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Bank of New York Mellon Corp
Form 10-Q
August 03, 2017

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 June 30, 2017

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 13-2614959
(State or other jurisdiction of (I.R.S. Employer Identification No.)
incorporation or organization)

225 Liberty 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

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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.

Class	Outstanding as of June 30, 2017
Common Stock, \$0.01 par value	1,033,156,201

THE BANK OF NEW YORK MELLON CORPORATION

Second Quarter 2017 Form 10-Q
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The Bank of New York Mellon Corporation (and its subsidiaries)

Consolidated Financial Highlights (unaudited)

(dollar amounts in millions, except per common share amounts and unless otherwise noted)	Quarter ended			Year-to-date		
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016	
Results applicable to common shareholders of The Bank of New York Mellon Corporation:						
Net income	\$926	\$880	\$825	\$1,806	\$1,629	
Basic earnings per share	0.88	0.83	0.76	1.71	1.49	
Diluted earnings per share	0.88	0.83	0.75	1.70	1.48	
Fee and other revenue	\$3,120	\$3,018	\$2,999	\$6,138	\$5,969	
Income from consolidated investment management funds	10	33	10	43	4	
Net interest revenue	826	792	767	1,618	1,533	
Total revenue	\$3,956	\$3,843	\$3,776	\$7,799	\$7,506	
Return on common equity (annualized) (a)	10.4	% 10.2	% 9.3	% 10.3	% 9.2	%
Adjusted return on common equity (annualized) – Non-GAAP (a)(b)	10.8	% 10.7	% 9.7	% 10.8	% 9.7	%
Return on tangible common equity (annualized) – Non-GAAP (a)(c)	21.9	% 22.2	% 20.4	% 22.1	% 20.5	%
Adjusted return on tangible common equity (annualized) – Non-GAAP (a)(b)(c)	22.1	% 22.4	% 20.5	% 22.2	% 20.7	%
Return on average assets (annualized)	1.09	% 1.06	% 0.89	% 1.07	% 0.89	%
Fee revenue as a percentage of total revenue	79	% 78	% 79	% 79	% 79	%
Percentage of non-U.S. total revenue	35	% 34	% 34	% 34	% 33	%
Pre-tax operating margin (a)	33	% 31	% 31	% 32	% 30	%
Adjusted pre-tax operating margin – Non-GAAP (a)(b)	35	% 33	% 33	% 34	% 32	%
Net interest margin	1.14	% 1.13	% 0.97	% 1.14	% 0.98	%
Net interest margin on a fully taxable equivalent (“FTE”) basis – Non-GAAP (d)	1.16	% 1.14	% 0.98	% 1.15	% 1.00	%
Assets under management (“AUM”) at period end (in billions) (e)	\$1,771	\$1,727	\$1,664	\$1,771	\$1,664	
Assets under custody and/or administration (“AUC/A”) at period end (in trillions) (f)	\$31.1	\$30.6	\$29.5	\$31.1	\$29.5	
Market value of securities on loan at period end (in billions) (g)	\$336	\$314	\$278	\$336	\$278	
Average common shares and equivalents outstanding (in thousands):						
Basic	1,035,829	1,041,158	1,072,583	1,038,479	1,076,112	

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Diluted	1,041,879	1,047,746	1,078,271	1,044,809	1,081,847	
Selected average balances:						
Interest-earning assets	\$289,496	\$283,421	\$318,433	\$286,475	\$314,556	
Assets of operations	\$341,607	\$335,080	\$372,974	\$338,362	\$368,110	
Total assets	\$342,515	\$336,200	\$374,220	\$339,375	\$369,387	
Interest-bearing deposits	\$142,336	\$139,820	\$165,122	\$141,084	\$163,569	
Long-term debt	\$27,398	\$25,882	\$22,838	\$26,644	\$22,197	
Noninterest-bearing deposits	\$73,886	\$73,555	\$84,033	\$73,721	\$83,489	
Preferred stock	\$3,542	\$3,542	\$2,552	\$3,542	\$2,552	
Total The Bank of New York Mellon Corporation common shareholders' equity	\$35,862	\$34,965	\$35,827	\$35,416	\$35,539	
Other information at period end:						
Cash dividends per common share	\$0.19	\$0.19	\$0.17	\$0.38	\$0.34	
Common dividend payout ratio	22	%23	%23	%22	%23	%
Common dividend yield (annualized)	1.5	%1.6	%1.8	%1.5	%1.8	%
Closing stock price per common share	\$51.02	\$47.23	\$38.85	\$51.02	\$38.85	
Market capitalization	\$52,712	\$49,113	\$41,479	\$52,712	\$41,479	
Book value per common share (a)	\$35.26	\$34.23	\$33.72	\$35.26	\$33.72	
Tangible book value per common share – Non-GAAP (a)(c)	\$17.53	\$16.65	\$16.25	\$17.53	\$16.25	
Full-time employees	52,800	52,600	52,200	52,800	52,200	
Common shares outstanding (in thousands)	1,033,156	1,039,877	1,067,674	1,033,156	1,067,674	

