648	9,305
Operations of consolidated investment management funds					
Investment income	10	13	10	12	57
Interest of investment management fund note holders	—	1	—	1	4
Income from consolidated investment management funds	10	12	10	11	53
Net interest revenue					
Interest revenue	1,634	1,553	1,151	4,568	3,163
Interest expense	743	637	312	1,842	706
Net interest revenue	891	916	839	2,726	2,457
Total revenue	4,069	4,138	4,016	12,385	11,815
Provision for credit losses	(3)	(3)	(6)	(11)	(18)
Noninterest expense					
Staff (a)	1,478	1,489	1,485	4,543	4,405
Professional, legal and other purchased services	332	328	305	951	937
Software	189	192	175	554	514
Net occupancy	139	156	141	434	417
Sub-custodian and clearing (b)	106	110	101	335	312
Distribution and servicing	99	106	109	311	313
Furniture and equipment	73	74	58	208	174
Business development	51	62	49	164	163
Bank assessment charges	49	47	51	148	167
Amortization of intangible assets	48	48	52	145	157
Other (a)(b)(c)	174	135	128	431	392
Total noninterest expense	2,738	2,747	2,654	8,224	7,951
Income					
Income before income taxes	1,334	1,394	1,368	4,172	3,882
Provision for income taxes	220	286	348	788	949
Net income	1,114	1,108	1,020	3,384	2,933
Net (income) loss attributable to noncontrolling interests (includes \$(3), \$(7), \$(3), \$1 and \$(24) related to consolidated investment management funds, respectively)	(3)	(5)	(2)	1	(18)
Net income applicable to shareholders of The Bank of New York Mellon Corporation	1,111	1,103	1,018	3,385	2,915
Preferred stock dividends	(36)	(48)	(35)	(120)	(126)
Net income applicable to common shareholders of The Bank of New York Mellon Corporation	\$ 1,075	\$ 1,055	\$ 983	\$ 3,265	\$ 2,789

- (a) In the first quarter of 2018, we adopted new accounting guidance included in ASU 2017-07, *Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, which required the reclassification of the components of pension and other postretirement costs, other than the service cost component. As a result, staff expense increased and other expense decreased. Prior periods have been reclassified. See Note 2 of the Notes to Consolidated Financial Statements for additional information.
- (b) Beginning in the first quarter of 2018, clearing expense, which was previously included in other expense, was included with sub-custodian expense. Prior periods have been reclassified.
- (c) Beginning in the first quarter of 2018, M&I, litigation and restructuring charges are no longer separately disclosed. Expenses previously reported in this line have been reclassified to existing expense categories, primarily other expense.

Consolidated Income Statement (unaudited) (continued)

Net income applicable to common shareholders of The Bank of New York Mellon Corporation used for the earnings per share calculation <i>(in millions)</i>	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
Net income applicable to common shareholders of The Bank of New York Mellon Corporation	\$ 1,075	\$ 1,055	\$ 983	\$ 3,265	\$ 2,789
Less: Earnings allocated to participating securities	7	7	8	22	35
Net income applicable to common shareholders of The Bank of New York Mellon Corporation after required adjustment for the calculation of basic and diluted earnings per common share	\$ 1,068	\$ 1,048	\$ 975	\$ 3,243	\$ 2,754

Average common shares and equivalents outstanding of The Bank of New York Mellon Corporation <i>(in thousands)</i>	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
Basic	999,808	1,010,179	1,035,337	1,008,967	1,037,431
Common stock equivalents	6,451	6,451	9,226	6,967	14,216
Less: Participating securities	(2,594)	(2,273)	(3,425)	(2,692)	(8,062)
Diluted	1,003,665	1,014,357	1,041,138	1,013,242	1,043,585
Anti-dilutive securities (a)	6,972	7,208	8,059	7,061	13,906

Earnings per share applicable to common shareholders of The Bank of New York Mellon Corporation (b) <i>(in dollars)</i>	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
Basic	\$ 1.07	\$ 1.04	\$ 0.94	\$ 3.21	\$ 2.66
Diluted	\$ 1.06	\$ 1.03	\$ 0.94	\$ 3.20	\$ 2.64

- (a) Represents stock options, restricted stock, restricted stock units and participating securities outstanding but not included in the computation of diluted average common shares because their effect would be anti-dilutive.
- (b) Basic and diluted earnings per share under the two-class method are determined on the net income applicable to common shareholders of The Bank of New York Mellon Corporation reported on the income statement less earnings allocated to participating securities.

See accompanying unaudited Notes to Consolidated Financial Statements.

Consolidated Comprehensive Income Statement (unaudited)

<i>(in millions)</i>	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
Net income	\$ 1,114	\$ 1,108	\$ 1,020	\$ 3,384	\$ 2,933
Other comprehensive income, net of tax:					
Foreign currency translation adjustments	(60)	(400)	286	(216)	741
Unrealized (loss) gain on assets available-for-sale:					
Unrealized (loss) gain arising during the period	(144)	(64)	28	(483)	213
Reclassification adjustment	—	—	(12)	37	(19)
Total unrealized (loss) gain on assets available-for-sale	(144)	(64)	16	(446)	194
Defined benefit plans:					
Net gain arising during the period	—	—	—	—	2
Amortization of prior service credit, net loss and initial obligation included in net periodic benefit cost	18	16	15	51	49
Total defined benefit plans	18	16	15	51	51
Net unrealized (loss) gain on cash flow hedges	(4)	(14)	—	(20)	11
Total other comprehensive (loss) income, net of tax (a)	(190)	(462)	317	(631)	997
Total comprehensive income	924	646	1,337	2,753	3,930
Net (income) loss attributable to noncontrolling interests	(3)	(5)	(2)	1	(18)
Other comprehensive loss (income) attributable to noncontrolling interests	2	10	(5)	7	(13)
Comprehensive income applicable to shareholders of The Bank of New York Mellon Corporation	\$ 923	\$ 651	\$ 1,330	\$ 2,761	\$ 3,899

(a) Other comprehensive income (loss) attributable to The Bank of New York Mellon Corporation shareholders was \$(188) million for the quarter ended Sept. 30, 2018, \$(452) million for the quarter ended June 30, 2018, \$312 million for the quarter ended Sept. 30, 2017, \$(624) million for the nine months ended Sept. 30, 2018 and \$984 million for the nine months ended Sept. 30, 2017.

See accompanying unaudited Notes to Consolidated Financial Statements.

The Bank of New York Mellon Corporation (and its subsidiaries)

Consolidated Balance Sheet (unaudited)

<i>(dollars in millions, except per share amounts)</i>	Sept. 30, 2018	Dec. 31, 2017
Assets		
Cash and due from:		
Banks	\$ 5,047	\$ 5,382
Interest-bearing deposits with the Federal Reserve and other central banks	74,725	91,510
Interest-bearing deposits with banks (\$1,302 and \$1,751 is restricted)	14,519	11,979
Federal funds sold and securities purchased under resale agreements	28,722	28,135
Securities:		
Held-to-maturity (fair value of \$33,345 and \$40,512)	34,486	40,827
Available-for-sale	84,155	79,543
Total securities	118,641	120,370
Trading assets	7,804	6,022
Loans	53,987	61,540
Allowance for loan losses	(140)	(159)
Net loans	53,847	61,381
Premises and equipment	1,832	1,634
Accrued interest receivable	640	610
Goodwill	17,390	17,564
Intangible assets	3,258	3,411
Other assets (includes \$832 and \$791, at fair value)	22,846	23,029
Subtotal assets of operations	349,271	371,027
Assets of consolidated investment management funds, at fair value	499	731
Total assets	\$ 349,770	\$ 371,758
Liabilities		
Deposits:		
Noninterest-bearing (principally U.S. offices)	\$ 65,846	\$ 82,716
Interest-bearing deposits in U.S. offices	73,525	52,294
Interest-bearing deposits in non-U.S. offices	92,219	109,312
Total deposits	231,590	244,322
Federal funds purchased and securities sold under repurchase agreements	10,158	15,163
Trading liabilities	3,536	3,984
Payables to customers and broker-dealers	18,683	20,184
Commercial paper	735	3,075
Other borrowed funds	2,934	3,028
Accrued taxes and other expenses	5,601	6,225
Other liabilities (including allowance for lending-related commitments of \$111 and \$102, also includes \$74 and \$800, at fair value)	6,552	6,050
Long-term debt (includes \$363 and \$367, at fair value)	28,113	27,979
Subtotal liabilities of operations	307,902	330,010
Liabilities of consolidated investment management funds, at fair value	7	2
Total liabilities	307,909	330,012
Temporary equity		
Redeemable noncontrolling interests	211	179
Permanent equity		
Preferred stock – par value \$0.01 per share; authorized 100,000,000 shares; issued 35,826 and 35,826 shares	3,542	3,542
Common stock – par value \$0.01 per share; authorized 3,500,000,000 shares; issued 1,364,286,053 and 1,354,163,581 shares	14	14
Additional paid-in capital	27,034	26,665
Retained earnings	28,098	25,635
Accumulated other comprehensive loss, net of tax	(2,983)	(2,357)
Less: Treasury stock of 375,508,558 and 340,721,136 common shares, at cost	(14,145)	(12,248)
Total The Bank of New York Mellon Corporation shareholders' equity	41,560	41,251
Nonredeemable noncontrolling interests of consolidated investment management funds	90	316
Total permanent equity	41,650	41,567
Total liabilities, temporary equity and permanent equity	\$ 349,770	\$ 371,758

See accompanying unaudited Notes to Consolidated Financial Statements.

Consolidated Statement of Cash Flows (unaudited)

<i>(in millions)</i>	Nine months ended Sept. 30,	
	2018	2017
Operating activities		
Net income	\$ 3,384	2,933
Net loss (income) attributable to noncontrolling interests	1	(18)
Net income applicable to shareholders of The Bank of New York Mellon Corporation	3,385	2,915
Adjustments to reconcile net income to net cash provided by (used for) operating activities:		
Provision for credit losses	(11)	(18)
Pension plan contributions	(47)	(12)
Depreciation and amortization	1,011	1,044
Deferred tax (benefit) expense	(401)	272
Net securities losses (gains)	48	(29)
Change in trading assets and liabilities	(1,282)	(66)
Change in accruals and other, net <i>(a)</i>	109	(730)
Net cash provided by operating activities <i>(a)</i>	2,812	3,376
Investing activities		
Change in interest-bearing deposits with banks <i>(a)</i>	(3,367)	1,033
Change in interest-bearing deposits with the Federal Reserve and other central banks	15,570	(14,467)
Purchases of securities held-to-maturity	(4,029)	(5,878)
Paydowns of securities held-to-maturity	3,289	3,332
Maturities of securities held-to-maturity	6,047	3,412
Purchases of securities available-for-sale	(22,898)	(18,974)
Sales of securities available-for-sale	5,538	3,531
Paydowns of securities available-for-sale	5,683	7,047
Maturities of securities available-for-sale	6,113	4,820
Net change in loans	7,227	5,283
Sales of loans and other real estate	257	369
Change in federal funds sold and securities purchased under resale agreements <i>(a)</i>	(592)	(2,082)
Net change in seed capital investments	54	(52)
Purchases of premises and equipment/capitalized software	(819)	(933)
Proceeds from the sale of premises and equipment	23	—
Dispositions, net of cash	84	—
Other, net <i>(a)</i>	(163)	58
Net cash provided by (used for) investing activities <i>(a)</i>	18,017	(13,501)
Financing activities		
Change in deposits	(10,680)	4,459
Change in federal funds purchased and securities sold under repurchase agreements	(5,005)	325
Change in payables to customers and broker-dealers	(1,487)	177
Change in other borrowed funds	(133)	2,187
Change in commercial paper	(2,340)	2,501
Net proceeds from the issuance of long-term debt	4,144	4,739
Repayments of long-term debt	(3,400)	(796)
Proceeds from the exercise of stock options	74	383
Issuance of common stock	30	24
Treasury stock acquired	(1,897)	(2,035)
Common cash dividends paid	(774)	(653)
Preferred cash dividends paid	(120)	(126)
Other, net	32	44
Net cash (used for) provided by financing activities	(21,556)	11,229
Effect of exchange rate changes on cash	(57)	157
Change in cash and due from banks and restricted cash <i>(a)</i>	(784)	1,261
Change in cash and due from banks and restricted cash	(784)	1,261
Cash and due from banks and restricted cash at beginning of period	7,133	8,204
Cash and due from banks and restricted cash at end of period	\$ 6,349	\$ 9,465
Cash and due from banks and restricted cash: <i>(a)</i>		
Cash and due from banks at end of period (unrestricted cash)	\$ 5,047	\$ 5,557
Restricted cash at end of period	1,302	3,908
Cash and due from banks and restricted cash at end of period	\$ 6,349	\$ 9,465
Supplemental disclosures		
Interest paid	\$ 1,795	\$ 721
Income taxes paid	699	316
Income taxes refunded	155	19

(a) Reflects the impact of adopting new accounting guidance included in ASU 2016-15 and ASU 2016-18. Prior periods have been restated. See Note 2 of the Notes to Consolidated Financial Statements for additional information.

See accompanying unaudited Notes to Consolidated Financial Statements.

Consolidated Statement of Changes in Equity (unaudited)

(in millions, except per share amount)	The Bank of New York Mellon Corporation shareholders						Non-redeemable noncontrolling interests of consolidated investment management funds	Total permanent equity	Redeemable noncontrolling interests/temporary equity
	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive (loss), net of tax	Treasury stock			
Balance at June 30, 2018	\$ 3,542	\$ 14	\$ 26,981	\$ 27,306	\$ (2,795)	\$(13,543)	\$ 52	\$ 41,557 (a)	\$ 189
Shares issued to shareholders of noncontrolling interests	—	—	—	—	—	—	—	—	22
Other net changes in noncontrolling interests	—	—	(4)	—	—	—	35	31	2
Net income	—	—	—	1,111	—	—	3	1,114	—
Other comprehensive (loss)	—	—	—	—	(188)	—	—	(188)	(2)
Dividends:									
Common stock at \$0.28 per share	—	—	—	(283)	—	—	—	(283)	—
Preferred stock	—	—	—	(36)	—	—	—	(36)	—
Repurchase of common stock	—	—	—	—	—	(602)	—	(602)	—
Common stock issued under:									
Employee benefit plans	—	—	7	—	—	—	—	7	—
Direct stock purchase and dividend reinvestment plan	—	—	7	—	—	—	—	7	—
Stock awards and options exercised	—	—	43	—	—	—	—	43	—
Balance at Sept. 30, 2018	\$ 3,542	\$ 14	\$ 27,034	\$ 28,098	\$ (2,983)	\$(14,145)	\$ 90	\$ 41,650 (a)	\$ 211

(a) Includes total The Bank of New York Mellon Corporation common shareholders' equity of \$37,963 million at June 30, 2018 and \$38,018 million at Sept. 30, 2018.

(in millions, except per share amount)	The Bank of New York Mellon Corporation shareholders						Non-redeemable noncontrolling interests of consolidated investment management funds	Total permanent equity	Redeemable noncontrolling interests/temporary equity
	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive (loss), net of tax	Treasury stock			
Balance at March 31, 2018	\$ 3,542	\$ 14	\$ 26,911	\$ 26,496	\$ (2,343)	\$(12,892)	\$ 212	\$ 41,940 (a)	\$ 184
Shares issued to shareholders of noncontrolling interests	—	—	—	—	—	—	—	—	17
Other net changes in noncontrolling interests	—	—	(2)	—	—	—	(167)	(169)	—
Net income (loss)	—	—	—	1,103	—	—	7	1,110	(2)
Other comprehensive (loss)	—	—	—	—	(452)	—	—	(452)	(10)
Dividends:									
Common stock at \$0.24 per share	—	—	—	(245)	—	—	—	(245)	—
Preferred stock	—	—	—	(48)	—	—	—	(48)	—
Repurchase of common stock	—	—	—	—	—	(651)	—	(651)	—
Common stock issued under:									
Employee benefit plans	—	—	7	—	—	—	—	7	—
Direct stock purchase and dividend reinvestment plan	—	—	7	—	—	—	—	7	—
Stock awards and options exercised	—	—	58	—	—	—	—	58	—
Balance at June 30, 2018	\$ 3,542	\$ 14	\$ 26,981	\$ 27,306	\$ (2,795)	\$(13,543)	\$ 52	\$ 41,557 (a)	\$ 189

(a) Includes total The Bank of New York Mellon Corporation common shareholders' equity of \$38,186 million at March 31, 2018 and \$37,963 million at June 30, 2018.

Consolidated Statement of Changes in Equity (unaudited) (continued)

(in millions, except per share amount)	The Bank of New York Mellon Corporation shareholders						Non-redeemable noncontrolling interests of consolidated investment management funds	Total permanent equity	Redeemable noncontrolling interests/ temporary equity
	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive (loss) income, net of tax	Treasury stock			
Balance at June 30, 2017	\$ 3,542	\$ 13	\$ 26,432	\$ 24,027	\$ (3,093)	\$(10,947)	\$ 343	\$ 40,317	(a) \$ 181
Shares issued to shareholders of noncontrolling interests	—	—	—	—	—	—	—	—	11
Other net changes in noncontrolling interests	—	—	(2)	—	—	—	38	36	1
Net income (loss)	—	—	—	1,018	—	—	3	1,021	(1)
Other comprehensive income	—	—	—	—	312	—	—	312	5
Dividends:									
Common stock at \$0.24 per share	—	—	—	(253)	—	—	—	(253)	—
Preferred stock	—	—	—	(35)	—	—	—	(35)	—
Repurchase of common stock	—	—	—	—	—	(650)	—	(650)	—
Common stock issued under:									
Employee benefit plans	—	—	6	—	—	—	—	6	—
Direct stock purchase and dividend reinvestment plan	—	—	8	—	—	—	—	8	—
Stock awards and options exercised	—	1	144	—	—	—	—	145	—
Balance at Sept. 30, 2017	\$ 3,542	\$ 14	\$ 26,588	\$ 24,757	\$ (2,781)	\$(11,597)	\$ 384	\$ 40,907	(a) \$ 197

(a) Includes total The Bank of New York Mellon Corporation common shareholders' equity of \$36,432 million at June 30, 2017 and \$36,981 million at Sept. 30, 2017.

(in millions, except per share amount)	The Bank of New York Mellon Corporation shareholders						Non-redeemable noncontrolling interests of consolidated investment management funds	Total permanent equity	Redeemable noncontrolling interests/ temporary equity
	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive (loss), net of tax	Treasury stock			
Balance at Dec. 31, 2017	\$ 3,542	\$ 14	\$ 26,665	\$ 25,635	\$ (2,357)	\$(12,248)	\$ 316	\$ 41,567	(a) \$ 179
Adjustment for the cumulative effect of applying ASU 2014-09 for contract revenue	—	—	—	(55)	—	—	—	(55)	—
Adjustment for the cumulative effect of applying ASU 2017-12 for derivatives and hedging	—	—	—	27	(2)	—	—	25	—
Adjusted balance at Jan. 1, 2018	3,542	14	26,665	25,607	(2,359)	(12,248)	316	41,537	179
Shares issued to shareholders of noncontrolling interests	—	—	—	—	—	—	—	—	56
Redemption of subsidiary shares from noncontrolling interests	—	—	—	—	—	—	—	—	(32)
Other net changes in noncontrolling interests	—	—	(17)	—	—	—	(225)	(242)	15
Net income (loss)	—	—	—	3,385	—	—	(1)	3,384	—
Other comprehensive (loss)	—	—	—	—	(624)	—	—	(624)	(7)
Dividends:									
Common stock at \$0.76 per share	—	—	—	(774)	—	—	—	(774)	—
Preferred stock	—	—	—	(120)	—	—	—	(120)	—
Repurchase of common stock	—	—	—	—	—	(1,897)	—	(1,897)	—
Common stock issued under:									
Employee benefit plans	—	—	24	—	—	—	—	24	—
Direct stock purchase and dividend reinvestment plan	—	—	23	—	—	—	—	23	—
Stock awards and options exercised	—	—	339	—	—	—	—	339	—
Balance at Sept. 30, 2018	\$ 3,542	\$ 14	\$ 27,034	\$ 28,098	\$ (2,983)	\$(14,145)	\$ 90	\$ 41,650	(a) \$ 211

(a) Includes total The Bank of New York Mellon Corporation common shareholders' equity of \$37,709 million at Dec. 31, 2017 and \$38,018 million at Sept. 30, 2018.

Consolidated Statement of Changes in Equity (unaudited) (continued)

<i>(in millions, except per share amount)</i>	The Bank of New York Mellon Corporation shareholders						Non-redeemable noncontrolling interests of consolidated investment management funds	Total permanent equity	Redeemable non-controlling interests/temporary equity
	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive (loss) income, net of tax	Treasury stock			
Balance at Dec. 31, 2016	\$ 3,542	\$ 13	\$ 25,962	\$ 22,621	\$ (3,765)	\$ (9,562)	\$ 618	\$ 39,429	(a) \$ 151
Shares issued to shareholders of noncontrolling interests	—	—	—	—	—	—	—	—	40
Redemption of subsidiary shares from noncontrolling interests	—	—	—	—	—	—	—	—	(16)
Other net changes in noncontrolling interests	—	—	(11)	—	—	—	(258)	(269)	15
Net income (loss)	—	—	—	2,915	—	—	24	2,939	(6)
Other comprehensive income	—	—	—	—	984	—	—	984	13
Dividends:									
Common stock at \$0.62 per share	—	—	—	(653)	—	—	—	(653)	—
Preferred stock	—	—	—	(126)	—	—	—	(126)	—
Repurchase of common stock	—	—	—	—	—	(2,035)	—	(2,035)	—
Common stock issued under:									
Employee benefit plans	—	—	21	—	—	—	—	21	—
Direct stock purchase and dividend reinvestment plan	—	—	18	—	—	—	—	18	—
Stock awards and options exercised	—	1	598	—	—	—	—	599	—
Balance at Sept. 30, 2017	\$ 3,542	\$ 14	\$ 26,588	\$ 24,757	\$ (2,781)	\$ (11,597)	\$ 384	\$ 40,907	(a) \$ 197

(a) Includes total The Bank of New York Mellon Corporation common shareholders' equity of \$35,269 million at Dec. 31, 2016 and \$36,981 million at Sept. 30, 2017.

See accompanying unaudited Notes to Consolidated Financial Statements.

Note 1—Basis of presentation

Basis of presentation

The accounting and financial reporting policies of BNY Mellon, a global financial services company, conform to U.S. generally accepted accounting principles (“GAAP”) and prevailing industry practices.

The accompanying consolidated financial statements are unaudited. In the opinion of management, all adjustments necessary for a fair presentation of financial position, results of operations and cash flows for the periods presented have been made. These financial statements should be read in conjunction with BNY Mellon’s Annual Report on Form 10-K for the year ended Dec. 31, 2017. Certain immaterial reclassifications have been made to prior periods to place them on a basis comparable with current period presentation.

Use of estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates based upon assumptions about future economic and market conditions which affect reported amounts and related disclosures in our financial statements. Although our current estimates contemplate current conditions and how we expect them to change in the future, it is reasonably possible that actual conditions could be worse than anticipated in those estimates, which could materially affect our results of operations and financial condition. Amounts subject to estimates are items such as allowance for loan losses and lending-related commitments, fair value of financial instruments and derivatives, other-than-temporary impairment, goodwill and other intangibles and pension accounting. Among other effects, such changes in estimates could result in future impairments of securities, goodwill and intangible assets and establishment of allowances for loan losses and lending-related commitments as well as changes in pension and postretirement expense.

Note 2—Accounting changes and new accounting guidance

The following accounting changes and new accounting guidance were adopted in 2018.

ASU 2017-12, Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities

In August 2017, the FASB issued an ASU, *Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities*. The objective of this ASU is to improve the financial reporting of hedging relationships to better portray the economic results of an entity’s risk management activities and to simplify the application of hedge accounting guidance.

The most significant impact of the new guidance to the Company relates to the new accounting alternatives for fair value hedges of interest rate risk, specifically, the ability to hedge only the benchmark component of the contractual cash flows and partial-term hedging. The guidance also changed presentation and disclosure requirements and made changes to how the shortcut method is applied, which resulted in the Company using that method going forward for certain hedging relationships.

BNY Mellon elected to early adopt this ASU on Jan. 31, 2018, which is the “as of” date for which the Company was permitted to make certain elections and the measurement date for recording the adoption impact for certain hedge modifications. As part of the adoption, we elected to reclassify approximately \$1.1 billion of debt securities from held-to-maturity to available-for-sale which resulted in a decrease of \$47 million pre-tax to accumulated other comprehensive income. The Company also elected to modify certain hedge relationships as of the adoption date primarily to utilize the benchmark component method of measuring hedge effectiveness, as such method is deemed to more closely match risk management objectives with accounting results. The Company recognized a \$27 million after-tax increase in retained earnings as of Jan. 1, 2018 associated with the adoption impact of these hedge modifications.

ASU 2017-07, Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued an ASU, *Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. The ASU requires the disaggregation of the service cost component from the other components of the net

benefit cost in the consolidated income statement. The ASU also permits only the service cost component of net benefit cost to be eligible for capitalization. BNY Mellon adopted this ASU in the first quarter of 2018, and applied the guidance retrospectively for the presentation of the service cost component and the other components in the consolidated income statement, and prospectively for the capitalization of the service cost component in assets. The adoption of this standard increased staff expense and decreased other expense by \$16 million for the third quarter of 2017 and \$48 million for the first nine months of 2017.

ASU 2016-18, Statement of Cash Flows: Restricted Cash

In November 2016, the FASB issued an ASU, *Statement of Cash Flows: Restricted Cash*. This ASU provides guidance on the presentation of restricted cash or restricted cash equivalents in the consolidated statement of cash flows. Restricted cash consists of excess client funds held by our broker-dealer business and totaled \$1.3 billion at Sept. 30, 2018 and \$3.9 billion at Sept. 30, 2017. Restricted cash is included in interest-bearing deposits with banks on the consolidated balance sheet and with cash and due from banks when reconciling the beginning and end-of-period balances on the consolidated statement of cash flows.

We adopted the guidance in this ASU retrospectively. As a result, the change in interest-bearing deposits with banks, which is included in investing activities on the consolidated statement of cash flows, was restated to reflect the increase in restricted cash of \$526 million for the nine months ended Sept. 30, 2017. The change in restricted cash was a \$449 million decrease for the nine months ended Sept. 30, 2018.

ASU 2016-15, Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments

In August 2016, the FASB issued an ASU, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments*. This ASU provides guidance on eight specific cash flow presentation issues. The most significant impact for BNY Mellon relates to distributions received from equity method investees. For equity method investments, BNY Mellon elected to report distributions received from

equity method investees using the cumulative earnings approach. Distributions received are considered returns on investment and classified as cash inflows from operating activities on the consolidated statement of cash flows. To the extent the returns on investment exceeded the cumulative equity in earnings recognized, the excess would be considered a return of investment and classified as cash inflows from investing activities on the consolidated statement of cash flows. We adopted the guidance in this ASU retrospectively. As a result, the change in accruals and other, net, which is included in operating activities on the consolidated statement of cash flows, was restated to reflect distributions received of \$24 million for the nine months ended Sept. 30, 2017. These distributions were previously included in other, net in investing activities on the consolidated statement of cash flows. Distributions received for the nine months ended Sept. 30, 2018 were \$24 million. The remaining seven specific cash flow presentation issues do not materially impact BNY Mellon.

ASU 2014-09, Revenue from Contracts with Customers

In May 2014, the FASB issued an ASU, *Revenue from Contracts with Customers*. This ASU, as amended, provides guidance on the recognition of revenue related to the transfer of promised goods or services to customers and guidance on accounting for certain contract costs. The standard provides a single revenue model to be applied by reporting companies under U.S. GAAP and supersedes most existing revenue recognition guidance.

The Company adopted the guidance on Jan. 1, 2018 using the cumulative effect transition method applied to contracts not completed as of Dec. 31, 2017, which resulted in a \$55 million after-tax reduction to retained earnings. The comparative financial information for 2017 has not been restated and continues to be reported under the accounting standards in effect for that period.

Although the impact of the adoption of this ASU was not material, the most significant changes and quantitative impact of the changes are disclosed below.

Payments to customers

The timing of recognizing the reduction in revenue for certain payments made to depository receipts customers has changed. Prior to adoption, annual payments to customers were capitalized and amortized as contra revenue over the remaining contract period, subject to impairment reviews.

Under the new guidance, annual payments are recorded as a reduction in revenue in proportion to the expected annual revenue generated from the related customer contract.

Costs to obtain a customer contract

Prior to adoption, costs to obtain a customer contract, primarily sales incentives, were expensed as incurred. Under the new guidance, an asset is recognized for the incremental sales incentives that are considered costs of obtaining a contract with a customer, if those costs are expected to be recovered.

The table below presents the cumulative effect of the adoption of the new guidance on the consolidated balance sheet as of Dec. 31, 2017.

Impact on the consolidated balance sheet			
<i>(in millions)</i>	Dec. 31, 2017	Impact of adoption	Jan. 1, 2018
Assets			
Other assets	\$ 23,029	\$ (9)	\$ 23,020
Liabilities			
Accrued tax and other expenses	\$ 6,225	\$ (18)	\$ 6,207
Other liabilities	6,050	64	6,114
Equity			
Retained earnings	\$ 25,635	\$ (55)	\$ 25,580

The impact of the new guidance on the consolidated income statement for the third quarter of 2018 and the first nine months of 2018, and consolidated balance sheet as of Sept. 30, 2018, was de minimis. See Note 8 for additional revenue and contract costs disclosures.

ASU 2016-01, Financial Instruments—Overall: Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued an ASU, *Financial Instruments—Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. The ASU requires investments in equity securities that do not result in consolidation and are not accounted for under the equity method to be measured at fair value with changes in the fair value recognized through net income, unless one of two available exceptions applies. The first exception, a scope exception, allows Federal Reserve Bank stock, FHLB stock and exchange memberships to remain accounted for at cost, less impairment. The second practicability exception is an election available for equity investments that do not have readily determinable fair values. For certain investments where the Company has chosen the practicability exception, such investments are accounted for at cost adjusted for impairment, if any, plus or minus observable price changes.

The Company adopted this guidance in the first quarter of 2018 using the cumulative effect method of adoption, with a de minimis impact to retained earnings. As part of the adoption, we reclassified money market fund investments of approximately \$1 billion to trading assets, primarily from available-for-sale securities.

We have non-readily marketable equity securities where we are utilizing the practicability exception of \$55 million at Sept. 30, 2018 and \$53 million at June 30, 2018. We recognized net upward adjustments on these securities of \$2 million in the third quarter of 2018 and \$5 million in the second quarter of 2018. Both upward adjustments were driven by activity that resulted in observable price changes.

ASU 2018-13, Fair Value Measurement: Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement

In August 2018, the FASB issued an ASU, *Fair Value Measurement: Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement*. This ASU requires disclosure of the changes in unrealized gains or losses included in OCI for Level 3 assets or liabilities held at the end of the period and the range and weighted-average of the significant unobservable inputs used in determining

the fair value of Level 3 assets and liabilities. This ASU removes the requirement to disclose the transfers between Level 1 and Level 2 of the fair value hierarchy and the valuation process for determining Level 3 fair value measurements. BNY Mellon adopted this ASU in the third quarter of 2018 and applied the guidance prospectively for the new disclosure requirements and retrospectively for disclosure requirements that have been removed.

Note 3—Acquisitions and dispositions

We sometimes structure our acquisitions with both an initial payment and later contingent payments tied to post-closing revenue or income growth. There were no contingent payments in the third quarter of 2018 or the first nine months of 2018.

At Sept. 30, 2018, we are potentially obligated to pay additional consideration which, using reasonable assumptions, could range from \$0 million to \$7 million over the next two years, but could be higher as certain of the arrangements do not contain a contractual maximum.

The transactions described below did not have a material impact on BNY Mellon's results of operations.

On Jan. 2, 2018, BNY Mellon completed the sale of CenterSquare, one of our Investment Management boutiques, and recorded a gain on this transaction. CenterSquare had approximately \$10 billion in AUM in U.S. and global real estate and infrastructure investments. In addition, goodwill of \$52 million was removed from the consolidated balance sheet as a result of this sale.

On June 29, 2018, BNY Mellon completed the exchange of its majority equity interest in Amherst Capital Management LLC for a minority equity stake in Amherst Holdings LLC. Goodwill of \$13 million was removed from the consolidated balance sheet and a gain was recorded as a result of this sale.

Note 4—Securities

The following tables present the amortized cost, the gross unrealized gains and losses and the fair value of securities at Sept. 30, 2018 and Dec. 31, 2017, respectively.

Securities at Sept. 30, 2018		Gross unrealized		Fair value
<i>(in millions)</i>	Amortized cost	Gains	Losses	
Available-for-sale:				
U.S. Treasury	\$ 19,904	\$ 18	\$ 410	\$ 19,512
U.S. government agencies	1,571	—	46	1,525
State and political subdivisions	2,355	15	34	2,336
Agency RMBS	25,283	79	495	24,867
Non-agency RMBS <i>(a)</i>	1,158	269	8	1,419
Non-agency commercial MBS	1,484	1	26	1,459
Agency commercial MBS	9,867	6	260	9,613
CLOs	3,368	3	8	3,363
Foreign covered bonds	2,985	7	20	2,972
Corporate bonds	1,140	7	29	1,118
Sovereign debt/ sovereign guaranteed	11,491	100	49	11,542
Other debt securities	4,454	3	28	4,429
Total securities available-for-sale <i>(b)</i>	\$ 85,060	\$ 508	\$ 1,413	\$ 84,155
Held-to-maturity:				
U.S. Treasury	\$ 4,923	\$ 1	\$ 133	\$ 4,791
U.S. government agencies	1,572	—	19	1,553
State and political subdivisions	17	—	1	16
Agency RMBS	25,651	3	966	24,688
Non-agency RMBS	107	4	1	110
Agency commercial MBS	1,262	—	52	1,210
Foreign covered bonds	81	1	—	82
Sovereign debt/ sovereign guaranteed	847	22	—	869
Other debt securities	26	—	—	26
Total securities held-to-maturity	\$ 34,486	\$ 31	\$ 1,172	\$ 33,345
Total securities	\$ 119,546	\$ 539	\$ 2,585	\$ 117,500

- (a)* Includes \$889 million that was included in the former Grantor Trust.
- (b)* Includes gross unrealized gains of \$42 million and gross unrealized losses of \$93 million recorded in accumulated other comprehensive income related to securities that were transferred from available-for-sale to held-to-maturity. The unrealized gains and losses are primarily related to Agency RMBS and will be amortized into net interest revenue over the contractual lives of the securities.

Securities at Dec. 31, 2017 (in millions)	Amortized cost	Gross unrealized		Fair value
		Gains	Losses	
Available-for-sale:				
U.S. Treasury	\$ 15,159	\$ 264	\$ 160	\$ 15,263
U.S. government agencies	917	1	10	908
State and political subdivisions	2,949	31	23	2,957
Agency RMBS	24,002	108	291	23,819
Non-agency RMBS (a)	1,265	317	4	1,578
Other RMBS	152	3	6	149
Non-agency commercial MBS	1,360	6	6	1,360
Agency commercial MBS	8,793	36	67	8,762
CLOs	2,898	12	1	2,909
Other asset-backed securities	1,040	3	—	1,043
Foreign covered bonds	2,520	18	9	2,529
Corporate bonds	1,249	17	11	1,255
Sovereign debt/ sovereign guaranteed	12,405	175	23	12,557
Other debt securities	3,494	9	12	3,491
Money market funds	963	—	—	963
Total securities available-for-sale (b)	\$ 79,166	\$ 1,000	\$ 623	\$ 79,543
Held-to-maturity:				
U.S. Treasury	\$ 9,792	\$ 6	\$ 56	\$ 9,742
U.S. government agencies	1,653	—	12	1,641
State and political subdivisions	17	—	1	16
Agency RMBS	26,208	51	332	25,927
Non-agency RMBS	57	5	—	62
Other RMBS	65	—	1	64
Non-agency commercial MBS	6	—	—	6
Agency commercial MBS	1,324	2	9	1,317
Foreign covered bonds	84	2	—	86
Sovereign debt/ sovereign guaranteed	1,593	30	—	1,623
Other debt securities	28	—	—	28
Total securities held-to-maturity	\$ 40,827	\$ 96	\$ 411	\$ 40,512
Total securities	\$ 119,993	\$ 1,096	\$ 1,034	\$ 120,055

(a) Includes \$1,091 million that was included in the former Grantor Trust.

(b) Includes gross unrealized gains of \$50 million and gross unrealized losses of \$144 million recorded in accumulated other comprehensive income related to securities that were transferred from available-for-sale to held-to-maturity. The unrealized gains and losses are primarily related to Agency RMBS and will be amortized into net interest revenue over the contractual lives of the securities.

The following table presents the realized gains, losses and impairments, on a gross basis.

Net securities gains (losses)					
(in millions)	3Q18	2Q18	3Q17	YTD18	YTD17
Realized gross gains	\$ 1	\$ 2	\$ 20	\$ 5	\$ 34
Realized gross losses	(1)	(1)	—	(53)	(2)
Recognized gross impairments	—	—	(1)	—	(3)
Total net securities gains (losses)	\$ —	\$ 1	\$ 19	\$ (48)	\$ 29

In the first quarter of 2018, we adopted the new accounting guidance included in ASU 2016-01, *Financial Instruments—Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. As a result, money market fund investments were reclassified to trading assets, primarily from available-for-sale securities.

In the first quarter of 2018, certain debt securities with an aggregate amortized cost of \$1,117 million and fair value of \$1,070 million were transferred from held-to-maturity securities to available-for-sale securities as part of the adoption of ASU 2017-12, *Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities*.

Temporarily impaired securities

At Sept. 30, 2018, the unrealized losses on the securities portfolio were primarily attributable to an increase in interest rates from date of purchase, and for certain securities that were transferred from available-for-sale to held-to-maturity, an increase in interest rates through the date they were transferred. Specifically, \$93 million of the unrealized losses at Sept. 30, 2018 and \$144 million at Dec. 31, 2017 reflected in the available-for-sale sections of the tables below relate to certain securities (primarily Agency RMBS) that were transferred in prior periods from available-for-sale to held-to-maturity. The unrealized losses will be amortized into net interest revenue over the contractual lives of the securities. The transfer created a new cost basis for the securities. As a result, if these securities have experienced unrealized losses since the date of transfer, the corresponding fair value and unrealized losses would be reflected in the held-to-maturity sections of the following tables. We do not intend to sell these securities, and it is not more likely than not that we will have to sell these securities.

The following tables show the aggregate fair value of securities with a continuous unrealized loss position for less than 12 months and those that have been in a continuous unrealized loss position for 12 months or more at Sept. 30, 2018 and Dec. 31, 2017, respectively.

Temporarily impaired securities at Sept. 30, 2018	Less than 12 months		12 months or more		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
<i>(in millions)</i>						
Available-for-sale:						
U.S. Treasury	\$ 12,651	\$ 171	\$ 4,996	\$ 239	\$ 17,647	\$ 410
U.S. government agencies	1,279	32	247	14	1,526	46
State and political subdivisions	733	5	560	29	1,293	34
Agency RMBS	8,668	149	7,105	346	15,773	495
Non-agency RMBS (a)	39	—	188	8	227	8
Non-agency commercial MBS	795	21	135	5	930	26
Agency commercial MBS	5,238	124	2,329	136	7,567	260
CLOs	1,578	7	27	1	1,605	8
Foreign covered bonds	1,079	6	624	14	1,703	20
Corporate bonds	710	27	54	2	764	29
Sovereign debt/sovereign guaranteed	3,555	26	1,194	23	4,749	49
Other debt securities	2,300	16	686	12	2,986	28
Total securities available-for-sale (b)	\$ 38,625	\$ 584	\$ 18,145	\$ 829	\$ 56,770	\$ 1,413
Held-to-maturity:						
U.S. Treasury	\$ 2,268	\$ 62	\$ 2,372	\$ 71	\$ 4,640	\$ 133
U.S. government agencies	681	8	871	11	1,552	19
State and political subdivisions	—	—	4	1	4	1
Agency RMBS	11,018	299	13,396	667	24,414	966
Non-agency RMBS	20	—	37	1	57	1
Agency commercial MBS	747	28	464	24	1,211	52
Total securities held-to-maturity	\$ 14,734	\$ 397	\$ 17,144	\$ 775	\$ 31,878	\$ 1,172
Total temporarily impaired securities	\$ 53,359	\$ 981	\$ 35,289	\$ 1,604	\$ 88,648	\$ 2,585

- (a) Includes \$6 million with an unrealized loss of less than \$1 million for less than 12 months and \$6 million with an unrealized loss of less than \$1 million for 12 months or more that were included in the former Grantor Trust.
- (b) Includes gross unrealized losses of \$93 million for 12 months or more recorded in accumulated other comprehensive income related to securities that were transferred from available-for-sale to held-to-maturity. The unrealized losses are primarily related to Agency RMBS and will be amortized into net interest revenue over the contractual lives of the securities. There were no gross unrealized losses for less than 12 months.

Notes to Consolidated Financial Statements (continued)

Temporarily impaired securities at Dec. 31, 2017	Less than 12 months		12 months or more		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
<i>(in millions)</i>						
Available-for-sale:						
U.S. Treasury	\$ 7,429	\$ 131	\$ 2,175	\$ 29	\$ 9,604	\$ 160
U.S. government agencies	588	6	160	4	748	10
State and political subdivisions	732	3	518	20	1,250	23
Agency RMBS	8,567	66	5,834	225	14,401	291
Non-agency RMBS (a)	20	—	149	4	169	4
Other RMBS	71	4	45	2	116	6
Non-agency commercial MBS	476	3	122	3	598	6
Agency commercial MBS	3,077	28	1,332	39	4,409	67
CLOs	260	1	—	—	260	1
Foreign covered bonds	953	7	116	2	1,069	9
Corporate bonds	274	2	288	9	562	11
Sovereign debt/sovereign guaranteed	1,880	12	559	11	2,439	23
Other debt securities	1,855	7	368	5	2,223	12
Total securities available-for-sale (b)	\$ 26,182	\$ 270	\$ 11,666	\$ 353	\$ 37,848	\$ 623
Held-to-maturity:						
U.S. Treasury	\$ 6,389	\$ 41	\$ 2,909	\$ 15	\$ 9,298	\$ 56
U.S. government agencies	791	4	850	8	1,641	12
State and political subdivisions	—	—	4	1	4	1
Agency RMBS	9,458	81	12,305	251	21,763	332
Other RMBS	—	—	50	1	50	1
Agency commercial MBS	737	7	60	2	797	9
Total securities held-to-maturity	\$ 17,375	\$ 133	\$ 16,178	\$ 278	\$ 33,553	\$ 411
Total temporarily impaired securities	\$ 43,557	\$ 403	\$ 27,844	\$ 631	\$ 71,401	\$ 1,034

- (a) Includes \$7 million with an unrealized loss of less than \$1 million for less than 12 months and \$12 million with an unrealized loss of \$1 million for 12 months or more that were included in the former Grantor Trust.
- (b) Includes gross unrealized losses of \$144 million for 12 months or more recorded in accumulated other comprehensive income related to securities that were transferred from available-for-sale to held-to-maturity. The unrealized losses are primarily related to Agency RMBS and will be amortized into net interest revenue over the contractual lives of the securities. There were no gross unrealized losses for less than 12 months.

The following table shows the maturity distribution by carrying amount and yield (on a tax equivalent basis) of our securities portfolio.

Maturity distribution and yields on securities at Sept. 30, 2018	U.S. Treasury		U.S. government agencies		State and political subdivisions		Other bonds, notes and debentures		Mortgage/asset-backed		Total
	Amount	Yield (a)	Amount	Yield (a)	Amount	Yield (a)	Amount	Yield (a)	Amount	Yield (a)	
<i>(dollars in millions)</i>											
Securities available-for-sale:											
One year or less	\$ 7,485	1.91%	\$ 145	2.16%	\$ 426	2.28%	\$ 5,637	1.23%	\$ —	—%	\$ 13,693
Over 1 through 5 years	6,380	2.02	357	2.20	1,128	2.92	11,214	1.20	—	—	19,079
Over 5 through 10 years	2,385	2.25	1,023	2.75	587	2.57	2,280	0.88	—	—	6,275
Over 10 years	3,262	3.11	—	—	195	2.92	183	1.68	—	—	3,640
Mortgage-backed securities	—	—	—	—	—	—	—	—	37,358	3.13	37,358
Asset-backed securities	—	—	—	—	—	—	—	—	4,110	3.30	4,110
Total	\$ 19,512	2.19%	\$ 1,525	2.56%	\$ 2,336	2.72%	\$ 19,314	1.17%	\$ 41,468	3.15%	\$ 84,155
Securities held-to-maturity:											
One year or less	\$ 907	1.31%	\$ 507	1.21%	\$ —	—%	\$ —	—%	\$ —	—%	\$ 1,414
Over 1 through 5 years	3,705	1.81	1,065	2.34	2	5.63	437	0.46	—	—	5,209
Over 5 through 10 years	311	2.18	—	—	1	5.93	517	0.85	—	—	829
Over 10 years	—	—	—	—	14	4.76	—	—	—	—	14
Mortgage-backed securities	—	—	—	—	—	—	—	—	27,020	2.88	27,020
Total	\$ 4,923	1.74%	\$ 1,572	1.97%	\$ 17	4.95%	\$ 954	0.67%	\$ 27,020	2.88%	\$ 34,486

(a) Yields are based upon the amortized cost of securities.

Other-than-temporary impairment

We conduct periodic reviews of all securities to determine whether OTTI has occurred. Such reviews may incorporate the use of economic models.

Various inputs to the economic models are used to determine if an unrealized loss on securities is other-than-temporary. For example, the most significant inputs related to non-agency RMBS are:

- Default rate - the number of mortgage loans expected to go into default over the life of the transaction, which is driven by the roll rate of loans in each performance bucket that will ultimately migrate to default; and
- Severity - the loss expected to be realized when a loan defaults.

To determine if an unrealized loss is other-than-temporary, we project total estimated defaults of the underlying assets (mortgages) and multiply that calculated amount by an estimate of realizable value upon sale of these assets in the marketplace (severity) in order to determine the projected collateral loss. In determining estimated default rate and severity assumptions, we review the performance of the underlying securities, industry studies and market forecasts, as well as our view of the economic outlook affecting collateral. We also evaluate the current credit enhancement underlying the bond to determine the impact on cash flows. If we determine that a given security will be subject to a write-down or loss, we record the expected credit loss as a charge to earnings.

The table below shows the projected weighted-average default rates and loss severities for the 2007, 2006 and late 2005 non-agency RMBS and the securities previously held in the Grantor Trust that we established in connection with the restructuring of our securities portfolio in 2009, at Sept. 30, 2018 and Dec. 31, 2017. See Note 15 for carrying values of these securities.

	Projected weighted-average default rates and loss severities			
	Sept. 30, 2018		Dec. 31, 2017	
	Default rate	Severity	Default rate	Severity
Alt-A	20%	52%	22%	53%
Subprime	35%	65%	38%	66%
Prime	12%	40%	13%	39%

The following table presents pre-tax net securities gains (losses) by type.

Net securities gains (losses)					
(in millions)	3Q18	2Q18	3Q17	YTD18	YTD17
Agency RMBS	\$ —	\$ —	\$ 4	\$ (42)	\$ 5
U.S. Treasury	(1)	—	1	(5)	—
Non-agency RMBS	—	—	(1)	—	(2)
Other	1	1	15	(1)	26
Total net securities gains (losses)	\$ —	\$ 1	\$ 19	\$ (48)	\$ 29

The following tables reflect securities credit losses recorded in earnings. The beginning balance represents the credit loss component for which OTTI occurred on debt securities in prior periods. The additions represent the first time a debt security was credit impaired or when subsequent credit impairments have occurred. The deductions represent credit losses on securities that have been sold, are required to be sold, or for which it is our intention to sell.

Debt securities credit loss roll forward		
(in millions)	3Q18	3Q17
Beginning balance as of June 30	\$ 79	\$ 85
Add: Initial OTTI credit losses	—	—
Subsequent OTTI credit losses	—	1
Less: Realized losses for securities sold	1	2
Ending balance as of Sept. 30	\$ 78	\$ 84

Debt securities credit loss roll forward		
(in millions)	YTD18	YTD17
Beginning balance as of Dec. 31	\$ 84	\$ 88
Add: Initial OTTI credit losses	—	—
Subsequent OTTI credit losses	—	3
Less: Realized losses for securities sold	6	7
Ending balance as of Sept. 30	\$ 78	\$ 84

Pledged assets

At Sept. 30, 2018, BNY Mellon had pledged assets of \$114 billion, including \$93 billion pledged as collateral for potential borrowings at the Federal Reserve Discount Window and \$6 billion pledged as collateral for borrowing at the Federal Home Loan Bank. The components of the assets pledged at Sept. 30, 2018 included \$96 billion of securities, \$14 billion of loans, \$4 billion of trading assets and less than \$1 billion of interest-bearing deposits with banks.

If there has been no borrowing at the Federal Reserve Discount Window, the Federal Reserve generally allows banks to freely move assets in and out of their pledged assets account to sell or repledge the assets for other purposes. BNY Mellon regularly moves assets in and out of its pledged assets account at the Federal Reserve.

At Dec. 31, 2017, BNY Mellon had pledged assets of \$111 billion, including \$92 billion pledged as collateral for potential borrowing at the Federal Reserve Discount Window and \$5 billion pledged as collateral for borrowing at the Federal Home Loan Bank. The components of the assets pledged at Dec. 31, 2017 included \$96 billion of securities, \$13 billion of loans and \$2 billion of trading assets.

At Sept. 30, 2018 and Dec. 31, 2017, pledged assets included \$11 billion and \$10 billion, respectively, for which the recipients were permitted to sell or repledge the assets delivered.

We also obtain securities as collateral, including receipts under resale agreements, securities borrowed, derivative contracts and custody agreements on terms which permit us to sell or repledge the securities to others. At Sept. 30, 2018 and Dec. 31, 2017, the market value of the securities received that can be sold or repledged was \$117 billion and \$86 billion, respectively. We routinely sell or repledge these securities through delivery to third parties. As of Sept. 30, 2018 and Dec. 31, 2017, the market value of securities collateral sold or repledged was \$83 billion and \$49 billion, respectively.

Restricted cash and securities

Cash and securities may be segregated under federal and other regulations or requirements. At Sept. 30, 2018 and Dec. 31, 2017, cash segregated under federal and other regulations or requirements was \$1 billion and \$2 billion, respectively. Restricted cash is included in interest-bearing deposits with banks on the consolidated balance sheet. Securities segregated for these purposes were less than \$1 billion at Sept. 30, 2018 and \$1 billion at Dec. 31, 2017. Restricted securities were sourced from securities purchased under resale agreements at Sept. 30, 2018 and Dec. 31, 2017 and are included in federal funds sold and securities purchased under resale agreements on the consolidated balance sheet.

Note 5—Loans and asset quality

Loans

The table below provides the details of our loan portfolio and industry concentrations of credit risk at Sept. 30, 2018 and Dec. 31, 2017.

Loans (in millions)	Sept. 30, 2018	Dec. 31, 2017
Domestic:		
Commercial	\$ 1,928	\$ 2,744
Commercial real estate	5,034	4,900
Financial institutions	4,237	5,568
Lease financings	738	772
Wealth management loans and mortgages	15,852	16,420
Other residential mortgages	623	708
Overdrafts	784	963
Other	1,196	1,131
Margin loans	13,326	15,689
Total domestic	43,718	48,895
Foreign:		
Commercial	223	167
Commercial real estate	2	—
Financial institutions	6,154	7,483
Lease financings	545	527
Wealth management loans and mortgages	104	108
Other (primarily overdrafts)	3,099	4,264
Margin loans	142	96
Total foreign	10,269	12,645
Total loans (a)	\$ 53,987	\$ 61,540

(a) Net of unearned income of \$367 million at Sept. 30, 2018 and \$394 million at Dec. 31, 2017 primarily related to domestic and foreign lease financings.

Our loan portfolio consists of three portfolio segments: commercial, lease financings and mortgages. We manage our portfolio at the class level, which consists of six classes of financing receivables: commercial, commercial real estate, financial institutions, lease financings, wealth management loans and mortgages, and other residential mortgages.

The following tables are presented for each class of financing receivable and provide additional information about our credit risks and the adequacy of our allowance for credit losses.

Allowance for credit losses

Transactions in the allowance for credit losses are summarized as follows.

Allowance for credit losses activity for the quarter ended Sept. 30, 2018										
<i>(in millions)</i>	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total	
Beginning balance	\$ 76	\$ 74	\$ 24	\$ 6	\$ 23	\$ 18	\$ —	\$ 33	\$ 254	
Charge-offs	—	—	—	—	—	(1)	—	—	(1)	
Recoveries	—	—	—	—	—	1	—	—	1	
Net recoveries	—	—	—	—	—	—	—	—	—	
Provision	—	(1)	1	—	(2)	(1)	—	—	(3)	
Ending balance	\$ 76	\$ 73	\$ 25	\$ 6	\$ 21	\$ 17	\$ —	\$ 33	\$ 251	
Allowance for:										
Loan losses	\$ 17	\$ 53	\$ 9	\$ 6	\$ 17	\$ 17	\$ —	\$ 21	\$ 140	
Lending-related commitments	59	20	16	—	4	—	—	12	111	
Individually evaluated for impairment:										
Loan balance	\$ —	\$ —	\$ —	\$ —	\$ 4	\$ —	\$ —	\$ —	\$ 4	
Allowance for loan losses	—	—	—	—	—	—	—	—	—	
Collectively evaluated for impairment:										
Loan balance	\$ 1,928	\$ 5,034	\$ 4,237	\$ 738	\$ 15,848	\$ 623	\$ 15,306 (a)	\$ 10,269	\$ 53,983	
Allowance for loan losses	17	53	9	6	17	17	—	21	140	

(a) Includes \$784 million of domestic overdrafts, \$13,326 million of margin loans and \$1,196 million of other loans at Sept. 30, 2018.

Allowance for credit losses activity for the quarter ended June 30, 2018										
<i>(in millions)</i>	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total	
Beginning balance	\$ 75	\$ 75	\$ 22	\$ 7	\$ 23	\$ 19	\$ —	\$ 35	\$ 256	
Charge-offs	—	—	—	—	—	—	—	—	—	
Recoveries	—	—	—	—	—	1	—	—	1	
Net recoveries	—	—	—	—	—	1	—	—	1	
Provision	1	(1)	2	(1)	—	(2)	—	(2)	(3)	
Ending balance	\$ 76	\$ 74	\$ 24	\$ 6	\$ 23	\$ 18	\$ —	\$ 33	\$ 254	
Allowance for:										
Loan losses	\$ 17	\$ 55	\$ 8	\$ 6	\$ 19	\$ 18	\$ —	\$ 22	\$ 145	
Lending-related commitments	59	19	16	—	4	—	—	11	109	
Individually evaluated for impairment:										
Loan balance	\$ —	\$ —	\$ —	\$ —	\$ 5	\$ —	\$ —	\$ —	\$ 5	
Allowance for loan losses	—	—	—	—	—	—	—	—	—	
Collectively evaluated for impairment:										
Loan balance	\$ 2,117	\$ 4,974	\$ 5,526	\$ 758	\$ 16,186	\$ 653	\$ 17,173 (a)	\$ 10,384	\$ 57,771	
Allowance for loan losses	17	55	8	6	19	18	—	22	145	

(a) Includes \$1,090 million of domestic overdrafts, \$14,914 million of margin loans and \$1,169 million of other loans at June 30, 2018.

Notes to Consolidated Financial Statements (continued)
Allowance for credit losses activity for the quarter ended Sept. 30, 2017

<i>(in millions)</i>	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
Beginning balance	\$ 80	\$ 75	\$ 23	\$ 10	\$ 25	\$ 23	\$ —	\$ 34	\$ 270
Charge-offs	—	—	—	—	—	—	—	—	—
Recoveries	—	—	—	—	—	1	—	—	1
Net recoveries	—	—	—	—	—	1	—	—	1
Provision	1	—	—	(1)	(4)	(3)	—	1	(6)
Ending balance	\$ 81	\$ 75	\$ 23	\$ 9	\$ 21	\$ 21	\$ —	\$ 35	\$ 265
Allowance for:									
Loan losses	\$ 26	\$ 57	\$ 7	\$ 9	\$ 17	\$ 21	\$ —	\$ 24	\$ 161
Lending-related commitments	55	18	16	—	4	—	—	11	104
Individually evaluated for impairment:									
Loan balance	\$ —	\$ —	\$ 2	\$ —	\$ 5	\$ —	\$ —	\$ —	\$ 7
Allowance for loan losses	—	—	2	—	—	—	—	—	2
Collectively evaluated for impairment:									
Loan balance	\$ 2,698	\$ 4,921	\$ 5,153	\$ 823	\$ 16,156	\$ 741	\$ 16,366	(a) \$ 12,203	\$ 59,061
Allowance for loan losses	26	57	5	9	17	21	—	24	159

(a) Includes \$1,487 million of domestic overdrafts, \$13,720 million of margin loans and \$1,159 million of other loans at Sept. 30, 2017.

Allowance for credit losses activity for the nine months ended Sept. 30, 2018

<i>(in millions)</i>	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
Beginning balance	\$ 77	\$ 76	\$ 23	\$ 8	\$ 22	\$ 20	\$ —	\$ 35	\$ 261
Charge-offs	—	—	—	—	—	(1)	—	—	(1)
Recoveries	—	—	—	—	—	2	—	—	2
Net recoveries	—	—	—	—	—	1	—	—	1
Provision	(1)	(3)	2	(2)	(1)	(4)	—	(2)	(11)
Ending balance	\$ 76	\$ 73	\$ 25	\$ 6	\$ 21	\$ 17	\$ —	\$ 33	\$ 251

Allowance for credit losses activity for the nine months ended Sept. 30, 2017

<i>(in millions)</i>	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
Beginning balance	\$ 82	\$ 73	\$ 26	\$ 13	\$ 23	\$ 28	\$ —	\$ 36	\$ 281
Charge-offs	—	—	—	—	—	(1)	—	—	(1)
Recoveries	—	—	—	—	—	3	—	—	3
Net recoveries	—	—	—	—	—	2	—	—	2
Provision	(1)	2	(3)	(4)	(2)	(9)	—	(1)	(18)
Ending balance	\$ 81	\$ 75	\$ 23	\$ 9	\$ 21	\$ 21	\$ —	\$ 35	\$ 265

Nonperforming assets

The table below presents our nonperforming assets.

Nonperforming assets (in millions)	Sept. 30, 2018	Dec. 31, 2017
Nonperforming loans:		
Other residential mortgages	\$ 69	\$ 78
Wealth management loans and mortgages	9	7
Commercial real estate	—	1
Total nonperforming loans	78	86
Other assets owned	3	4
Total nonperforming assets	\$ 81	\$ 90

Lost interest

Interest income would have increased by \$1 million in the third quarter of 2018, second quarter of 2018 and third quarter of 2017 and \$4 million in the first nine months of 2018 and first nine months of 2017 if nonperforming loans at period-end had been performing for the entire respective quarter.

Impaired loans

We use the discounted cash flow method as the primary method for valuing impaired loans. The average recorded investment and unpaid principal balance of impaired loans were \$10 million or less for the third quarter 2018, second quarter 2018 and the third quarter 2017. The allowance related to impaired loans was less than \$1 million at Sept. 30, 2018 and \$1 million at Dec. 31, 2017.

Past due loans

The table below presents our past due loans.

Past due loans and still accruing interest (in millions)	Sept. 30, 2018				Dec. 31, 2017			
	Days past due			Total past due	Days past due			Total past due
	30-59	60-89	≥90		30-59	60-89	≥90	
Commercial real estate	\$ 42	\$ —	\$ —	\$ 42	\$ 44	\$ —	\$ —	\$ 44
Other residential mortgages	20	4	9	33	18	5	5	28
Financial institutions	33	—	—	33	1	—	—	1
Wealth management loans and mortgages	19	8	1	28	39	5	—	44
Total past due loans	\$ 114	\$ 12	\$ 10	\$ 136	\$ 102	\$ 10	\$ 5	\$ 117

Troubled debt restructurings (“TDRs”)

A modified loan is considered a TDR if the debtor is experiencing financial difficulties and the creditor grants a concession to the debtor that would not otherwise be considered. We modified loans of \$1 million in the third quarter of 2018, \$1 million in the second quarter of 2018 and \$7 million in the third quarter of 2017, primarily other residential mortgages.

Credit quality indicators

Our credit strategy is to focus on investment-grade clients that are active users of our non-credit services. Each customer is assigned an internal credit rating, which is mapped to an external rating agency grade equivalent, if possible, based upon a number of dimensions, which are continually evaluated and may change over time.

The following tables present information about credit quality indicators.

Commercial loan portfolio

Commercial loan portfolio – Credit risk profile by creditworthiness category <i>(in millions)</i>	Commercial		Commercial real estate		Financial institutions	
	Sept. 30, 2018	Dec. 31, 2017	Sept. 30, 2018	Dec. 31, 2017	Sept. 30, 2018	Dec. 31, 2017
Investment grade	\$ 2,073	\$ 2,685	\$ 4,390	\$ 4,277	\$ 8,009	\$ 10,021
Non-investment grade	78	226	646	623	2,382	3,030
Total	\$ 2,151	\$ 2,911	\$ 5,036	\$ 4,900	\$ 10,391	\$ 13,051

The commercial loan portfolio is divided into investment grade and non-investment grade categories based on rating criteria largely consistent with those of the public rating agencies. Each customer in the portfolio is assigned an internal credit rating. These internal credit ratings are generally consistent with the ratings categories of the public rating agencies. Customers with ratings consistent with BBB- (S&P)/Baa3 (Moody's) or better are considered to be investment grade. Those clients with ratings lower than this threshold are considered to be non-investment grade.

Wealth management loans and mortgages

Wealth management loans and mortgages – Credit risk profile by internally assigned grade <i>(in millions)</i>	Sept. 30, 2018	Dec. 31, 2017
Wealth management loans:		
Investment grade	\$ 6,822	\$ 7,042
Non-investment grade	82	185
Wealth management mortgages	9,052	9,301
Total	\$ 15,956	\$ 16,528

Wealth management non-mortgage loans are not typically rated by external rating agencies. A majority of the wealth management loans are secured by the customers' investment management accounts or custody accounts. Eligible assets pledged for these loans are typically investment grade fixed-income securities, equities and/or mutual funds. Internal ratings for this portion of the wealth management portfolio, therefore, would equate to investment-grade external ratings. Wealth management loans are provided to select customers based on the pledge of other types of assets, including business assets, fixed assets or a modest amount of commercial real estate. For the loans collateralized by other assets, the credit

quality of the obligor is carefully analyzed, but we do not consider this portfolio of loans to be investment grade.

Credit quality indicators for wealth management mortgages are not correlated to external ratings. Wealth management mortgages are typically loans to high-net-worth individuals, which are secured primarily by residential property. These loans are primarily interest-only, adjustable rate mortgages with a weighted-average loan-to-value ratio of 62% at origination. In the wealth management portfolio, less than 1% of the mortgages were past due at Sept. 30, 2018.

At Sept. 30, 2018, the wealth management mortgage portfolio consisted of the following geographic concentrations: California - 24%; New York - 18%; Massachusetts - 11%; Florida - 8%; and other - 39%.

Other residential mortgages

The other residential mortgage portfolio primarily consists of 1-4 family residential mortgage loans and totaled \$623 million at Sept. 30, 2018 and \$708 million at Dec. 31, 2017. These loans are not typically correlated to external ratings. Included in this portfolio at Sept. 30, 2018 are \$140 million of mortgage loans purchased in 2005, 2006 and the first quarter of 2007 that are predominantly prime mortgage loans, with a small portion of Alt-A loans. As of Sept. 30, 2018, the purchased loans in this portfolio had a weighted-average loan-to-value ratio of 76% at origination, and 12% of the serviced loan balance was at least 60 days delinquent. The properties securing the prime and Alt-A mortgage loans were located (in order of concentration) in California, Florida, Virginia, the tri-state area (New York, New Jersey and Connecticut) and Maryland.

Overdrafts

Overdrafts primarily relate to custody and securities clearance clients and totaled \$3.8 billion at Sept. 30, 2018 and \$5.1 billion at Dec. 31, 2017. Overdrafts occur on a daily basis primarily in the custody and securities clearance business and are generally repaid within two business days.

Other loans

Other loans primarily include loans to consumers that are fully collateralized with equities, mutual funds and fixed-income securities.

Margin loans

We had \$13.5 billion of secured margin loans on our balance sheet at Sept. 30, 2018 compared with \$15.8

billion at Dec. 31, 2017. Margin loans are collateralized with marketable securities, and borrowers are required to maintain a daily collateral margin in excess of 100% of the value of the loan. We have rarely suffered a loss on these types of loans and do not allocate any of our allowance for credit losses to margin loans.

Reverse repurchase agreements

Reverse repurchase agreements are transactions fully collateralized with high-quality liquid securities. These transactions carry minimal credit risk and therefore are not allocated an allowance for credit losses.

Note 6—Goodwill and intangible assets

Goodwill

The tables below provide a breakdown of goodwill by business.

Goodwill by business <i>(in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Balance at Dec. 31, 2017	\$ 8,389	\$ 9,128	\$ 47	\$ 17,564
Dispositions	—	(65)	—	(65)
Foreign currency translation	(39)	(70)	—	(109)
Balance at Sept. 30, 2018	\$ 8,350	\$ 8,993	\$ 47	\$ 17,390

Goodwill by business <i>(in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Balance at Dec. 31, 2016	\$ 8,269	\$ 9,000	\$ 47	\$ 17,316
Foreign currency translation	107	120	—	227
Balance at Sept. 30, 2017	\$ 8,376	\$ 9,120	\$ 47	\$ 17,543

Intangible assets

The tables below provide a breakdown of intangible assets by business.

Intangible assets – net carrying amount by business <i>(in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Balance at Dec. 31, 2017	\$ 888	\$ 1,674	\$ 849	\$ 3,411
Amortization	(107)	(38)	—	(145)
Foreign currency translation	(1)	(7)	—	(8)
Balance at Sept. 30, 2018	\$ 780	\$ 1,629	\$ 849	\$ 3,258

Intangible assets – net carrying amount by business <i>(in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Balance at Dec. 31, 2016	\$ 1,032	\$ 1,717	\$ 849	\$ 3,598
Amortization	(112)	(45)	—	(157)
Foreign currency translation	4	16	—	20
Balance at Sept. 30, 2017	\$ 924	\$ 1,688	\$ 849	\$ 3,461

The table below provides a breakdown of intangible assets by type.

Intangible assets <i>(in millions)</i>	Sept. 30, 2018				Dec. 31, 2017		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Remaining weighted- average amortization period	Gross carrying amount	Accumulated amortization	Net carrying amount
Subject to amortization: (a)							
Customer contracts—Investment Services	\$ 1,591	\$ (1,183)	\$ 408	10 years	\$ 2,260	\$ (1,744)	\$ 516
Customer relationships—Investment Management	1,249	(1,037)	212	11 years	1,262	(1,015)	247
Other	31	(16)	15	4 years	42	(23)	19
Total subject to amortization	2,871	(2,236)	635	10 years	3,564	(2,782)	782
Not subject to amortization: (b)							
Tradenames	1,332	N/A	1,332	N/A	1,334	N/A	1,334
Customer relationships	1,291	N/A	1,291	N/A	1,295	N/A	1,295
Total not subject to amortization	2,623	N/A	2,623	N/A	2,629	N/A	2,629
Total intangible assets	\$ 5,494	\$ (2,236)	\$ 3,258	N/A	\$ 6,193	\$ (2,782)	\$ 3,411

(a) Excludes fully amortized intangible assets.

(b) Intangible assets not subject to amortization have an indefinite life.

N/A - Not applicable.

Estimated annual amortization expense for current intangibles for the next five years is as follows:

For the year ended Dec. 31,	Estimated amortization expense <i>(in millions)</i>
2018	\$ 180
2019	116
2020	102
2021	78
2022	60

BNY Mellon's three business segments include seven reporting units for which goodwill impairment testing is performed on an annual basis. The Investment Services segment is comprised of four reporting units; the Investment Management segment is comprised of two reporting units and one reporting unit is included in the Other segment. As a result of the annual goodwill impairment test of the seven reporting units conducted in the second quarter of 2018, no goodwill impairment was recognized.

Impairment testing

The goodwill impairment test is performed at least annually at the reporting unit level. Intangible assets not subject to amortization are tested for impairment annually or more often if events or circumstances indicate they may be impaired.

Note 7—Other assets

The following table provides the components of other assets presented on the consolidated balance sheet.

Other assets <i>(in millions)</i>	Sept. 30, 2018	Dec. 31, 2017
Corporate/bank-owned life insurance	\$ 4,901	\$ 4,857
Fails to deliver	3,719	2,817
Accounts receivable	3,638	4,590
Software	1,579	1,499
Prepaid pension assets	1,558	1,416
Renewable energy investments	1,293	1,368
Equity in a joint venture and other investments	1,143	1,083
Income taxes receivable	1,087	1,533
Qualified affordable housing project investments	1,033	1,014
Federal Reserve Bank stock	483	477
Prepaid expense	477	395
Fair value of hedging derivatives	347	323
Seed capital	245	288
Other (a)	1,343	1,369
Total other assets	\$ 22,846	\$ 23,029

(a) At Sept. 30, 2018 and Dec. 31, 2017, other assets include \$97 million and \$82 million, respectively, of Federal Home Loan Bank stock, at cost.

Qualified affordable housing project investments

We invest in affordable housing projects primarily to satisfy the Company's requirements under the Community Reinvestment Act. Our total investment in qualified affordable housing projects totaled \$1.0 billion at Sept. 30, 2018 and \$1.0 billion at Dec. 31, 2017. Commitments to fund future investments in qualified affordable housing projects totaled \$487 million at Sept. 30, 2018 and \$486 million at Dec. 31, 2017 and is recorded in other liabilities. A summary of the commitments to fund future investments is as

follows: 2018 – \$66 million; 2019 – \$138 million; 2020 – \$116 million; 2021 – \$120 million; 2022 – \$29 million; and 2023 and thereafter – \$18 million.

Tax credits and other tax benefits recognized were \$40 million in the third quarter of 2018, \$42 million in the second quarter of 2018, \$39 million in the third quarter of 2017, \$122 million in the first nine months of 2018 and \$115 million in the first nine months of 2017.

Amortization expense included in the provision for income taxes was \$34 million in the third quarter of 2018, \$35 million in the second quarter of 2018, \$29 million in the third quarter of 2017, \$102 million in the first nine months of 2018 and \$84 million in the first nine months of 2017.

Investments valued using net asset value per share

In our Investment Management business, we manage investment assets, including equities, fixed income, money market and multi-asset and alternative investment funds for institutions and other investors. As part of that activity, we make seed capital investments in certain funds. We also hold private equity investments, specifically in small business investment companies ("SBICs"), which are compliant with the Volcker Rule, and certain other corporate investments. Seed capital, private equity and other corporate investments are included in other assets on the consolidated balance sheet. The fair value of these investments was estimated using the net asset value ("NAV") per share for BNY Mellon's ownership interest in the funds.

The table below presents information on our investments valued using NAV.

Other assets valued using NAV <i>(dollars in millions)</i>	Sept. 30, 2018				Dec. 31, 2017			
	Fair value	Unfunded commitments	Redemption frequency	Redemption notice period	Fair value	Unfunded commitments	Redemption frequency	Redemption notice period
Seed capital	\$ 51	\$ —	Daily- quarterly	1-90 days	\$ 40	\$ 1	Daily- quarterly	1-90 days
Private equity investments (SBICs) (a)	75	42	N/A	N/A	55	42	N/A	N/A
Other (b)	74	—	Daily- quarterly	1-95 days	59	—	Daily- quarterly	1-95 days
Total	\$ 200	\$ 42			\$ 154	\$ 43		

(a) Private equity investments primarily include Volcker Rule-compliant investments in SBICs that invest in various sectors of the economy. Private equity investments do not have redemption rights. Distributions from such investments will be received as the underlying investments in the private equity investments, which have a life of 10 years, are liquidated.

(b) Primarily relates to investments in funds that relate to deferred compensation arrangements with employees.

N/A - Not applicable.

Note 8—Contract revenue

Significant accounting policy

Revenue is based on terms specified in a contract with a customer, and excludes any amounts collected on behalf of third parties. Revenue is recognized when, or as, a performance obligation is satisfied by transferring control of a good or service to a customer. A performance obligation may be satisfied over time or at a point in time. Revenue from a performance obligation satisfied over time is recognized by measuring our progress in satisfying the performance obligation in a manner that reflects the transfer of goods and services to the customer. Revenue from a performance obligation satisfied at a point in time is recognized at the point in time the customer obtains control of the promised good or service. The amount of revenue recognized reflects the consideration we expect to be entitled to in exchange for the promised goods and services. Taxes assessed by a governmental authority, that are both imposed on, and concurrent with, a specific revenue-producing transaction, are collected from a customer and are excluded from revenue.

Nature of services and revenue recognition

Fee revenue in Investment Services and Investment Management is primarily variable, based on levels of AUC/A, AUM and the level of client-driven transactions, as specified in fee schedules.

Investment Services fees are based primarily on the market value of AUC/A; client accounts, balances and the volume of transactions; securities lending volume and spreads; and fees for other services. Certain fees based on the market value of assets are calculated in arrears on a monthly or quarterly basis.

Substantially all services within the Investment Services business are provided over time. Revenue on these services is recognized using the time elapsed method, equal to the expected invoice amount, which typically represents the value provided to the customer for our performance completed to date.

Trade execution and clearing services are delivered at a point-in-time, based on customer actions. Revenue for trade execution and clearing services is recognized on trade date, which is consistent with the time that the service was provided. Customers are generally billed for services on a monthly or quarterly basis.

Investment management fees are dependent on the overall level and mix of AUM. The management fees, expressed in basis points, are charged for managing those assets. Management fees are typically subject to fee schedules based on the overall level of assets managed and products in which those assets are invested.

Investment management fee revenue also includes transactional- and account-based fees. These fees along with distribution and servicing fees are recognized when the services have been completed. Clients are generally billed for services performed on a monthly or quarterly basis.

Performance fees are generally calculated as a percentage of the applicable portfolio's performance in excess of a benchmark index or a peer group's performance. Performance fees are recognized at the end of the measurement period when they are determinable.

See Note 19 for additional information on our principal businesses, Investment Services and Investment Management, and the primary services provided.

Disaggregation of contract revenue

Contract revenue is included in fee revenue on the consolidated income statement. The following table presents fee revenue related to contracts with customers, disaggregated by type, for each business segment.

Disaggregation of contract revenue by business segment (a)

(in millions)	Quarter ended Sept. 30, 2018				Quarter ended June 30, 2018			
	Investment Services	Investment Management	Other	Total	Investment Services	Investment Management	Other	Total
Fee revenue - contract revenue:								
Investment services fees:								
Asset servicing	\$ 1,103	\$ 21	\$ —	\$ 1,124	\$ 1,098	\$ 21	\$ 1	\$ 1,120
Clearing services	383	—	—	383	392	—	—	392
Issuer services	288	—	—	288	265	—	—	265
Treasury services	136	—	—	136	140	1	—	141
Total investment services fees	1,910	21	—	1,931	1,895	22	1	1,918
Investment management and performance fees	13	904	—	917	14	893	—	907
Financing-related fees	13	—	1	14	15	—	—	15
Distribution and servicing	(13)	48	—	35	(14)	48	—	34
Investment and other income	71	(51)	(1)	19	69	(50)	1	20
Total fee revenue - contract revenue	1,994	922	—	2,916	1,979	913	2	2,894
Fee and other revenue - not in scope of ASC 606 (b)(c)	236	16	7	259	254	28	39	321
Total fee and other revenue	\$ 2,230	\$ 938	\$ 7	\$ 3,175	\$ 2,233	\$ 941	\$ 41	\$ 3,215

- (a) Business segment data has been determined on an internal management basis of accounting, rather than the generally accepted accounting principles used for consolidated financial reporting.
- (b) Primarily includes foreign exchange and other trading revenue, financing-related fees, investment and other income and net securities gains, all of which are accounted for using other accounting guidance.
- (c) The Investment Management business includes income from consolidated investment management funds, net of noncontrolling interests, of \$7 million in the third quarter of 2018 and \$5 million in the second quarter of 2018.

Disaggregation of contract revenue by business segment (a)

(in millions)	Year-to-date Sept. 30, 2018			
	Investment Services	Investment Management	Other	Total
Fee revenue - contract revenue:				
Investment services fees:				
Asset servicing	\$ 3,318	\$ 67	\$ 1	\$ 3,386
Clearing services	1,188	—	1	1,189
Issuer services	813	—	—	813
Treasury services	414	1	—	415
Total investment services fees	5,733	68	2	5,803
Investment management and performance fees	41	2,739	—	2,780
Financing-related fees	45	—	1	46
Distribution and servicing	(41)	146	—	105
Investment and other income	209	(152)	—	57
Total fee revenue - contract revenue	5,987	2,801	3	8,791
Fee and other revenue - not in scope of ASC 606 (b)(c)	726	90	53	869
Total fee and other revenue	\$ 6,713	\$ 2,891	\$ 56	\$ 9,660

- (a) Business segment data has been determined on an internal management basis of accounting, rather than the generally accepted accounting principles used for consolidated financial reporting.
- (b) Primarily includes foreign exchange and other trading revenue, financing-related fees, investment and other income and net securities gains, all of which are accounted for using other accounting guidance.
- (c) The Investment Management business includes income from consolidated investment management funds, net of noncontrolling interests of \$12 million in the first nine months of 2018.

Contract balances

Our clients are billed based on fee schedules that are agreed upon in each customer contract. Receivable from customers were \$3.9 billion at Jan. 1, 2018 and \$2.5 billion at Sept. 30, 2018. An allowance is maintained for accounts receivables which is generally based on the number of days outstanding. Adjustments to the allowance are recorded in other expense in the consolidated income statement. Provisions of \$2 million and \$8 million were recorded in the third quarter of 2018 and first nine months of 2018, respectively.

Contract assets represent accrued revenues that have not yet been billed to the customers due to certain contractual terms other than the passage of time and were \$30 million at Jan. 1, 2018 and \$56 million at Sept. 30, 2018. Accrued revenues recorded as contract assets are usually billed on an annual basis. There were no impairments recorded on contract assets in the third quarter of 2018.

Both receivables from customers and contract assets are included in other assets on the consolidated balance sheet.

Contract liabilities represent payments received in advance of providing services under certain contracts and were \$167 million at Jan. 1, 2018 and \$195 million at Sept. 30, 2018. Contract liabilities are

included in other liabilities on the consolidated balance sheet. Revenue recognized in the third quarter of 2018 relating to contract liabilities as of June 30, 2018 was \$60 million. Revenue recognized in the first nine months of 2018 relating to contract liabilities as of Jan. 1, 2018 was \$87 million.

Changes in contract assets and liabilities primarily relate to either party's performance under the contracts.

Contract costs

Incremental costs for obtaining contracts that are deemed recoverable are capitalized as contract costs. Such costs result from the payment of sales incentives, primarily in the Wealth Management business, and totaled \$99 million at Sept. 30, 2018. Capitalized sales incentives are amortized based on the transfer of goods or services to which the assets relate and typically average nine years. The amortization of capitalized sales incentives, which is primarily included in staff expense, totaled \$6 million in the third quarter of 2018 and \$17 million in the first nine months of 2018.

Costs to fulfill a contract are capitalized when they relate directly to an existing contract or specific

anticipated contract, generate or enhance resources that will be used to fulfill performance obligations and are recoverable. Such costs generally represent set-up costs, which include any direct cost incurred at inception of a contract which enables the fulfillment of the performance obligation and totaled \$13 million at Sept. 30, 2018. These capitalized costs are amortized on a straight-line basis over the expected contract period which generally range from seven to nine years. The amortization is included in other expense and totaled \$1 million in the third quarter of 2018 and \$4 million in the first nine months of 2018.

There were no impairments recorded on capitalized contract costs in the third quarter of 2018.

Unsatisfied performance obligations

We do not have any unsatisfied performance obligations other than those that are subject to a practical expedient election under Accounting Standards Codification ("ASC") 606, *Revenue From Contracts With Customers*. The practical expedient election applies to (i) contracts with an original expected length of one year or less, and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.

Note 9—Net interest revenue

The following table provides the components of net interest revenue presented on the consolidated income statement.

Net interest revenue	Quarter ended			Year-to-date	
	Sept. 30, 2018	June 30, 2018	Sept. 30, 2017	Sept. 30, 2018	Sept. 30, 2017
<i>(in millions)</i>					
Interest revenue					
Deposits with banks	\$ 59	\$ 56	\$ 34	\$ 157	\$ 83
Deposits with the Federal Reserve and other central banks	125	136	89	387	217
Federal funds sold and securities purchased under resale agreements	281	230	119	681	272
Margin loans	129	128	87	372	249
Non-margin loans	344	345	283	994	800
Securities:					
Taxable	650	615	510	1,846	1,447
Exempt from federal income taxes	14	14	16	43	49
Total securities	664	629	526	1,889	1,496
Trading securities	32	29	13	88	46
Total interest revenue	1,634	1,553	1,151	4,568	3,163
Interest expense					
Deposits	237	173	57	527	98
Federal funds purchased and securities sold under repurchase agreements	190	158	70	455	132
Trading liabilities	7	7	2	23	6
Other borrowed funds	16	14	7	39	13
Commercial paper	16	21	8	49	18
Customer payables	51	45	19	127	42
Long-term debt	226	219	149	622	397
Total interest expense	743	637	312	1,842	706
Net interest revenue	891	916	839	2,726	2,457
Provision for credit losses	(3)	(3)	(6)	(11)	(18)
Net interest revenue after provision for credit losses	\$ 894	\$ 919	\$ 845	\$ 2,737	\$ 2,475

Note 10—Employee benefit plans

The components of net periodic benefit (credit) cost are as follows. The service cost component is reflected in staff expense, whereas the remaining components are reflected in other expense.

Net periodic benefit (credit) cost	Quarter ended								
	Sept. 30, 2018			June 30, 2018			Sept. 30, 2017		
<i>(in millions)</i>	Domestic pension benefits	Foreign pension benefits	Health care benefits	Domestic pension benefits	Foreign pension benefits	Health care benefits	Domestic pension benefits	Foreign pension benefits	Health care benefits
Service cost	\$ —	\$ 7	\$ 1	\$ —	\$ 7	\$ —	\$ —	\$ 7	\$ —
Interest cost	42	8	1	42	8	2	45	8	2
Expected return on assets	(85)	(14)	(2)	(85)	(14)	(2)	(81)	(12)	(2)
Other	19	5	(1)	17	6	—	17	9	(1)
Net periodic benefit (credit) cost	\$ (24)	\$ 6	\$ (1)	\$ (26)	\$ 7	\$ —	\$ (19)	\$ 12	\$ (1)

Net periodic benefit (credit) cost	Year-to-date					
	Sept. 30, 2018			Sept. 30, 2017		
	Domestic pension benefits	Foreign pension benefits	Health care benefits	Domestic pension benefits	Foreign pension benefits	Health care benefits
<i>(in millions)</i>						
Service cost	\$ —	\$ 21	\$ 1	\$ —	\$ 21	\$ —
Interest cost	127	24	5	135	24	6
Expected return on assets	(255)	(43)	(6)	(243)	(36)	(6)
Other	53	17	(2)	51	27	(3)
Net periodic benefit (credit) cost	\$ (75)	\$ 19	\$ (2)	\$ (57)	\$ 36	\$ (3)

Note 11—Income taxes

BNY Mellon recorded an income tax provision of \$220 million (16.5% effective tax rate) in the third quarter of 2018, including the impact of adjusting provisional estimates for U.S. tax legislation and other changes. The income tax provision was \$348 million (25.4% effective tax rate) in the third quarter of 2017 and \$286 million (20.5% effective tax rate) in the second quarter of 2018.

In December 2017, the Tax Cuts and Jobs Act of 2017 (“U.S. tax legislation”) was signed into law in the United States. U.S. GAAP requires companies to recognize the effect of tax law changes on deferred tax assets and liabilities and other recognized assets in the period of enactment. Also in December 2017, the Securities and Exchange Commission staff issued Staff Accounting Bulletin No.118 (“SAB 118”). SAB 118 allows the recording of a provisional estimate to reflect the income tax impact of the U.S. tax legislation and provides a measurement period up to one year from the enactment date. In the fourth quarter of 2017, BNY Mellon recorded a \$710 million provisional tax benefit to reflect the impact of the U.S tax legislation.

Income tax (benefit) expense	4Q17
<i>(estimated in millions)</i>	
Remeasurement of net deferred tax liabilities	\$ (1,472)
Repatriation tax	723
Other items	39
Net income tax (benefit)	\$ (710)

In the third quarter of 2018, BNY Mellon adjusted its 2017 provisional tax calculation and recorded an additional \$93 million tax benefit. The tax benefit is comprised of \$70 million for remeasurement of net deferred tax liabilities and \$23 million for reduction in repatriation tax. We expect to complete our analysis under SAB 118 in the fourth quarter of 2018.

Our total tax reserves as of Sept. 30, 2018 were \$98 million compared with \$101 million at June 30, 2018. If these tax reserves were unnecessary, \$98 million would affect the effective tax rate in future periods. We recognize accrued interest and penalties, if applicable, related to income taxes in income tax expense. Included in the balance sheet at Sept. 30, 2018 is accrued interest, where applicable, of \$18 million. The additional tax expense related to interest for the nine months ended Sept. 30, 2018 was \$3 million, compared with \$7 million for the nine months ended Sept. 30, 2017.

It is reasonably possible the total reserve for uncertain tax positions could decrease within the next 12 months by approximately \$7 million as a result of adjustments related to tax years that are still subject to examination.

Our federal income tax returns are closed to examination through 2013. Our New York State, New York City and UK income tax returns are closed to examination through 2012.

Note 12—Variable interest entities and securitization

BNY Mellon has variable interests in VIEs, which include investments in retail, institutional and alternative investment funds, including collateralized loan obligation (“CLO”) structures in which we provide asset management services, some of which are consolidated. The investment funds are offered to our retail and institutional clients to provide them with access to investment vehicles with specific investment objectives and strategies that address the client’s investment needs.

BNY Mellon earns management fees from these funds as well as performance fees in certain funds and may also provide start-up capital for its new

funds. The funds are primarily financed by our customers' investments in the funds' equity or debt.

Additionally, BNY Mellon invests in qualified affordable housing and renewable energy projects, which are designed to generate a return primarily through the realization of tax credits by the Company. The projects, which are structured as limited partnerships and LLCs, are also VIEs, but are not consolidated.

The VIEs previously discussed are included in the scope of ASU 2015-02 and are reviewed for consolidation based on the guidance in ASC 810, *Consolidation*. We reconsider and reassess whether or not we are the primary beneficiary of a VIE when governing documents or contractual arrangements are

changed that would reallocate the obligation to absorb expected losses or receive expected residual returns between BNY Mellon and the other investors. This could occur when BNY Mellon disposes of its variable interests in the fund, when additional variable interests are issued to other investors or when we acquire additional variable interests in the VIE.

The following table presents the incremental assets and liabilities included in BNY Mellon's consolidated financial statements as of Sept. 30, 2018 and Dec. 31, 2017. The net assets of any consolidated VIE are solely available to settle the liabilities of the VIE and to settle any investors' ownership liquidation requests, including any seed capital invested in the VIE by BNY Mellon.

Consolidated investments

(in millions)	Sept. 30, 2018			Dec. 31, 2017		
	Investment Management funds	Securitization	Total consolidated investments	Investment Management funds	Securitization	Total consolidated investments
Securities - Available-for-sale	\$ —	\$ —	\$ —	\$ —	\$ 400	\$ 400
Trading assets	243	400	643	516	—	516
Other assets	256	—	256	215	—	215
Total assets	\$ 499 (a)	\$ 400	\$ 899	\$ 731 (b)	\$ 400	\$ 1,131
Other liabilities	\$ 7	\$ 363	\$ 370	\$ 2	\$ 367	\$ 369
Total liabilities	\$ 7 (a)	\$ 363	\$ 370	\$ 2 (b)	\$ 367	\$ 369
Nonredeemable noncontrolling interests	\$ 90 (a)	\$ —	\$ 90	\$ 316 (b)	\$ —	\$ 316

(a) Includes voting model entities ("VMEs") with assets of \$283 million, liabilities of \$1 million and nonredeemable noncontrolling interests of less than \$1 million.

(b) Includes VMEs with assets of \$84 million, liabilities of \$1 million and nonredeemable noncontrolling interests of \$1 million.

BNY Mellon has not provided financial or other support that was not otherwise contractually required to be provided to our VIEs. Additionally, creditors of any consolidated VIEs do not have any recourse to the general credit of BNY Mellon.

Non-consolidated VIEs

As of Sept. 30, 2018 and Dec. 31, 2017, the following assets and liabilities related to the VIEs where BNY

Mellon is not the primary beneficiary are included in our consolidated financial statements and primarily relate to accounting for our investments in qualified affordable housing and renewable energy projects.

The maximum loss exposure indicated in the table below relates solely to BNY Mellon's investments in, and unfunded commitments to, the VIEs.

Non-consolidated VIEs

(in millions)	Sept. 30, 2018			Dec. 31, 2017		
	Assets	Liabilities	Maximum loss exposure	Assets	Liabilities	Maximum loss exposure
Securities - Available-for-sale (a)	\$ 219	\$ —	\$ 219	\$ 203	\$ —	\$ 203
Other	2,516	487	3,003	2,592	486	3,078

(a) Includes investments in the Company's sponsored CLOs.

Note 13—Preferred stock

BNY Mellon has 100 million authorized shares of preferred stock with a par value of \$0.01 per share. The following table summarizes BNY Mellon's preferred stock issued and outstanding at Sept. 30, 2018 and Dec. 31, 2017.

Preferred stock summary (a)		Total shares issued and outstanding		Carrying value (b) (in millions)	
		Sept. 30, 2018	Dec. 31, 2017	Sept. 30, 2018	Dec. 31, 2017
Per annum dividend rate					
Series A	Greater of (i) three-month LIBOR plus 0.565% for the related distribution period; or (ii) 4.000%	5,001	5,001	\$ 500	\$ 500
Series C	5.2%	5,825	5,825	568	568
Series D	4.50% to but excluding June 20, 2023, then a floating rate equal to the three-month LIBOR plus 2.46%	5,000	5,000	494	494
Series E	4.95% to and including June 20, 2020, then a floating rate equal to the three-month LIBOR plus 3.42%	10,000	10,000	990	990
Series F	4.625% to and including Sept. 20, 2026, then a floating rate equal to the three-month LIBOR plus 3.131%	10,000	10,000	990	990
Total		35,826	35,826	\$ 3,542	\$ 3,542

(a) All outstanding preferred stock is noncumulative perpetual preferred stock with a liquidation preference of \$100,000 per share.

(b) The carrying value of the Series C, Series D, Series E and Series F preferred stock is recorded net of issuance costs.

The table below presents the dividends paid on our preferred stock.

Dividend paid per preferred share											
	Depository shares per share	3Q18		2Q18		3Q17		YTD18		YTD17	
		per share	in millions	per share	in millions	per share	in millions	per share	in millions	per share	in millions
Series A	100 (a)	\$1,022.22	\$ 5	\$1,022.22	\$ 5	\$1,022.22	\$ 5	\$3,044.44	\$ 15	\$3,044.44	\$ 15
Series C	4,000	1,300.00	8	1,300.00	7	1,300.00	7	3,900.00	23	3,900.00	23
Series D	100	N/A	—	2,250.00	11	N/A	—	2,250.00	11	2,250.00	11
Series E	100	N/A	—	2,475.00	25	N/A	—	2,475.00	25	2,475.00	25
Series F	100	2,312.50	23	N/A	—	2,312.50	23	4,625.00	46	5,254.51	52
Total		\$ 36	\$ 48	\$ 35	\$ 120	\$ 126					

(a) Represents Normal Preferred Capital Securities.

For additional information on the preferred stock, see Note 13 of the Notes to Consolidated Financial Statements in our 2017 Annual Report.

Terms of the Series A, Series C, Series D, Series E and Series F preferred stock are more fully described in each of their Certificates of Designations, each of which is filed as an Exhibit to this Form 10-Q.

Note 14—Other comprehensive income (loss)

Components of other comprehensive income (loss)	Quarter ended								
	Sept. 30, 2018			June 30, 2018			Sept. 30, 2017		
	Pre-tax amount	Tax (expense) benefit	After-tax amount	Pre-tax amount	Tax (expense) benefit	After-tax amount	Pre-tax amount	Tax (expense) benefit	After-tax amount
<i>(in millions)</i>									
Foreign currency translation:									
Foreign currency translation adjustments arising during the period (a)	\$ (21)	\$ (39)	\$ (60)	\$ (302)	\$ (98)	\$ (400)	\$ 221	\$ 65	\$ 286
Total foreign currency translation	(21)	(39)	(60)	(302)	(98)	(400)	221	65	286
Unrealized (loss) gain on assets available-for-sale:									
Unrealized (loss) gain arising during period	(190)	46	(144)	(103)	39	(64)	47	(19)	28
Reclassification adjustment (b)	—	—	—	(1)	1	—	(19)	7	(12)
Net unrealized (loss) gain on assets available-for-sale	(190)	46	(144)	(104)	40	(64)	28	(12)	16
Defined benefit plans:									
Amortization of prior service credit, net loss and initial obligation included in net periodic benefit cost (b)	23	(5)	18	22	(6)	16	25	(10)	15
Total defined benefit plans	23	(5)	18	22	(6)	16	25	(10)	15
Unrealized (loss) gain on cash flow hedges:									
Unrealized hedge (loss) gain arising during period	(9)	2	(7)	(17)	3	(14)	(2)	—	(2)
Reclassification of net loss (gain) to net income:									
FX contracts - trading revenue	—	—	—	—	—	—	1	(1)	—
FX contracts - other revenue	—	—	—	1	—	1	—	—	—
FX contracts - salary expense	4	(1)	3	(2)	1	(1)	2	—	2
Total reclassifications to net income (b)	4	(1)	3	(1)	1	—	3	(1)	2
Net unrealized (loss) gain on cash flow hedges	(5)	1	(4)	(18)	4	(14)	1	(1)	—
Total other comprehensive (loss) income	\$ (193)	\$ 3	\$ (190)	\$ (402)	\$ (60)	\$ (462)	\$ 275	\$ 42	\$ 317

Components of other comprehensive income (loss)	Year-to-date					
	Sept. 30, 2018			Sept. 30, 2017		
	Pre-tax amount	Tax (expense) benefit	After-tax amount	Pre-tax amount	Tax (expense) benefit	After-tax amount
<i>(in millions)</i>						
Foreign currency translation:						
Foreign currency translation adjustments arising during the period (a)	\$ (122)	\$ (94)	\$ (216)	\$ 566	\$ 175	\$ 741
Total foreign currency translation	(122)	(94)	(216)	566	175	741
Unrealized (loss) gain on assets available-for-sale:						
Unrealized (loss) gain arising during period	(635)	152	(483)	357	(144)	213
Reclassification adjustment (b)	48	(11)	37	(29)	10	(19)
Net unrealized (loss) gain on assets available-for-sale	(587)	141	(446)	328	(134)	194
Defined benefit plans:						
Net gain (loss) arising during the period	—	—	—	3	(1)	2
Amortization of prior service credit, net loss and initial obligation included in net periodic benefit cost (b)	67	(16)	51	74	(25)	49
Total defined benefit plans	67	(16)	51	77	(26)	51
Unrealized (loss) gain on cash flow hedges:						
Unrealized hedge (loss) gain arising during period	(19)	4	(15)	4	(1)	3
Reclassification of net (gain) loss to net income:						
FX contracts - trading revenue	—	—	—	(2)	—	(2)
FX contracts - other revenue	(3)	1	(2)	—	—	—
FX contracts - salary expense	(4)	1	(3)	15	(5)	10
Total reclassifications to net income (b)	(7)	2	(5)	13	(5)	8
Net unrealized (loss) gain on cash flow hedges	(26)	6	(20)	17	(6)	11
Total other comprehensive (loss) income	\$ (668)	\$ 37	\$ (631)	\$ 988	\$ 9	\$ 997

(a) Includes the impact of hedges of net investments in foreign subsidiaries. See Note 17 for additional information.

(b) The reclassification adjustment related to the unrealized gain (loss) on assets available-for-sale is recorded as net securities gains on the Consolidated Income Statement. The amortization of prior service credit, net loss and initial obligation included in net periodic benefit cost is recorded as staff expense on the Consolidated Income Statement. See Note 17 for the location of the reclassification adjustment related to cash flow hedges on the Consolidated Income Statement.

Note 15—Fair value measurement

Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. A three-level hierarchy for fair value measurements is utilized based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. BNY Mellon's own creditworthiness is considered when valuing liabilities. See Note 18 of the Notes to Consolidated Financial Statements in our 2017 Annual Report for

information on how we determine fair value and the fair value hierarchy.

The following tables present the financial instruments carried at fair value at Sept. 30, 2018 and Dec. 31, 2017, by caption on the consolidated balance sheet and by the three-level valuation hierarchy. We have included credit ratings information in certain of the tables because the information indicates the degree of credit risk to which we are exposed, and significant changes in ratings classifications could result in increased risk for us.

Assets measured at fair value on a recurring basis at Sept. 30, 2018 <i>(dollars in millions)</i>	Level 1	Level 2	Level 3	Netting (a)	Total carrying value
Available-for-sale securities:					
U.S. Treasury	\$ 19,512	\$ —	\$ —	\$ —	\$ 19,512
U.S. government agencies	—	1,525	—	—	1,525
Sovereign debt/sovereign guaranteed	9,180	2,362	—	—	11,542
State and political subdivisions	—	2,336	—	—	2,336
Agency RMBS	—	24,867	—	—	24,867
Non-agency RMBS (b)	—	1,419	—	—	1,419
Non-agency commercial MBS	—	1,459	—	—	1,459
Agency commercial MBS	—	9,613	—	—	9,613
CLOs	—	3,363	—	—	3,363
Corporate bonds	—	1,118	—	—	1,118
Other debt securities	—	4,429	—	—	4,429
Foreign covered bonds	—	2,972	—	—	2,972
Total available-for-sale securities	28,692	55,463	—	—	84,155
Trading assets:					
Debt instruments	1,648	2,791	—	—	4,439
Equity instruments (c)	1,429	—	—	—	1,429
Derivative assets not designated as hedging:					
Interest rate	8	3,228	—	(2,121)	1,115
Foreign exchange	—	3,611	—	(2,807)	804
Equity and other contracts	—	40	—	(23)	17
Total derivative assets not designated as hedging	8	6,879	—	(4,951)	1,936
Total trading assets	3,085	9,670	—	(4,951)	7,804
Other assets:					
Derivative assets designated as hedging:					
Interest rate	—	151	—	—	151
Foreign exchange	—	196	—	—	196
Total derivative assets designated as hedging	—	347	—	—	347
Other assets (d)	101	184	—	—	285
Other assets measured at NAV (d)	—	—	—	—	200
Total other assets	101	531	—	—	832
Subtotal assets of operations at fair value	31,878	65,664	—	(4,951)	92,791
Percentage of assets of operations prior to netting	33%	67%	—%		
Assets of consolidated investment management funds	216	283	—	—	499
Total assets	\$ 32,094	\$ 65,947	\$ —	\$ (4,951)	\$ 93,290
Percentage of total assets prior to netting	33%	67%	—%		

Notes to Consolidated Financial Statements (continued)

Liabilities measured at fair value on a recurring basis at Sept. 30, 2018 <i>(dollars in millions)</i>	Level 1	Level 2	Level 3	Netting (a)	Total carrying value
Trading liabilities:					
Debt instruments	\$ 1,186	\$ 216	\$ —	\$ —	\$ 1,402
Equity instruments	22	—	—	—	22
Derivative liabilities not designated as hedging:					
Interest rate	4	2,813	—	(2,262)	555
Foreign exchange	—	3,937	—	(2,455)	1,482
Equity and other contracts	2	108	—	(35)	75
Total derivative liabilities not designated as hedging	6	6,858	—	(4,752)	2,112
Total trading liabilities	1,214	7,074	—	(4,752)	3,536
Long-term debt (c)	—	363	—	—	363
Other liabilities – derivative liabilities designated as hedging:					
Interest rate	—	36	—	—	36
Foreign exchange	—	38	—	—	38
Total other liabilities – derivative liabilities designated as hedging	—	74	—	—	74
Subtotal liabilities of operations at fair value	1,214	7,511	—	(4,752)	3,973
Percentage of liabilities of operations prior to netting	14%	86%	—%		
Liabilities of consolidated investment management funds	—	7	—	—	7
Total liabilities	\$ 1,214	\$ 7,518	\$ —	\$ (4,752)	\$ 3,980
Percentage of total liabilities prior to netting	14%	86%	—%		

- (a) ASC 815, *Derivatives and Hedging*, permits the netting of derivative receivables and derivative payables under legally enforceable master netting agreements and permits the netting of cash collateral. Netting is applicable to derivatives not designated as hedging instruments included in trading assets or trading liabilities and derivatives designated as hedging instruments included in other assets or other liabilities. Netting is allocated to the derivative products based on the net fair value of each product.
- (b) Includes \$889 million in Level 2 that was included in the former Grantor Trust.
- (c) Includes certain interests in securitizations.
- (d) Includes seed capital, private equity investments and other assets.

Notes to Consolidated Financial Statements (continued)

Assets measured at fair value on a recurring basis at Dec. 31, 2017 <i>(dollars in millions)</i>	Level 1	Level 2	Level 3	Netting (a)	Total carrying value
Available-for-sale securities:					
U.S. Treasury	\$ 15,263	\$ —	\$ —	\$ —	\$ 15,263
U.S. government agencies	—	908	—	—	908
Sovereign debt/sovereign guaranteed	9,919	2,638	—	—	12,557
State and political subdivisions	—	2,957	—	—	2,957
Agency RMBS	—	23,819	—	—	23,819
Non-agency RMBS (b)	—	1,578	—	—	1,578
Other RMBS	—	149	—	—	149
Non-agency commercial MBS	—	1,360	—	—	1,360
Agency commercial MBS	—	8,762	—	—	8,762
CLOs	—	2,909	—	—	2,909
Other asset-backed securities	—	1,043	—	—	1,043
Money market funds (c)	963	—	—	—	963
Corporate bonds	—	1,255	—	—	1,255
Other debt securities	—	3,491	—	—	3,491
Foreign covered bonds	—	2,529	—	—	2,529
Total available-for-sale securities	26,145	53,398	—	—	79,543
Trading assets:					
Debt and equity instruments (c)	1,344	1,910	—	—	3,254
Derivative assets not designated as hedging:					
Interest rate	9	6,430	—	(5,075)	1,364
Foreign exchange	—	5,104	—	(3,720)	1,384
Equity and other contracts	—	70	—	(50)	20
Total derivative assets not designated as hedging	9	11,604	—	(8,845)	2,768
Total trading assets	1,353	13,514	—	(8,845)	6,022
Other assets:					
Derivative assets designated as hedging:					
Interest rate	—	278	—	—	278
Foreign exchange	—	45	—	—	45
Total derivative assets designated as hedging	—	323	—	—	323
Other assets (d)	144	170	—	—	314
Other assets measured at NAV (d)	—	—	—	—	154
Total other assets	144	493	—	—	791
Subtotal assets of operations at fair value	27,642	67,405	—	(8,845)	86,356
Percentage of assets of operations prior to netting	29%	71%	—%	—	—
Assets of consolidated investment management funds	322	409	—	—	731
Total assets	\$ 27,964	\$ 67,814	\$ —	\$ (8,845)	\$ 87,087
Percentage of total assets prior to netting	29%	71%	—%	—	—

Notes to Consolidated Financial Statements (continued)

Liabilities measured at fair value on a recurring basis at Dec. 31, 2017 <i>(dollars in millions)</i>	Level 1	Level 2	Level 3	Netting (a)	Total carrying value
Trading liabilities:					
Debt and equity instruments	\$ 1,128	\$ 80	\$ —	\$ —	\$ 1,208
Derivative liabilities not designated as hedging:					
Interest rate	4	6,349	—	(5,495)	858
Foreign exchange	—	5,067	—	(3,221)	1,846
Equity and other contracts	—	153	—	(81)	72
Total derivative liabilities not designated as hedging	4	11,569	—	(8,797)	2,776
Total trading liabilities	1,132	11,649	—	(8,797)	3,984
Long-term debt (c)	—	367	—	—	367
Other liabilities – derivative liabilities designated as hedging:					
Interest rate	—	534	—	—	534
Foreign exchange	—	266	—	—	266
Total other liabilities – derivative liabilities designated as hedging	—	800	—	—	800
Subtotal liabilities of operations at fair value	1,132	12,816	—	(8,797)	5,151
Percentage of liabilities of operations prior to netting	8%	92%	—%		
Liabilities of consolidated investment management funds	1	1	—	—	2
Total liabilities	\$ 1,133	\$ 12,817	\$ —	\$ (8,797)	\$ 5,153
Percentage of total liabilities prior to netting	8%	92%	—%		

- (a) ASC 815, *Derivatives and Hedging*, permits the netting of derivative receivables and derivative payables under legally enforceable master netting agreements and permits the netting of cash collateral. Netting is applicable to derivatives not designated as hedging instruments included in trading assets or trading liabilities and derivatives designated as hedging instruments included in other assets or other liabilities. Netting is allocated to the derivative products based on the net fair value of each product.
- (b) Includes \$1,091 million in Level 2 that was included in the former Grantor Trust.
- (c) Includes certain interests in securitizations.
- (d) Includes private equity investments and seed capital.

Notes to Consolidated Financial Statements (continued)

Details of certain available-for-sale securities measured at fair value on a recurring basis	Sept. 30, 2018					Dec. 31, 2017				
	Total carrying value (b)	Ratings (a)				Total carrying value (b)	Ratings (a)			
		AAA/ AA-	A+/ A-	BBB+/ BBB-	BB+ and lower		AAA/ AA-	A+/ A-	BBB+/ BBB-	BB+ and lower
<i>(dollars in millions)</i>										
Non-agency RMBS (c), originated in:										
2007	\$ 337	15%	2%	4%	79%	\$ 419	13%	3%	—%	84%
2006	385	—	18	1	81	467	—	17	—	83
2005	426	5	1	10	84	509	6	2	6	86
2004 and earlier	271	3	5	30	62	332	3	2	31	64
Total non-agency RMBS	\$ 1,419	5%	7%	10%	78%	\$ 1,727 (d)	6%	6%	8%	80%
Non-agency commercial MBS, originated in:										
2009-2017	\$ 1,412	96%	4%	—%	—%	\$ 1,309	94%	6%	—%	—%
2005	47	100	—	—	—	51	100	—	—	—
Total non-agency commercial MBS	\$ 1,459	96%	4%	—%	—%	\$ 1,360	94%	6%	—%	—%
Foreign covered bonds:										
Canada	\$ 1,583	100%	—%	—%	—%	\$ 1,659	100%	—%	—%	—%
United Kingdom	524	100	—	—	—	103	100	—	—	—
Australia	363	100	—	—	—	265	100	—	—	—
Sweden	191	100	—	—	—	136	100	—	—	—
Other	311	100	—	—	—	366	100	—	—	—
Total foreign covered bonds	\$ 2,972	100%	—%	—%	—%	\$ 2,529	100%	—%	—%	—%
Sovereign debt/sovereign guaranteed:										
United Kingdom	\$ 2,627	100%	—%	—%	—%	\$ 3,052	100%	—%	—%	—%
Germany	1,853	100	—	—	—	1,586	100	—	—	—
France	1,837	100	—	—	—	2,046	100	—	—	—
Spain	1,444	—	—	100	—	1,635	—	—	100	—
Italy	972	—	—	100	—	1,292	—	—	100	—
Netherlands	887	100	—	—	—	1,027	100	—	—	—
Ireland	792	—	100	—	—	843	—	100	—	—
Canada	325	100	—	—	—	—	—	—	—	—
Belgium	312	100	—	—	—	803	100	—	—	—
Other (e)	493	79	—	—	21	273	50	—	—	50
Total sovereign debt/sovereign guaranteed	\$ 11,542	71%	7%	21%	1%	\$ 12,557	69%	7%	23%	1%

(a) Represents ratings by S&P or the equivalent.

(b) At Sept. 30, 2018 and Dec. 31, 2017, sovereign debt/sovereign guaranteed securities were included in Level 1 and Level 2 in the valuation hierarchy. All other assets in the table are Level 2 assets in the valuation hierarchy.

(c) Includes \$889 million at Sept. 30, 2018 and \$1,091 million at Dec. 31, 2017 that were included in the former Grantor Trust.

(d) Includes other RMBS.

(e) Includes non-investment grade sovereign debt/sovereign guaranteed securities related to Brazil of \$102 million at Sept. 30, 2018 and \$136 million at Dec. 31, 2017.

Assets and liabilities measured at fair value on a nonrecurring basis

Under certain circumstances, we make adjustments to fair value our assets, liabilities and unfunded lending-related commitments although they are not measured at fair value on an ongoing basis. Examples would be the recording of an impairment of an asset and non-

readily marketable equity securities carried at cost with upward or downward adjustments.

The following table presents the financial instruments carried on the consolidated balance sheet by caption and level in the fair value hierarchy as of Sept. 30, 2018 and Dec. 31, 2017, for which a nonrecurring change in fair value has been recorded during the quarters ended Sept. 30, 2018 and Dec. 31, 2017.

Assets measured at fair value on a nonrecurring basis	Sept. 30, 2018				Dec. 31, 2017			
	Level 1	Level 2	Level 3	Total carrying value	Level 1	Level 2	Level 3	Total carrying value
<i>(in millions)</i>								
Loans (a)	\$ —	\$ 65	\$ 4	\$ 69	\$ —	\$ 73	\$ 6	\$ 79
Other assets (b)	—	9	—	9	—	4	—	4
Total assets at fair value on a nonrecurring basis	\$ —	\$ 74	\$ 4	\$ 78	\$ —	\$ 77	\$ 6	\$ 83

(a) During the quarters ended Sept. 30, 2018 and Dec. 31, 2017, the fair value of these loans decreased less than \$1 million and less than \$1 million, respectively, based on the fair value of the underlying collateral based on guidance in ASC 310, Receivables, with an offset to the allowance for credit losses.

(b) Includes other assets received in satisfaction of debt.

Estimated fair value of financial instruments

The following tables present the estimated fair value and the carrying amount of financial instruments not carried at fair value on the consolidated balance sheet at Sept. 30, 2018 and Dec. 31, 2017, by caption on the consolidated balance sheet and by the valuation hierarchy. See Note 18 of the Notes to Consolidated Financial Statements in our 2017 Annual Report 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.

Summary of financial instruments	Sept. 30, 2018				
	Level 1	Level 2	Level 3	Total estimated fair value	Carrying amount
<i>(in millions)</i>					
Assets:					
Interest-bearing deposits with the Federal Reserve and other central banks	\$ —	\$ 74,725	\$ —	\$ 74,725	\$ 74,725
Interest-bearing deposits with banks	—	14,538	—	14,538	14,519
Federal funds sold and securities purchased under resale agreements	—	28,722	—	28,722	28,722
Securities held-to-maturity	5,660	27,685	—	33,345	34,486
Loans (a)	—	52,613	—	52,613	52,564
Other financial assets	5,047	1,337	—	6,384	6,384
Total	\$ 10,707	\$ 199,620	\$ —	\$ 210,327	\$ 211,400
Liabilities:					
Noninterest-bearing deposits	\$ —	\$ 65,846	\$ —	\$ 65,846	\$ 65,846
Interest-bearing deposits	—	163,990	—	163,990	165,744
Federal funds purchased and securities sold under repurchase agreements	—	10,158	—	10,158	10,158
Payables to customers and broker-dealers	—	18,683	—	18,683	18,683
Commercial paper	—	735	—	735	735
Borrowings	—	3,229	—	3,229	3,229
Long-term debt	—	27,217	—	27,217	27,750
Total	\$ —	\$ 289,858	\$ —	\$ 289,858	\$ 292,145

(a) Does not include the leasing portfolio.

Summary of financial instruments	Dec. 31, 2017				
	Level 1	Level 2	Level 3	Total estimated fair value	Carrying amount
<i>(in millions)</i>					
Assets:					
Interest-bearing deposits with the Federal Reserve and other central banks	\$ —	\$ 91,510	\$ —	\$ 91,510	\$ 91,510
Interest-bearing deposits with banks	—	11,982	—	11,982	11,979
Federal funds sold and securities purchased under resale agreements	—	28,135	—	28,135	28,135
Securities held-to-maturity	11,365	29,147	—	40,512	40,827
Loans (a)	—	60,219	—	60,219	60,082
Other financial assets	5,382	1,244	—	6,626	6,626
Total	\$ 16,747	\$ 222,237	\$ —	\$ 238,984	\$ 239,159
Liabilities:					
Noninterest-bearing deposits	\$ —	\$ 82,716	\$ —	\$ 82,716	\$ 82,716
Interest-bearing deposits	—	160,042	—	160,042	161,606
Federal funds purchased and securities sold under repurchase agreements	—	15,163	—	15,163	15,163
Payables to customers and broker-dealers	—	20,184	—	20,184	20,184
Commercial paper	—	3,075	—	3,075	3,075
Borrowings	—	2,931	—	2,931	2,931
Long-term debt	—	27,789	—	27,789	27,612
Total	\$ —	\$ 311,900	\$ —	\$ 311,900	\$ 313,287

(a) Does not include the leasing portfolio.

The table below summarizes the carrying amount of the hedged financial instruments, the notional amount of the hedge and the unrealized gain (loss) (estimated fair value) of the derivatives.

Hedged financial instruments	Carrying amount	Notional amount of hedge	Unrealized (a)	
			Gain	(Loss)
<i>(in millions)</i>				
Sept. 30, 2018				
Securities available-for-sale	\$ 17,602	\$ 18,009	\$ 151	\$ (36)
Long-term debt	19,904	20,650	—	—
Dec. 31, 2017				
Securities available-for-sale	\$ 12,307	\$ 12,365	\$ 102	\$ (301)
Long-term debt	23,821	23,950	175	(233)

(a) Unrealized gain/loss amounts reflect the fact that certain of the derivatives are cleared and settled through central clearing counterparties where cash collateral received and paid is deemed a settlement of the derivative.

Note 16—Fair value option

We elected fair value as an alternative measurement for selected financial assets and liabilities. The following table presents the assets and liabilities of consolidated investment management funds, at fair value.

Assets and liabilities of consolidated investment management funds, at fair value	Sept. 30, 2018	Dec. 31, 2017
<i>(in millions)</i>		
Assets of consolidated investment management funds:		
Trading assets	\$ 243	\$ 516
Other assets	256	215
Total assets of consolidated investment management funds	\$ 499	\$ 731
Liabilities of consolidated investment management funds:		
Other liabilities	\$ 7	\$ 2
Total liabilities of consolidated investment management funds	\$ 7	\$ 2

BNY Mellon values the assets and liabilities of its consolidated investment management funds using quoted prices for identical assets or liabilities in active markets or observable inputs such as quoted prices for similar assets or liabilities. Quoted prices for either identical or similar assets or liabilities in inactive markets may also be used. Accordingly, fair value best reflects the interests BNY Mellon holds in the economic performance of the consolidated investment management funds. Changes in the value of the assets and liabilities are recorded in the consolidated income statement as investment income of consolidated investment management funds and in the interest of investment management fund note holders, respectively.

We have elected the fair value option on \$240 million of long-term debt. The fair value of this long-term debt was \$363 million at Sept. 30, 2018 and \$367 million at Dec. 31, 2017. The long-term debt is valued using observable market inputs and is included in Level 2 of the valuation hierarchy.

The following table presents the change in fair value of long-term debt recorded in foreign exchange and other trading revenue in the consolidated income statement.

Foreign exchange and other trading revenue (a)	3Q18	2Q18	3Q17	YTD18	YTD17
<i>(in millions)</i>					
Long-term debt	\$ —	\$ —	\$ (1)	\$ 4	\$ (6)

(a) The change in fair value is approximately offset by an economic hedge included in foreign exchange and other trading revenue.

Note 17—Derivative instruments

We use derivatives to manage exposure to market risk, including interest rate risk, equity price risk and foreign currency risk, as well as credit risk. Our trading activities are focused on acting as a market-maker for our customers and facilitating customer trades in compliance with the Volcker Rule.

The notional amounts for derivative financial instruments express the dollar volume of the transactions; however, credit risk is much smaller. We perform credit reviews and enter into netting agreements and collateral arrangements to minimize the credit risk of derivative financial instruments. We enter into offsetting positions to reduce exposure to foreign currency, interest rate and equity price risk.

Use of derivative financial instruments involves reliance on counterparties. Failure of a counterparty to honor its obligation under a derivative contract is a risk we assume whenever we engage in a derivative contract. There were no counterparty default losses recorded in the third quarter of 2018 or the third quarter of 2017.

Hedging derivatives

We utilize interest rate swap agreements to manage our exposure to interest rate fluctuations. We enter into fair value hedges as an interest rate risk management strategy to reduce fair value variability by converting certain fixed rate interest payments associated with available-for-sale securities, deposits and long-term debt to LIBOR.

The available-for-sale securities hedged consist of U.S. Treasury bonds, agency and non-agency commercial MBS, sovereign debt, corporate bonds and covered bonds that had original maturities of 30 years or less at initial purchase. At Sept. 30, 2018, \$17.8 billion face amount of available-for-sale securities were hedged with interest rate swaps designated as fair value hedges that had notional values of \$17.9 billion.

The fixed rate long-term debt instruments hedged generally have original maturities of five to 30 years. We issue both callable and non-callable debt. The debt is hedged with “receive fixed rate, pay variable rate” swaps. At Sept. 30, 2018, \$20.7 billion par value of debt was hedged with interest rate swaps that had notional values of \$20.7 billion.

In addition, we utilize forward foreign exchange contracts as hedges to mitigate foreign exchange exposures. We use forward foreign exchange contracts as cash flow hedges to convert certain forecasted non-U.S. dollar revenue and expenses into

U.S. dollars. We use forward foreign exchange contracts with maturities of 12 months or less as cash flow hedges to hedge our foreign exchange exposure to Indian rupee, British pound, Hong Kong dollar, Singapore dollar, Polish zloty and Canadian dollar revenue and expense transactions in entities that have the U.S. dollar as their functional currency. As of Sept. 30, 2018, the hedged forecasted foreign currency transactions and designated forward foreign exchange contract hedges were \$272 million (notional), with a pre-tax loss of \$14 million recorded in accumulated OCI. This loss will be reclassified to earnings over the next 12 months.

Forward foreign exchange contracts are also used to hedge the value of our net investments in foreign subsidiaries. These forward foreign exchange contracts have maturities of less than one year. The derivatives employed are designated as hedges of changes in value of our foreign investments due to exchange rates. Changes in the value of the forward foreign exchange contracts offset the changes in value of the foreign investments due to changes in foreign exchange rates. The change in fair market value of these forward foreign exchange contracts is deferred and reported within foreign currency translation adjustments in shareholders' equity, net of tax. At Sept. 30, 2018, forward foreign exchange contracts with notional amounts totaling \$7.2 billion were designated as hedges.

In addition to forward foreign exchange contracts, we also designate non-derivative financial instruments as hedges of our net investments in foreign subsidiaries. Those non-derivative financial instruments designated as hedges of our net investments in foreign subsidiaries were all long-term liabilities of BNY Mellon in various currencies, and, at Sept. 30, 2018, had a combined U.S. dollar equivalent value of \$177 million.

The following table presents the gains (losses) related to our hedging derivative portfolio recognized in the consolidated income statement.

Income statement impact of fair value and cash flow hedges						
<i>(in millions)</i>	Location of gains (losses)	3Q18	2Q18	3Q17	YTD18	YTD17
Fair value hedges of available-for-sale securities						
Derivative	Interest income	\$ 214	\$ 136	\$ 12	\$ 747	\$ (9)
Hedged item	Interest income	(209)	(133)	(12)	(725)	(4)
Fair value hedges of long-term debt						
Derivative	Interest expense	(101)	(131)	(45)	(610)	(12)
Hedged item	Interest expense	103	129	43	609	12
Cash flow hedges of forecasted FX exposures						
(Loss) gain reclassified from OCI into income	Trading revenue	—	—	(1)	—	2
(Loss) gain reclassified from OCI into income	Other revenue	—	(1)	—	3	—
(Loss) gain reclassified from OCI into income	Salary expense	(4)	2	(2)	4	(15)
Gains (losses) recognized in the consolidated income statement due to fair value and cash flow hedging relationships		\$ 3	\$ 2	\$ (5)	\$ 28	\$ (26)

The following table presents the impact of hedging derivatives used in net investment hedging relationships in the consolidated income statement.

Impact of derivative instruments used in net investment hedging relationships in the income statement											
<i>(in millions)</i>	Gain or (loss) recognized in accumulated OCI on derivatives					Location of gain or (loss) reclassified from accumulated OCI into income	Gain or (loss) reclassified from accumulated OCI into income				
Derivatives in net investment hedging relationships	3Q18	2Q18	3Q17	YTD18	YTD17	OCI into income	3Q18	2Q18	3Q17	YTD18	YTD17
FX contracts	\$ 83	\$ 429	\$ (206)	\$ 354	\$ (576)	Net interest revenue	\$ —	\$ —	\$ —	\$ —	\$ —

The following table presents information on the hedged items in fair value hedging relationships.

Hedged items in fair value hedging relationships at Sept. 30, 2018		
<i>(in millions)</i>	Carrying amount of hedged asset or liability	Hedge accounting basis adjustment (decrease)
Available-for-sale securities	\$ 17,602	\$ (584)
Long-term debt	19,904	(747) (a)

(a) Includes \$111 million of basis adjustment on long-term debt associated with terminated hedges.

The following table summarizes the notional amount and credit exposure of our total derivative portfolio at Sept. 30, 2018 and Dec. 31, 2017.

Impact of derivative instruments on the balance sheet	Notional value		Asset derivatives fair value		Liability derivatives fair value	
	Sept. 30, 2018	Dec. 31, 2017	Sept. 30, 2018	Dec. 31, 2017	Sept. 30, 2018	Dec. 31, 2017
<i>(in millions)</i>						
Derivatives designated as hedging instruments: (a)(b)						
Interest rate contracts	\$ 38,659	\$ 36,315	\$ 151	\$ 278	\$ 36	\$ 534
Foreign exchange contracts	7,487	8,923	196	45	38	266
Total derivatives designated as hedging instruments			\$ 347	\$ 323	\$ 74	\$ 800
Derivatives not designated as hedging instruments: (b)(c)						
Interest rate contracts	\$ 272,429	\$ 267,485	\$ 3,236	\$ 6,439	\$ 2,817	\$ 6,353
Foreign exchange contracts	685,871	767,999	3,611	5,104	3,937	5,067
Equity contracts	961	1,698	40	70	106	149
Credit contracts	180	180	—	—	4	4
Total derivatives not designated as hedging instruments			\$ 6,887	\$ 11,613	\$ 6,864	\$ 11,573
Total derivatives fair value (d)			\$ 7,234	\$ 11,936	\$ 6,938	\$ 12,373
Effect of master netting agreements (e)			(4,951)	(8,845)	(4,752)	(8,797)
Fair value after effect of master netting agreements			\$ 2,283	\$ 3,091	\$ 2,186	\$ 3,576

- (a) The fair value of asset derivatives and liability derivatives designated as hedging instruments is recorded as other assets and other liabilities, respectively, on the consolidated balance sheet.
- (b) Pursuant to a rule change at a clearing organization in 2018, cash collateral exchanged is deemed a settlement of the derivative each day. The impact of the change reduced the gross fair value of derivative assets and liabilities and a corresponding decrease in effect of master netting agreements, with no impact to the consolidated balance sheet.
- (c) The fair value of asset derivatives and liability derivatives not designated as hedging instruments is recorded as trading assets and trading liabilities, respectively, on the consolidated balance sheet.
- (d) Fair values are on a gross basis, before consideration of master netting agreements, as required by ASC 815, Derivatives and Hedging.
- (e) Effect of master netting agreements includes cash collateral received and paid of \$607 million and \$408 million, respectively, at Sept. 30, 2018, and \$925 million and \$877 million, respectively, at Dec. 31, 2017.

Trading activities (including trading derivatives)

We manage trading risk through a system of position limits, a VaR methodology based on historical simulation and other market sensitivity measures. Risk is monitored and reported to senior management by a separate unit, independent from trading, on a daily basis. Based on certain assumptions, the VaR methodology is designed to capture the potential overnight pre-tax dollar loss from adverse changes in fair values of all trading positions. The calculation assumes a one-day holding period, utilizes a 99% confidence level and incorporates non-linear product characteristics. The VaR model is one of several statistical models used to develop economic capital results, which are allocated to lines of business for computing risk-adjusted performance.

VaR methodology does not evaluate risk attributable to extraordinary financial, economic or other occurrences. As a result, the risk assessment process includes a number of stress scenarios based upon the risk factors in the portfolio and management's assessment of market conditions. Additional stress scenarios based upon historical market events are also

performed. Stress tests may incorporate the impact of reduced market liquidity and the breakdown of historically observed correlations and extreme scenarios. VaR and other statistical measures, stress testing and sensitivity analysis are incorporated in other risk management materials.

The following table presents our foreign exchange and other trading revenue.

Foreign exchange and other trading revenue					
<i>(in millions)</i>	3Q18	2Q18	3Q17	YTD18	YTD17
Foreign exchange	\$ 150	\$ 171	\$ 158	\$ 504	\$ 463
Other trading revenue	5	16	15	47	39
Total foreign exchange and other trading revenue	\$ 155	\$ 187	\$ 173	\$ 551	\$ 502

Foreign exchange revenue includes income from purchasing and selling foreign currencies and currency forwards, futures and options. Other trading revenue reflects results from trading in cash instruments including fixed income and equity securities and non-foreign exchange derivatives.

Counterparty credit risk and collateral

We assess credit risk of our counterparties through regular examination of their financial statements, confidential communication with the management of those counterparties and regular monitoring of publicly available credit rating information. This and other information is used to develop proprietary credit rating metrics used to assess credit quality.

Collateral requirements are determined after a comprehensive review of the credit quality of each counterparty. Collateral is generally held or pledged in the form of cash and/or highly liquid government securities. Collateral requirements are monitored and adjusted daily.

Additional disclosures concerning derivative financial instruments are provided in Note 15 of the Notes to Consolidated Financial Statements.

Disclosure of contingent features in OTC derivative instruments

Certain OTC derivative contracts and/or collateral agreements contain credit-risk contingent features triggered upon a rating downgrade in which the counterparty has the right to request additional collateral or the right to terminate the contracts in a net liability position.

The following table shows the aggregate fair value of OTC derivative contracts in net liability positions that contained credit-risk contingent features and the value of collateral that has been posted.

<i>(in millions)</i>	Sept. 30, 2018	Dec. 31, 2017
Aggregate fair value of OTC derivatives in net liability positions (a)	\$ 1,811	\$ 2,393
Collateral posted	\$ 1,690	\$ 2,115

(a) Before consideration of cash collateral.

The aggregate fair value of OTC derivative contracts containing credit-risk contingent features can fluctuate from quarter to quarter due to changes in market conditions, composition of counterparty trades, new business or changes to the contingent features.

The Bank of New York Mellon, our largest banking subsidiary, enters into the substantial majority of our OTC derivative contracts and/or collateral agreements. As such, the contingent features may be triggered if The Bank of New York Mellon's long-term issuer rating was downgraded.

The following table shows the fair value of contracts falling under early termination provisions that were in net liability positions for three key ratings triggers.

Potential close-out exposures (fair value) (a)		
<i>(in millions)</i>	Sept. 30, 2018	Dec. 31, 2017
If The Bank of New York Mellon's rating changed to: (b)		
A3/A-	\$ 29	\$ 92
Baa2/BBB	\$ 190	\$ 748
Ba1/BB+	\$ 644	\$ 2,007

(a) The amounts represent potential total close-out values if The Bank of New York Mellon's long-term issuer rating were to immediately drop to the indicated levels, and do not reflect collateral posted.

(b) Represents rating by Moody's/S&P.

If The Bank of New York Mellon's debt rating had fallen below investment grade on Sept. 30, 2018 and Dec. 31, 2017, existing collateral arrangements would have required us to post additional collateral of \$106 million and \$102 million, respectively.

Offsetting assets and liabilities

The following tables present derivative instruments and financial instruments that are either subject to an enforceable netting agreement or offset by collateral arrangements. There were no derivative instruments or financial instruments subject to a legally enforceable netting agreement for which we are not currently netting.

Offsetting of derivative assets and financial assets at Sept. 30, 2018

<i>(in millions)</i>	Gross assets recognized	Gross amounts offset in the balance sheet	<i>(a)</i>	Net assets recognized in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
					Financial instruments	Cash collateral received	
Derivatives subject to netting arrangements:							
Interest rate contracts	\$ 2,600	\$ 2,121		\$ 479	\$ 162	\$ —	\$ 317
Foreign exchange contracts	3,351	2,807		544	37	—	507
Equity and other contracts	44	23		21	—	—	21
Total derivatives subject to netting arrangements	5,995	4,951		1,044	199	—	845
Total derivatives not subject to netting arrangements	1,239	—		1,239	—	—	1,239
Total derivatives	7,234	4,951		2,283	199	—	2,084
Reverse repurchase agreements	76,304	58,540	<i>(b)</i>	17,764	17,629	—	135
Securities borrowing	10,958	—		10,958	10,632	—	326
Total	\$ 94,496	\$ 63,491		\$ 31,005	\$ 28,460	\$ —	\$ 2,545

Offsetting of derivative assets and financial assets at Dec. 31, 2017

<i>(in millions)</i>	Gross assets recognized	Gross amounts offset in the balance sheet	<i>(a)</i>	Net assets recognized in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
					Financial instruments	Cash collateral received	
Derivatives subject to netting arrangements:							
Interest rate contracts	\$ 5,915	\$ 5,075		\$ 840	\$ 178	\$ —	\$ 662
Foreign exchange contracts	4,666	3,720		946	116	—	830
Equity and other contracts	67	50		17	—	—	17
Total derivatives subject to netting arrangements	10,648	8,845		1,803	294	—	1,509
Total derivatives not subject to netting arrangements	1,288	—		1,288	—	—	1,288
Total derivatives	11,936	8,845		3,091	294	—	2,797
Reverse repurchase agreements	42,784	25,848	<i>(b)</i>	16,936	16,923	—	13
Securities borrowing	11,199	—		11,199	10,858	—	341
Total	\$ 65,919	\$ 34,693		\$ 31,226	\$ 28,075	\$ —	\$ 3,151

(a) Includes the effect of netting agreements and net cash collateral received. The offset related to the OTC derivatives was allocated to the various types of derivatives based on the net positions.

(b) Offsetting of reverse repurchase agreements relates to our involvement in the Fixed Income Clearing Corporation, where we settle government securities transactions on a net basis for payment and delivery through the Fedwire system.

Offsetting of derivative liabilities and financial liabilities at Sept. 30, 2018

<i>(in millions)</i>	Gross liabilities recognized	Gross amounts offset in the balance sheet	<i>(a)</i>	Net liabilities recognized in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
					Financial instruments	Cash collateral pledged	
Derivatives subject to netting arrangements:							
Interest rate contracts	\$ 2,795	\$ 2,262		\$ 533	\$ 414	\$ —	\$ 119
Foreign exchange contracts	3,433	2,455		978	116	—	862
Equity and other contracts	106	35		71	67	—	4
Total derivatives subject to netting arrangements	6,334	4,752		1,582	597	—	985
Total derivatives not subject to netting arrangements	604	—		604	—	—	604
Total derivatives	6,938	4,752		2,186	597	—	1,589
Repurchase agreements	67,165	58,540	<i>(b)</i>	8,625	8,625	—	—
Securities lending	1,436	—		1,436	1,357	—	79
Total	\$ 75,539	\$ 63,292		\$ 12,247	\$ 10,579	\$ —	\$ 1,668

Offsetting of derivative liabilities and financial liabilities at Dec. 31, 2017

(in millions)	Gross liabilities recognized	Gross amounts offset in the balance sheet (a)	Net liabilities recognized in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
				Financial instruments	Cash collateral pledged	
Derivatives subject to netting arrangements:						
Interest rate contracts	\$ 6,810	\$ 5,495	\$ 1,315	\$ 1,222	\$ —	\$ 93
Foreign exchange contracts	4,765	3,221	1,544	177	—	1,367
Equity and other contracts	143	81	62	58	—	4
Total derivatives subject to netting arrangements	11,718	8,797	2,921	1,457	—	1,464
Total derivatives not subject to netting arrangements	655	—	655	—	—	655
Total derivatives	12,373	8,797	3,576	1,457	—	2,119
Repurchase agreements	33,908	25,848 (b)	8,060	8,059	—	1
Securities lending	2,186	—	2,186	2,091	—	95
Total	\$ 48,467	\$ 34,645	\$ 13,822	\$ 11,607	\$ —	\$ 2,215

(a) Includes the effect of netting agreements and net cash collateral paid. The offset related to the OTC derivatives was allocated to the various types of derivatives based on the net positions.

(b) Offsetting of repurchase agreements relates to our involvement in the Fixed Income Clearing Corporation, where we settle government securities transactions on a net basis for payment and delivery through the Fedwire system.

Secured borrowings

The following table presents the contract value of repurchase agreements and securities lending transactions accounted for as secured borrowings by the type of collateral provided to counterparties.

Repurchase agreements and securities lending transactions accounted for as secured borrowings

(in millions)	Sept. 30, 2018				Dec. 31, 2017			
	Remaining contractual maturity			Total	Remaining contractual maturity			Total
	Overnight and continuous	Up to 30 days	30 days or more		Overnight and continuous	Up to 30 days	30 days or more	
Repurchase agreements:								
U.S. Treasury	\$ 59,999	\$ —	\$ —	\$ 59,999	\$ 26,883	\$ 11	\$ —	\$ 26,894
U.S. government agencies	517	—	3	520	570	180	—	750
Agency RMBS	2,438	—	5	2,443	2,574	109	—	2,683
Corporate bonds	742	—	1,888	2,630	373	—	1,052	1,425
Other debt securities	194	—	776	970	253	—	731	984
Equity securities	225	—	378	603	655	—	517	1,172
Total	\$ 64,115	\$ —	\$ 3,050	\$ 67,165	\$ 31,308	\$ 300	\$ 2,300	\$ 33,908
Securities lending:								
U.S. government agencies	\$ 1	\$ —	\$ —	\$ 1	\$ 72	\$ —	\$ —	\$ 72
Other debt securities	438	—	—	438	316	—	—	316
Equity securities	997	—	—	997	1,798	—	—	1,798
Total	\$ 1,436	\$ —	\$ —	\$ 1,436	\$ 2,186	\$ —	\$ —	\$ 2,186
Total borrowings	\$ 65,551	\$ —	\$ 3,050	\$ 68,601	\$ 33,494	\$ 300	\$ 2,300	\$ 36,094

BNY Mellon's repurchase agreements and securities lending transactions primarily encounter risk associated with liquidity. We are required to pledge collateral based on predetermined terms within the agreements. If we were to experience a decline in the fair value of the collateral pledged for these transactions, we could be required to provide

additional collateral to the counterparty, therefore decreasing the amount of assets available for other liquidity needs that may arise. BNY Mellon also offers tri-party collateral agency services in the tri-party repo market where we are exposed to credit risk. In order to mitigate this risk, we require dealers to fully secure intraday credit.

Note 18—Commitments and contingent liabilities

Off-balance sheet arrangements

In the normal course of business, various commitments and contingent liabilities are outstanding that are not reflected in the accompanying consolidated balance sheets.

Our significant trading and off-balance sheet risks are securities, foreign currency and interest rate risk management products, commercial lending commitments, letters of credit and securities lending indemnifications. We assume these risks to reduce interest rate and foreign currency risks, to provide customers with the ability to meet credit and liquidity needs and to hedge foreign currency and interest rate risks. These items involve, to varying degrees, credit, foreign currency and interest rate risks not recognized on the balance sheet. Our off-balance sheet risks are managed and monitored in manners similar to those used for on-balance sheet risks.

The following table presents a summary of our off-balance sheet credit risks.

Off-balance sheet credit risks (in millions)	Sept. 30, 2018	Dec. 31, 2017
Lending commitments	\$ 50,858	\$ 51,467
Standby letters of credit (a)	2,779	3,531
Commercial letters of credit	159	122
Securities lending indemnifications (b)(c)	452,261	432,084

- (a) Net of participations totaling \$163 million at Sept. 30, 2018 and \$672 million at Dec. 31, 2017.
- (b) Excludes the indemnification for securities for which BNY Mellon acts as an agent on behalf of CIBC Mellon clients, which totaled \$67 billion at Sept. 30, 2018 and \$69 billion at Dec. 31, 2017.
- (c) Includes cash collateral, invested in indemnified repurchase agreements, held by us as securities lending agent of \$45 billion at Sept. 30, 2018 and \$33 billion at Dec. 31, 2017.

The total potential loss on undrawn lending commitments, standby and commercial letters of credit, and securities lending indemnifications is equal to the total notional amount if drawn upon, which does not consider the value of any collateral.

Since many of the lending commitments are expected to expire without being drawn upon, the total amount does not necessarily represent future cash requirements. A summary of lending commitment maturities is as follows: \$31.4 billion in less than one

year, \$19.3 billion in one to five years and \$96 million over five years.

SBLCs principally support obligations of corporate clients and were collateralized with cash and securities of \$229 million at Sept. 30, 2018 and \$160 million at Dec. 31, 2017. At Sept. 30, 2018, \$1.9 billion of the SBLCs will expire within one year and \$853 million in one to five years.

We must recognize, at the inception of an SBLC and foreign and other guarantees, a liability for the fair value of the obligation undertaken in issuing the guarantee. The fair value of the liability, which was recorded with a corresponding asset in other assets, was estimated as the present value of contractual customer fees. The estimated liability for losses related to SBLCs and foreign and other guarantees, if any, is included in the allowance for lending-related commitments. The allowance for lending-related commitments was \$111 million at Sept. 30, 2018 and \$102 million at Dec. 31, 2017.

Payment/performance risk of SBLCs is monitored using both historical performance and internal ratings criteria. BNY Mellon's historical experience is that SBLCs typically expire without being funded. SBLCs below investment grade are monitored closely for payment/performance risk. The table below shows SBLCs by investment grade:

Standby letters of credit	Sept. 30, 2018	Dec. 31, 2017
Investment grade	89%	84%
Non-investment grade	11%	16%

A commercial letter of credit is normally a short-term instrument used to finance a commercial contract for the shipment of goods from a seller to a buyer. Although the commercial letter of credit is contingent upon the satisfaction of specified conditions, it represents a credit exposure if the buyer defaults on the underlying transaction. As a result, the total contractual amounts do not necessarily represent future cash requirements. Commercial letters of credit totaled \$159 million at Sept. 30, 2018 and \$122 million at Dec. 31, 2017.

We expect many of the lending commitments and letters of credit to expire without the need to advance any cash. The revenue associated with guarantees frequently depends on the credit rating of the obligor

and the structure of the transaction, including collateral, if any.

A securities lending transaction is a fully collateralized transaction in which the owner of a security agrees to lend the security (typically through an agent, in our case, The Bank of New York Mellon), to a borrower, usually a broker-dealer or bank, on an open, overnight or term basis, under the terms of a prearranged contract.

We typically lend securities with indemnification against borrower default. We generally require the borrower to provide collateral with a minimum value of 102% of the fair value of the securities borrowed, which is monitored on a daily basis, thus reducing credit risk. Market risk can also arise in securities lending transactions. These risks are controlled through policies limiting the level of risk that can be undertaken. Securities lending transactions are generally entered into only with highly rated counterparties. Securities lending indemnifications were secured by collateral of \$474 billion at Sept. 30, 2018 and \$451 billion at Dec. 31, 2017.

CIBC Mellon, a joint venture between BNY Mellon and the Canadian Imperial Bank of Commerce (“CIBC”), engages in securities lending activities. CIBC Mellon, BNY Mellon and CIBC jointly and severally indemnify securities lenders against specific types of borrower default. At Sept. 30, 2018 and Dec. 31, 2017, \$67 billion and \$69 billion, respectively, of borrowings at CIBC Mellon, for which BNY Mellon acts as agent on behalf of CIBC Mellon clients, were secured by collateral of \$71 billion and \$73 billion, respectively. If, upon a default, a borrower’s collateral was not sufficient to cover its related obligations, certain losses related to the indemnification could be covered by the indemnitors.

Industry concentrations

We have significant industry concentrations related to credit exposure at Sept. 30, 2018. The tables below present our credit exposure in the financial institutions and commercial portfolios.

Financial institutions portfolio exposure (in billions)	Sept. 30, 2018		
	Loans	Unfunded commitments	Total exposure
Securities industry	\$ 2.3	\$ 21.4	\$ 23.7
Asset managers	1.3	6.3	7.6
Banks	5.9	1.3	7.2
Insurance	0.1	3.1	3.2
Government	0.1	0.5	0.6
Other	0.7	1.4	2.1
Total	\$ 10.4	\$ 34.0	\$ 44.4

Commercial portfolio exposure (in billions)	Sept. 30, 2018		
	Loans	Unfunded commitments	Total exposure
Manufacturing	\$ 0.9	\$ 5.2	\$ 6.1
Services and other	0.6	4.7	5.3
Energy and utilities	0.5	4.2	4.7
Media and telecom	0.1	1.2	1.3
Total	\$ 2.1	\$ 15.3	\$ 17.4

Major concentrations in securities lending are primarily to broker-dealers and are generally collateralized with cash and/or securities.

Exposure for certain administrative errors

In connection with certain offshore tax-exempt funds that we manage, we may be liable to the funds for certain administrative errors. The errors relate to the resident status of such funds, potentially exposing the Company to a tax liability related to the funds’ earnings. The Company is in discussions with tax authorities regarding the funds. We believe we are appropriately accrued and the additional reasonable possible exposure is not significant.

Indemnification arrangements

We have provided standard representations for underwriting agreements, acquisition and divestiture agreements, sales of loans and commitments, and other similar types of arrangements and customary indemnification for claims and legal proceedings related to providing financial services that are not otherwise included above. Insurance has been purchased to mitigate certain of these risks. Generally, there are no stated or notional amounts included in these indemnifications and the contingencies triggering the obligation for indemnification are not expected to occur. Furthermore, often counterparties to these transactions provide us with comparable indemnifications. We are unable to develop an estimate of the maximum payout under these

indemnifications for several reasons. In addition to the lack of a stated or notional amount in a majority of such indemnifications, we are unable to predict the nature of events that would trigger indemnification or the level of indemnification for a certain event. We believe, however, that the possibility that we will have to make any material payments for these indemnifications is remote. At Sept. 30, 2018 and Dec. 31, 2017, we have not recorded any material liabilities under these arrangements.

Clearing and settlement exchanges

We are a noncontrolling equity investor in, and/or member of, several industry clearing or settlement exchanges through which foreign exchange, securities, derivatives or other transactions settle. Certain of these industry clearing and settlement exchanges require their members to guarantee their obligations and liabilities and/or to provide liquidity support in the event other members do not honor their obligations. We believe the likelihood that a clearing or settlement exchange (of which we are a member) would become insolvent is remote. Additionally, certain settlement exchanges have implemented loss allocation policies that enable the exchange to allocate settlement losses to the members of the exchange. It is not possible to quantify such mark-to-market loss until the loss occurs. Any ancillary costs that occur as a result of any mark-to-market loss cannot be quantified. In addition, we also sponsor clients as members on clearing and settlement exchanges and guarantee their obligations. At Sept. 30, 2018 and Dec. 31, 2017, we have not recorded any material liabilities under these arrangements.

Legal proceedings

In the ordinary course of business, BNY Mellon and its subsidiaries are routinely named as defendants in or made parties to pending and potential legal actions. We also are subject to governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal). Claims for significant monetary damages are often asserted in many of these legal actions, while claims for disgorgement, restitution, penalties and/or other remedial actions or sanctions may be sought in governmental and regulatory matters. It is inherently difficult to predict the eventual outcomes of such matters given their complexity and the particular facts and circumstances at issue in each of these matters. However, on the basis of our current

knowledge and understanding, we do not believe that judgments, settlements or orders, if any, arising from these matters (either individually or in the aggregate, after giving effect to applicable reserves and insurance coverage) will have a material adverse effect on the consolidated financial position or liquidity of BNY Mellon, although they could have a material effect on net income in a given period.

In view of the inherent unpredictability of outcomes in litigation and governmental and regulatory matters, particularly where (i) the damages sought are substantial or indeterminate, (ii) the proceedings are in the early stages, or (iii) the matters involve novel legal theories or a large number of parties, as a matter of course there is considerable uncertainty surrounding the timing or ultimate resolution of litigation and governmental and regulatory matters, including a possible eventual loss, fine, penalty or business impact, if any, associated with each such matter. In accordance with applicable accounting guidance, BNY Mellon establishes accruals for litigation and governmental and regulatory matters when those matters proceed to a stage where they present loss contingencies that are both probable and reasonably estimable. In such cases, there may be a possible exposure to loss in excess of any amounts accrued. BNY Mellon will continue to monitor such matters for developments that could affect the amount of the accrual, and will adjust the accrual amount as appropriate. If the loss contingency in question is not both probable and reasonably estimable, BNY Mellon does not establish an accrual and the matter will continue to be monitored for any developments that would make the loss contingency both probable and reasonably estimable. BNY Mellon believes that its accruals for legal proceedings are appropriate and, in the aggregate, are not material to the consolidated financial position of BNY Mellon, although future accruals could have a material effect on net income in a given period.

For certain of those matters described here for which a loss contingency may, in the future, be reasonably possible (whether in excess of a related accrued liability or where there is no accrued liability), BNY Mellon is currently unable to estimate a range of reasonably possible loss. For those matters described here where BNY Mellon is able to estimate a reasonably possible loss, the aggregate range of such reasonably possible loss is up to \$900 million in excess of the accrued liability (if any) related to those matters.

The following describes certain judicial, regulatory and arbitration proceedings involving BNY Mellon:

Mortgage-Securitization Trusts Proceedings

The Bank of New York Mellon has been named as a defendant in a number of legal actions brought by MBS investors alleging that the trustee has expansive duties under the governing agreements, including the duty to investigate and pursue breach of representation and warranty claims against other parties to the MBS transactions. These actions include a lawsuit brought in New York State court on June 18, 2014, and later re-filed in federal court, by a group of institutional investors who purport to sue on behalf of 233 MBS trusts.

Matters Related to R. Allen Stanford

In late December 2005, Pershing LLC (“Pershing”) became a clearing firm for Stanford Group Co. (“SGC”), a registered broker-dealer that was part of a group of entities ultimately controlled by R. Allen Stanford (“Stanford”). Stanford International Bank (“SIB”), also controlled by Stanford, issued certificates of deposit (“CDs”). Some investors allegedly wired funds from their SGC accounts to purchase CDs. In 2009, the SEC charged Stanford with operating a Ponzi scheme in connection with the sale of CDs, and SGC was placed into receivership. Alleged purchasers of CDs have filed 15 lawsuits against Pershing that are pending in Texas, including two putative class actions. The purchasers allege that Pershing, as SGC’s clearing firm, assisted Stanford in a fraudulent scheme and assert contractual, statutory and common law claims. On July 12, 2018, a federal district court dismissed six of the individual lawsuits and those cases are on appeal. A series of FINRA arbitration proceedings also have been initiated by alleged purchasers asserting similar claims.

Brazilian Postalis Litigation

BNY Mellon Servicos Financeiros DTVM S.A. (“DTVM”), a subsidiary that provides a number of asset services in Brazil, acts as administrator for certain investment funds in which the exclusive investor is a public pension fund for postal workers called Postalis-Instituto de Seguridade Social dos Correios e Telégrafos (“Postalis”). On Aug. 22, 2014, Postalis sued DTVM in Rio de Janeiro, Brazil for losses related to a Postalis investment fund for which DTVM serves as fund administrator. Postalis alleges that DTVM failed to properly perform alleged duties, including duties to conduct due diligence of and exert control over the fund manager, Atlântica

Administração de Recursos (“Atlântica”), and Atlântica’s investments. On March 12, 2015, Postalis filed a lawsuit in Rio de Janeiro against DTVM and BNY Mellon Administração de Ativos Ltda. (“Ativos”) alleging failure to properly perform alleged duties relating to another fund of which DTVM is administrator and Ativos is investment manager. On Dec. 14, 2015, Associação dos Profissionais dos Correios (“ADCAP”), a Brazilian postal workers association, filed a lawsuit in São Paulo against DTVM and other defendants alleging that DTVM improperly contributed to investment losses in the Postalis portfolio. On March 20, 2017, the lawsuit was dismissed without prejudice, and ADCAP has appealed that decision. On Dec. 17, 2015, Postalis filed three additional lawsuits in Rio de Janeiro against DTVM and Ativos alleging failure to properly perform alleged duties and liabilities for losses with respect to investments in several other funds. On Feb. 4, 2016, Postalis filed another lawsuit in Brasilia against DTVM, Ativos and BNY Mellon Alocação de Patrimônio Ltda., an investment management subsidiary, alleging failure to properly perform duties and liability for losses with respect to investments in various other funds of which the defendants were administrator and/or manager. The lawsuit was transferred to São Paulo and then returned to Brasilia. On Jan. 16, 2018, the Brazilian Federal Prosecution Service (“MPF”) filed a civil lawsuit in São Paulo against DTVM alleging liability for Postalis losses based on alleged failures by DTVM to properly perform certain duties while acting as administrator to certain funds in which Postalis invested or controller of Postalis’s own investment portfolio. On April 18, 2018, the court dismissed the lawsuit without prejudice, and the MPF has appealed that decision.

Depository Receipt Litigation

Between late December 2015 and February 2016, four putative class action lawsuits were filed against BNY Mellon asserting claims relating to BNY Mellon’s foreign exchange pricing when converting dividends and other distributions from non-U.S. companies in its role as depository bank to Depository Receipt issuers. The claims are for breach of contract and violations of ERISA. The lawsuits have been consolidated into two suits that are pending in federal court in the Southern District of New York. The parties in the lawsuits have reached agreements in principle to resolve the suits, which are subject to court approval.

Brazilian Silverado Litigation

DTVM acts as administrator for the Fundo de Investimento em Direitos Creditórios Multisetorial Silverado Maximum (“Silverado Maximum Fund”), which invests in commercial credit receivables. On June 2, 2016, the Silverado Maximum Fund sued DTVM in its capacity as administrator, along with Deutsche Bank S.A. - Banco Alemão in its capacity as custodian and Silverado Gestão e Investimentos Ltda. in its capacity as investment manager. The Fund alleges that each of the defendants failed to fulfill its respective duty, and caused losses to the Fund for which the defendants are jointly and severally liable.

Depository Receipt Pre-Release Inquiry

In March 2014, the Staff of the U.S. Securities and Exchange Commission’s Enforcement Division (the “Staff”) commenced an investigation into certain issuers of American Depositary Receipts (“ADRs”), including BNY Mellon, for the period of 2011 to 2015. The Staff has issued several requests to BNY Mellon for information relating to the pre-release of ADRs. In May 2017, BNY Mellon began discussions with the Staff about a possible resolution of the investigation. BNY Mellon has fully cooperated with the investigation and has reached an agreement in principle with the Staff to resolve this matter, which is subject to the Commission’s approval.

Note 19—Lines of business

We have an internal information system that produces performance data along product and service lines for our two principal businesses and the Other segment.

Business accounting principles

Our business data has been determined on an internal management basis of accounting, rather than the generally accepted accounting principles used for consolidated financial reporting. These measurement principles are designed so that reported results of the businesses will track their economic performance.

Business results are subject to reclassification when organizational changes are made. There were no significant organizational changes in the third quarter of 2018. The results are also subject to refinements in revenue and expense allocation methodologies, which are typically reflected on a prospective basis.

The accounting policies of the businesses are the same as those described in Note 1 of the Notes to Consolidated Financial Statements in our 2017 Annual Report.

The primary products and services and types of revenue for our two principal businesses and a description of the Other segment are presented below.

Investment Services business

<i>Line of business</i>	<i>Primary products and services</i>	<i>Primary types of revenue</i>
Asset Servicing	Custody, accounting, ETF services, middle-office solutions, transfer agency, services for private equity and real estate funds, foreign exchange, securities lending, liquidity/lending services, prime brokerage and data analytics	<ul style="list-style-type: none"> - Asset servicing fees (includes securities lending revenue) - Foreign exchange revenue - Net interest revenue - Financing-related fees
Pershing	Clearing and custody, investment, wealth and retirement solutions, technology and enterprise data management, trading services and prime brokerage	<ul style="list-style-type: none"> - Clearing services fees - Net interest revenue
Issuer Services	Corporate Trust (trustee, administration and agency services and reporting and transparency) and Depositary Receipts (issuer services and support for brokers and investors)	<ul style="list-style-type: none"> - Issuer services fees - Net interest revenue - Foreign exchange revenue
Treasury Services	Integrated cash management solutions including payments, foreign exchange, liquidity management, receivables processing and payables management and trade finance and processing	<ul style="list-style-type: none"> - Treasury services fees - Net interest revenue
Clearance and Collateral Management	U.S. government clearing, global collateral management and tri-party repo	<ul style="list-style-type: none"> - Asset servicing fees - Net interest revenue

Investment Management business

<i>Line of business</i>	<i>Primary products and services</i>	<i>Primary types of revenue</i>
Asset Management	Diversified investment management strategies and distribution of investment products	<ul style="list-style-type: none"> - Investment management fees - Performance fees - Distribution and servicing fees
Wealth Management	Investment management, custody, wealth and estate planning and private banking services	<ul style="list-style-type: none"> - Investment management fees - Net interest revenue

Other segment

<i>Description</i>	<i>Primary types of revenue</i>
Includes leasing portfolio, corporate treasury activities, including our securities portfolio, derivatives and other trading activity, corporate and bank-owned life insurance, renewable energy investments and business exits	<ul style="list-style-type: none"> - Net interest revenue - Investment and other income - Net gain (loss) on securities - Other trading revenue

The results of our businesses are presented and analyzed on an internal management reporting basis.

- Revenue amounts reflect fee and other revenue generated by each business. Fee and other revenue transferred between businesses under revenue transfer agreements is included within other revenue in each business.
- Revenues and expenses associated with specific client bases are included in those businesses. For example, foreign exchange activity associated with clients using custody products is included in Investment Services.
- Net interest revenue is allocated to businesses based on the yields on the assets and liabilities generated by each business. We employ a funds transfer pricing system that matches funds with the specific assets and liabilities of each business based on their interest sensitivity and maturity characteristics.
- The provision for credit losses associated with the respective credit portfolios is reflected in each business segment.
- Incentives expense related to restricted stock is allocated to the businesses.
- Support and other indirect expenses are allocated to businesses based on internally developed methodologies.
- Recurring FDIC expense is allocated to the businesses based on average deposits generated within each business.
- Litigation expense is generally recorded in the business in which the charge occurs.
- Management of the securities portfolio is a shared service contained in the Other segment. As a result, gains and losses associated with the valuation of the securities portfolio are included in the Other segment.
- Client deposits serve as the primary funding source for our securities portfolio. We typically allocate all interest revenue to the businesses generating the deposits. Accordingly, accretion related to the portion of the securities portfolio restructured in 2009 has been included in the results of the businesses.
- Balance sheet assets and liabilities and their related income or expense are specifically assigned to each business. Businesses with a net liability position have been allocated assets.
- Goodwill and intangible assets are reflected within individual businesses.

The following consolidating schedules present the contribution of our businesses to our overall profitability.

For the quarter ended Sept. 30, 2018 <i>(dollars in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Total fee and other revenue	\$ 2,230	\$ 938 (a)	\$ 7	\$ 3,175 (a)
Net interest revenue (expense)	827	77	(13)	891
Total revenue (loss)	3,057	1,015 (a)	(6)	4,066 (a)
Provision for credit losses	1	(2)	(2)	(3)
Noninterest expense	2,030	701	6	2,737 (b)
Income (loss) before taxes	\$ 1,026	\$ 316 (a)	\$ (10)	\$ 1,332 (a)(b)
Pre-tax operating margin (c)	34%	31%	N/M	33%
Average assets	\$ 246,276	\$ 31,283	\$ 54,782	\$ 332,341

(a) Both total fee and other revenue and total revenue include net income from consolidated investment management funds of \$7 million, representing \$10 million of income and noncontrolling interests of \$3 million. Income before taxes is net of noncontrolling interests of \$3 million.

(b) Noninterest expense includes a loss attributable to noncontrolling interests of \$1 million related to other consolidated subsidiaries.

(c) Income before taxes divided by total revenue.

N/M - Not meaningful.

Notes to Consolidated Financial Statements (continued)

For the quarter ended June 30, 2018 <i>(dollars in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Total fee and other revenue	\$ 2,233	\$ 941 (a)	\$ 41	\$ 3,215 (a)
Net interest revenue (expense)	874	77	(35)	916
Total revenue	3,107	1,018 (a)	6	4,131 (a)
Provision for credit losses	1	2	(6)	(3)
Noninterest expense	1,967	697	81	2,745 (b)
Income (loss) before taxes	\$ 1,139	\$ 319 (a)	\$ (69)	\$ 1,389 (a)(b)
Pre-tax operating margin (c)	37%	31%	N/M	34%
Average assets	\$ 264,387	\$ 31,504	\$ 50,437	\$ 346,328

(a) Both total fee and other revenue and total revenue include net income from consolidated investment management funds of \$5 million, representing \$12 million of income and noncontrolling interests of \$7 million. Income before taxes is net of noncontrolling interests of \$7 million.

(b) Noninterest expense includes a loss attributable to noncontrolling interests of \$2 million related to other consolidated subsidiaries.

(c) Income before taxes divided by total revenue.

N/M - Not meaningful.

For the quarter ended Sept. 30, 2017 <i>(dollars in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Total fee and other revenue	\$ 2,187	\$ 918 (a)	\$ 69	\$ 3,174 (a)
Net interest revenue (expense)	777	82	(20)	839
Total revenue	2,964	1,000 (a)	49	4,013 (a)
Provision for credit losses	(2)	(2)	(2)	(6)
Noninterest expense	1,874	702	77	2,653 (b)
Income (loss) before taxes	\$ 1,092	\$ 300 (a)	\$ (26)	\$ 1,366 (a)(b)
Pre-tax operating margin (c)	37%	30%	N/M	34%
Average assets	\$ 252,461	\$ 31,689	\$ 61,559	\$ 345,709

(a) Both total fee and other revenue and total revenue include net income from consolidated investment management funds of \$7 million, representing \$10 million of income and noncontrolling interests of \$3 million. Income before taxes is net of noncontrolling interests of \$3 million.

(b) Noninterest expense includes a loss attributable to noncontrolling interests of \$1 million related to other consolidated subsidiaries.

(c) Income before taxes divided by total revenue.

N/M - Not meaningful.

For the nine months ended Sept. 30, 2018 <i>(dollars in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Total fee and other revenue	\$ 6,713	\$ 2,891 (a)	\$ 56	\$ 9,660 (a)
Net interest revenue (expense)	2,545	230	(49)	2,726
Total revenue	9,258	3,121 (a)	7	12,386 (a)
Provision for credit losses	(5)	2	(8)	(11)
Noninterest expense	5,946	2,103	174	8,223 (b)
Income (loss) before taxes	\$ 3,317	\$ 1,016 (a)	\$ (159)	\$ 4,174 (a)(b)
Pre-tax operating margin (c)	36%	33%	N/M	34%
Average assets	\$ 262,804	\$ 31,577	\$ 51,139	\$ 345,520

(a) Both total fee and other revenue and total revenue include net income from consolidated investment management funds of \$12 million, representing \$11 million of income and a loss attributable to noncontrolling interests of \$1 million. Income before taxes is net of a loss attributable to noncontrolling interests of \$1 million.

(b) Noninterest expense includes a loss attributable to noncontrolling interests of \$1 million related to other consolidated subsidiaries.

(c) Income before taxes divided by total revenue.

N/M - Not meaningful.

Notes to Consolidated Financial Statements (continued)

For the nine months ended Sept. 30, 2017 <i>(dollars in millions)</i>	Investment Services	Investment Management	Other	Consolidated
Total fee and other revenue	\$ 6,386	\$ 2,694 (a)	\$ 254	\$ 9,334 (a)
Net interest revenue (expense)	2,245	255	(43)	2,457
Total revenue	8,631	2,949 (a)	211	11,791 (a)
Provision for credit losses	(5)	1	(14)	(18)
Noninterest expense	5,650	2,083	212	7,945 (b)
Income before taxes	\$ 2,986	\$ 865 (a)	\$ 13	\$ 3,864 (a)(b)
Pre-tax operating margin (c)	35%	29%	N/M	33%
Average assets	\$ 252,675	\$ 31,372	\$ 57,463	\$ 341,510

(a) Both total fee and other revenue and total revenue include net income from consolidated investment management funds of \$29 million, representing \$53 million of income and noncontrolling interests of \$24 million. Income before taxes is net of noncontrolling interests of \$24 million.

(b) Noninterest expense includes a loss attributable to noncontrolling interest of \$6 million related to other consolidated subsidiaries.

(c) Income before taxes divided by total revenue.

N/M - Not meaningful.

Note 20—Supplemental information to the Consolidated Statement of Cash Flows

Non-cash investing and financing transactions that, appropriately, are not reflected in the consolidated statement of cash flows are listed below.

Non-cash investing and financing transactions <i>(in millions)</i>	Nine months ended Sept. 30,	
	2018	2017
Transfers from loans to other assets for other real estate owned	\$ 2	\$ 3
Change in assets of consolidated VIEs	232	429
Change in liabilities of consolidated VIEs	5	288
Change in nonredeemable noncontrolling interests of consolidated investment management funds	226	234
Securities purchased not settled	885	1,277
Securities sold not settled	249	—
Securities matured not settled	—	350
Available-for-sale securities transferred to trading assets	963	—
Held-to-maturity securities transferred to available-for-sale	1,087	74
Premises and equipment/capitalized software funded by capital lease obligations	25	347

Item 4. Controls and Procedures

Disclosure controls and procedures

Our management, including the Chief Executive Officer and Chief Financial Officer, with participation by the members of the Disclosure Committee, has responsibility for ensuring that there is an adequate and effective process for establishing, maintaining, and evaluating disclosure controls and procedures that are designed to ensure that information required to be disclosed by us in our SEC reports is timely recorded, processed, summarized and reported and that information required to be disclosed by BNY Mellon is accumulated and communicated to BNY Mellon's management to allow timely decisions regarding the required disclosure. In addition, our ethics hotline can also be used by employees and others for the anonymous communication of concerns about financial controls or reporting matters. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective.

Changes in internal control over financial reporting

In the ordinary course of business, we may routinely modify, upgrade or enhance our internal controls and procedures for financial reporting. There have not been any changes in our internal control over financial reporting as defined in Rule 13a-15(f) of the Exchange Act during the third quarter of 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Some statements in this document are forward-looking. These include all statements about the usefulness of Non-GAAP measures, the future results of BNY Mellon, our businesses, financial, liquidity and capital condition, results of operations, liquidity, risk and capital management and processes, goals, strategies, outlook, objectives, expectations (including those regarding our performance results, expenses, seasonality in our businesses, impacts of currency fluctuations, impacts of trends on our businesses, regulatory, technology, market, economic or accounting developments, legal proceedings and other contingencies), effective tax rate, estimates (including those regarding expenses, losses inherent in our credit portfolios, capital ratios and the tax benefit related to U.S. tax legislation), intentions (including those regarding our real estate strategy, capital returns and investment in technology), targets, opportunities and initiatives.

In this report, any other report, any press release or any written or oral statement that BNY Mellon or its executives may make, words, such as “estimate,” “forecast,” “project,” “anticipate,” “likely,” “target,” “expect,” “intend,” “continue,” “seek,” “believe,” “plan,” “goal,” “could,” “should,” “would,” “may,” “might,” “will,” “strategy,” “synergies,” “opportunities,” “trends,” “future” and words of similar meaning, may signify forward-looking statements.

Actual results may differ materially from those expressed or implied as a result of a number of factors, including those discussed in the “Risk Factors” section of our 2017 Annual Report and this Form 10-Q, such as: a communications or technology disruption or failure that results in a loss of information or impacts our ability to provide services to our clients may materially adversely affect our business, financial condition and results of operations; a cybersecurity incident, or a failure to protect our computer systems, networks and information and our clients’ information against cybersecurity threats, could result in a loss of information, adversely impact our ability to conduct our businesses, and damage our reputation and cause losses; our business may be materially adversely affected by operational risk; failure to satisfy regulatory standards, including “well capitalized” and “well managed” status or capital adequacy and liquidity rules more generally, could result in limitations on our activities and adversely affect our business and financial condition; we are subject to

extensive government rulemaking, regulation and supervision; these rules and regulations have, and in the future may, compel us to change how we manage our businesses, which could have a material adverse effect on our business, financial condition and results of operations; rules and regulations have increased our compliance and operational risk and costs; our risk management framework may not be effective in mitigating risk and reducing the potential for losses; a failure or circumvention of our controls and procedures could have a material adverse effect on our business, reputation, results of operations and financial condition; if our resolution plan is determined not to be credible or not to facilitate an orderly resolution under the U.S. Bankruptcy Code, our business, reputation, results of operations and financial condition could be materially negatively impacted; the application of our Title I preferred resolution strategy or resolution under the Title II orderly liquidation authority could adversely affect our liquidity and financial condition and our security holders; regulatory or enforcement actions or litigation could materially adversely affect our results of operations or harm our businesses or reputation; our businesses may be negatively affected by adverse events, publicity, government scrutiny or other reputational harm; acts of terrorism, natural disasters, pandemics, global conflicts and other geopolitical events may have a negative impact on our business and operations; we are dependent on fee-based business for a substantial majority of our revenue and our fee-based revenues could be adversely affected by slowing in market activity, weak financial markets, underperformance and/or negative trends in savings rates or in investment preferences; weakness and volatility in financial markets and the economy generally may materially adversely affect our business, results of operations and financial condition; the United Kingdom’s referendum decision to leave the EU has had and may continue to have negative effects on global economic conditions, global financial markets, and our business and results of operations; changes in interest rates and yield curves could have a material adverse effect on our profitability; we may experience write-downs of securities that we own and other losses related to volatile and illiquid market conditions, reducing our earnings and impacting our financial condition; ongoing concerns about the financial stability of certain countries, new barriers to global trade or a breakup of the EU or Eurozone could have a material adverse effect on our business and results of operations; our FX revenue may be adversely affected

by decreases in market volatility and the cross-border investment activity of our clients; the failure or perceived weakness of any of our significant counterparties, many of whom are major financial institutions and sovereign entities, and our assumption of credit and counterparty risk, could expose us to loss and adversely affect our business; our business, financial condition and results of operations could be adversely affected if we do not effectively manage our liquidity; any material reduction in our credit ratings or the credit ratings of our principal bank subsidiaries, The Bank of New York Mellon or BNY Mellon, N.A., could increase the cost of funding and borrowing to us and our rated subsidiaries and have a material adverse effect on our results of operations and financial condition and on the value of the securities we issue; we could incur losses if our allowance for credit losses, including loan and lending related commitments reserves, is inadequate; new lines of business, new products and services or transformational or strategic project initiatives may subject us to additional risks, and the failure to implement these initiatives could affect our results of operations; we are subject to competition in all aspects of our business, which could negatively affect our ability to maintain or increase our profitability; our business may be adversely affected if we are unable to attract and retain employees; our strategic transactions present risks and uncertainties and could have an adverse effect on our business, results of operations and financial condition; tax law changes, including the recent enactment of the Tax Act, or challenges to our tax positions with respect to historical transactions may adversely affect our net income, effective tax rate and our overall results of

operations and financial condition; our ability to return capital to shareholders is subject to the discretion of our board of directors and may be limited by U.S. banking laws and regulations, including those governing capital and the approval of our capital plan, applicable provisions of Delaware law or our failure to pay full and timely dividends on our preferred stock; changes in the method pursuant to which the LIBOR and other benchmark rates are determined could adversely impact our business and results of operations; the Parent is a non-operating holding company, and as a result, is dependent on dividends from its subsidiaries and extensions of credit from its IHC to meet its obligations, including with respect to its securities, and to provide funds for share repurchases and payment of dividends to its stockholders; changes in accounting standards governing the preparation of our financial statements and future events could have a material impact on our reported financial condition, results of operations, cash flows and other financial data.

Investors should consider all risk factors discussed in our 2017 Annual Report and any subsequent reports filed with the SEC by BNY Mellon pursuant to the Exchange Act. All forward-looking statements speak only as of the date on which such statements are made, and BNY Mellon undertakes no obligation to update any statement to reflect events or circumstances after the date on which such forward-looking statement is made or to reflect the occurrence of unanticipated events. The contents of BNY Mellon's website or any other websites referenced herein are not part of this report.

Part II - Other Information

Item 1. Legal Proceedings.

The information required by this Item is set forth in the “Legal proceedings” section in Note 18 of the Notes to Consolidated Financial Statements, which portion is incorporated herein by reference in response to this item.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

- (c) The following table discloses repurchases of our common stock made in the third quarter of 2018. All of the Company’s preferred stock outstanding has preference over the Company’s common stock with respect to the payment of dividends.

Issuer purchases of equity securities

Share repurchases - third quarter of 2018		Total shares repurchased as part of a publicly announced plan or program	Maximum approximate dollar value of shares that may yet be purchased under the publicly announced plans or programs at Sept. 30, 2018
<i>(dollars in millions, except per share information; common shares in thousands)</i>	Total shares repurchased	Average price per share	
July 2018	5	\$ 53.74	5 \$ 2,400
August 2018	8,364	51.35	8,364 1,970
September 2018	3,307	51.88	3,307 1,798
Third quarter of 2018 (a)	11,676	\$ 51.50	11,676 \$ 1,798 (b)

(a) Includes 25 thousand shares repurchased at a purchase price of \$1 million from employees, primarily in connection with the employees’ payment of taxes upon the vesting of restricted stock. The average price per share of open market purchases was \$51.50.

(b) Represents the maximum value of the shares authorized to be repurchased through the second quarter of 2019, including employee benefit plan repurchases, in connection with the Federal Reserve’s non-objection to our 2018 capital plan.

In June 2018, in connection with the Federal Reserve’s non-objection to our 2018 capital plan, BNY Mellon announced a share repurchase plan providing for the repurchase of up to \$2.4 billion of common stock starting in the third quarter of 2018 and continuing through the second quarter of 2019. This new share repurchase plan replaces all previously authorized share repurchase plans.

Share repurchases may be executed through repurchase plans designed to comply with Rule 10b5-1 and through derivative, accelerated share repurchase and other structured transactions. The

timing and exact amount of any common stock repurchases will depend on various factors, including market conditions and the common stock trading price; the Company’s capital position, liquidity and financial performance; alternative uses of capital; and legal and regulatory considerations.

Item 6. Exhibits.

The list of exhibits required to be filed as exhibits to this report appears below.

Exhibit No.	Description	Method of Filing
3.1	<u>Restated Certificate of Incorporation of The Bank of New York Mellon Corporation.</u>	Previously filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 000-52710) as filed with the Commission on July 2, 2007, and incorporated herein by reference.
3.2	<u>Certificate of Designations of The Bank of New York Mellon Corporation with respect to Series A Noncumulative Preferred Stock, dated June 15, 2007.</u>	Previously filed as Exhibit 4.1 to the Company's Current Report on Form 8-K (File No. 000-52710) as filed with the Commission on July 5, 2007, and incorporated herein by reference.
3.3	<u>Certificate of Designations of The Bank of New York Mellon Corporation with respect to Series C Noncumulative Perpetual Preferred Stock, dated Sept. 13, 2012.</u>	Previously filed as Exhibit 3.2 to the Company's Registration Statement on Form 8A12B (File No. 001-35651) as filed with the Commission on Sept. 14, 2012, and incorporated herein by reference.
3.4	<u>Certificate of Designations of The Bank of New York Mellon Corporation with respect to the Series D Noncumulative Perpetual Preferred Stock, dated May 16, 2013.</u>	Previously filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-35651) as filed with the Commission on May 16, 2013, and incorporated herein by reference.
3.5	<u>Certificate of Designations of The Bank of New York Mellon Corporation with respect to the Series E Noncumulative Perpetual Preferred Stock, dated April 27, 2015.</u>	Previously filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-35651) as filed with the Commission on April 28, 2015, and incorporated herein by reference.
3.6	<u>Certificate of Designations of The Bank of New York Mellon Corporation with respect to the Series F Noncumulative Perpetual Preferred Stock, dated July 29, 2016.</u>	Previously filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-35651) as filed with the Commission on Aug. 1, 2016, and incorporated herein by reference.
3.7	<u>Amended and Restated By-Laws of The Bank of New York Mellon Corporation, as amended and restated on Feb. 12, 2018.</u>	Previously filed as Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-35651) as filed with the Commission on Feb. 13, 2018, and incorporated herein by reference.
4.1	None of the instruments defining the rights of holders of long-term debt of the Parent or any of its subsidiaries represented long-term debt in excess of 10% of the total assets of the Company as of Sept. 30, 2018. The Company hereby agrees to furnish to the Commission, upon request, a copy of any such instrument.	N/A

Exhibit No.	Description	Method of Filing
10.1	* <u>Amendment dated as of Oct. 18, 2018 to The Bank of New York Company, Inc. Excess Benefit Plan.</u>	Filed herewith.
31.1	<u>Certification of the Chief Executive Officer pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>	Filed herewith.
31.2	<u>Certification of the Chief Financial Officer pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>	Filed herewith.
32.1	<u>Certification of the Chief Executive Officer pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>	Furnished herewith.
32.2	<u>Certification of the Chief Financial Officer pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>	Furnished herewith.
101.INS	XBRL Instance Document.	Filed herewith.
101.SCH	XBRL Taxonomy Extension Schema Document.	Filed herewith.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	Filed herewith.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	Filed herewith.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	Filed herewith.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	Filed herewith.

* Management contract or compensatory plan, contract or arrangement.

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.

THE BANK OF NEW YORK MELLON CORPORATION
(Registrant)

Date: November 6, 2018

By: /s/ Kurtis R. Kurimsky
Kurtis R. Kurimsky
Corporate Controller
(Duly Authorized Officer and
Principal Accounting Officer of
the Registrant)

**AMENDMENT TO THE BANK OF NEW YORK COMPANY, INC.
EXCESS BENEFIT PLAN**

WHEREAS, The Bank of New York Company, Inc. has adopted the Excess Benefit Plan (the “Plan”);

WHEREAS, The Bank of New York Mellon Corporation (the “Corporation”) is the successor in interest by merger to The Bank of New York Company, Inc.;

WHEREAS, in order to provide for more streamlined administration of the Plan and ensure continued compliance with the time and form of payment rules under Section 409A of the Internal Revenue Code (the “Code”) applicable to the Plan, the Corporation desires to amend the Plan to provide for lump sum payments of the present value of a Participant’s benefits not yet in payment status under the Plan if the value of such benefits as of the later of November 1, 2018 or separation from service is less than the annual contribution limit under Section 402(g) of the Code as published by the Internal Revenue Service for the year in which the payment occurs;

WHEREAS, the Charter and Summary of Operations of the Benefits Administration Committee (“BAC”) as initially approved by the Corporation’s Appointing and Monitoring Committee on July 21, 2008 – which Charter was adopted in partial implementation of that certain “Governance Resolution” adopted March 10, 2008 by the Human Resources & Compensation Committee of the Board of Directors of the Corporation (the “HRCC”) – vests the BAC with, *inter alia*, the responsibility for monitoring the compliance of the Corporation’s domestic plans with legal requirements; including the duty to amend such domestic plans to comply with legal requirements not requiring a material increase in cost or administration, with the advice of legal counsel; and

WHEREAS, Management, after consultation with legal counsel, has: (i) determined that the amendments to the Plan described in the premises fall within the BAC’s delegated authority and (ii) recommended that the Chair of the BAC exercise such delegated authority to adopt such amendments to the Plan in order to ensure the Plan’s continued compliance with the time and form of payment rules under Section 409A of the Code; and the Chair of the BAC has elected to so exercise such authority.

NOW, THEREFORE, the Plan is hereby amended as follows, effective November 1, 2018:

1. The last paragraph of Section 3 is amended to add the following clause to the end thereof to read as follows:
“, provided, however, that if the lump sum present value, determined as of the later of November 1, 2018 or separation from service, of a Participant’s benefits subject to Section 409A and not yet in payment status under all similar plans when added together does not exceed the annual contribution limit under Section 402(g) of the Internal Revenue Code as published by the Internal Revenue Service for the year in which such determination is made, the Participant’s benefit under this Section 3 shall be paid in a lump sum equivalent distribution within 30 days of the later of November 1, 2018 or separation from service.”
2. The last paragraph of Section 11 is amended to add the following clause to the end thereof to read as follows:
“, provided, however, that if the lump sum present value, determined as of the later of November 1, 2018 or separation from service, of a Participant’s benefits subject to Section 409A and not yet in payment status under all similar plans when added together does not exceed the annual contribution limit under Section 402(g) of the Internal Revenue Code as published by the Internal Revenue Service for the year in which such determination is made, the Participant’s Part II Benefit shall be paid in a lump sum equivalent distribution within 30 days of the later of November 1, 2018 or separation from service.”
3. Capitalized terms that are not defined in this Amendment shall have the meanings ascribed thereto in the Plan.

4. Except as modified by this Amendment, the existing provisions of the Plan shall remain in full force and effect.

IN WITNESS WHEREOF, the Benefits Administration Committee of The Bank of New York Mellon Corporation, intending to bind the Corporation through the exercise of its amendment authority described above, has caused its chair to execute this Amendment as of the 18th day of October, 2018.

WITNESS:

**THE BANK OF NEW YORK MELLON
CORPORATION**

By: /s/ Bennett E. Josselsohn
Bennett E. Josselsohn
Senior Managing Counsel

By: /s/ Monique R. Herena
Monique R. Herena, Chair
The Bank of New York Mellon Corporation
Benefits Administration Committee

CERTIFICATION

I, Charles W. Scharf, certify that:

1. I have reviewed this quarterly report on Form 10-Q of The Bank of New York Mellon Corporation (the “registrant”);
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 fiscal 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 functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: November 6, 2018

/s/ Charles W. Scharf

Name: Charles W. Scharf

Title: Chief Executive Officer

CERTIFICATION

I, Michael P. Santomassimo, certify that:

1. I have reviewed this quarterly report on Form 10-Q of The Bank of New York Mellon Corporation (the “registrant”);
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 fiscal 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 functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: November 6, 2018

/s/ Michael P. Santomassimo

Name: Michael P. Santomassimo

Title: Chief Financial Officer

CERTIFICATION

Pursuant to 18 U.S.C. Section 1350, the undersigned officer of The Bank of New York Mellon Corporation (“BNY Mellon”), hereby certifies, to his knowledge, that BNY Mellon’s Quarterly Report on Form 10-Q for the quarter ended Sept. 30, 2018 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of BNY Mellon.

Dated: November 6, 2018

/s/ Charles W. Scharf

Name: Charles W. Scharf

Title: Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.

CERTIFICATION

Pursuant to 18 U.S.C. Section 1350, the undersigned officer of The Bank of New York Mellon Corporation (“BNY Mellon”), hereby certifies, to his knowledge, that BNY Mellon’s Quarterly Report on Form 10-Q for the quarter ended Sept. 30, 2018 (the “Report”) fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of BNY Mellon.

Dated: November 6, 2018

/s/ Michael P. Santomassimo

Name: Michael P. Santomassimo

Title: Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.