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Consolidated Financial Highlights (unaudited) (continued)

	June 30, 2017	March 31, 2017	Dec. 31, 2016	
Regulatory ratios				
Average liquidity coverage ratio (“LCR”) (h)	116	% 117	% 114	%
Consolidated regulatory capital ratios: (i)				
Standardized:				
Common equity Tier 1 (“CET1”) ratio	12.0	% 12.0	% 12.3	%
Tier 1 capital ratio	14.3	14.4	14.5	
Total (Tier 1 plus Tier 2) capital ratio	14.8	14.9	15.2	
Advanced:				
CET1 ratio	10.8	10.4	10.6	
Tier 1 capital ratio	12.9	12.5	12.6	
Total (Tier 1 plus Tier 2) capital ratio	13.2	12.8	13.0	
Leverage capital ratio (i)	6.7	6.6	6.6	
Supplementary leverage ratio (“SLR”) (i)	6.2	6.1	6.0	
BNY Mellon shareholders’ equity to total assets ratio – GAAP	11.3	11.6	11.6	
BNY Mellon common shareholders’ equity to total assets ratio – GAAP	10.3	10.5	10.6	

Selected regulatory capital ratios – fully phased-in – Non-GAAP: (j)

Estimated CET1 ratio:				
Standardized Approach	11.5	% 11.5	% 11.3	%
Advanced Approach	10.4	10.0	9.7	
Estimated SLR	6.0	5.9	5.6	

(a) See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 52 for a reconciliation of Non-GAAP measures.

(b) Non-GAAP information for all periods presented excludes the amortization of intangible assets and M&I, litigation and restructuring charges. Pre-tax operating margin (Non-GAAP) also excludes the net income attributable to noncontrolling interests of consolidated investment management funds.

(c) Tangible common equity – Non-GAAP and tangible book value per common share – Non-GAAP exclude goodwill and intangible assets, net of deferred tax liabilities. See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 52 for the reconciliation of Non-GAAP measures.

(d) See “Average balances and interest rates” on page 11 for a reconciliation of Non-GAAP measures.

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

(f) Includes the AUC/A of CIBC Mellon Global Securities Services Company (“CIBC Mellon”), a joint venture with the Canadian Imperial Bank of Commerce, of \$1.2 trillion at June 30, 2017 and March 31, 2017 and \$1.1 trillion at June 30, 2016.

(g) 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 \$66 billion at June 30, 2017, \$65 billion at March 31, 2017 and \$56 billion at June 30, 2016.

(h) For additional information on our LCR, see “Liquidity and dividends” beginning on page 35.

(i) 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 leverage capital ratio is based on Tier I capital, as phased-in, and quarterly average total assets. The SLR is based on Tier 1 capital, as phased-in, and average quarterly assets and certain off-balance sheet exposures. For additional information on our

capital ratios, see “Capital” beginning on page 40.

The estimated fully phased-in CET1 and SLR ratios (Non-GAAP) are based on our interpretation of the U.S. capital (j) rules, which are being gradually phased-in over a multi-year period. For additional information on these Non-GAAP ratios, see “Capital” beginning on page 40.

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Part I - Financial Information

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, 2016 (“2016 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.”

How we reported results

Throughout this Form 10-Q, certain measures, which are noted as “Non-GAAP financial measures,” exclude certain items or otherwise include components that differ from U.S. generally accepted accounting principles (“GAAP”). BNY Mellon believes that these measures are useful to investors because they permit a focus on period-to-period comparisons using measures that relate to our ability to enhance revenues and limit expenses in circumstances where such matters are within our control or because they provide additional information about our ability to meet fully phased-in capital requirements. Certain immaterial reclassifications have been made to prior periods to place them on a basis comparable with the current period presentation. See “Supplemental information - Explanation of GAAP and Non-GAAP financial measures” beginning on page 52 for a reconciliation of financial measures presented in accordance with GAAP to adjusted Non-GAAP financial measures. See “Net interest revenue,” including the “Average balances and interest rates” beginning on page 10 for information on measures presented on a fully taxable equivalent basis. Also see “Capital” beginning on page 40 for information on our fully phased-in capital requirements.

Overview

The Bank of New York Mellon Corporation was the first company listed on the New York Stock Exchange (NYSE: BK). With a rich history of maintaining our financial strength and stability through all business cycles, BNY Mellon is a global investments company dedicated to improving lives through investing.

We manage and service assets for financial institutions, corporations and individual investors in 35 countries and more than 100 markets. As of June 30, 2017, BNY Mellon had \$31.1 trillion in assets under custody and/or administration (“AUC/A”), and \$1.8 trillion in assets under management (“AUM”).

BNY Mellon is focused on enhancing our clients' experience by leveraging our scale and expertise to deliver innovative and strategic solutions for our clients, and building trusted relationships that drive value. We hold a unique position in the global financial services industry. We service both the buy-side and sell-side, providing us with distinctive marketplace insights that enable us to support our clients' success.

BNY Mellon's businesses benefit from global growth in financial assets, the globalization of the investment process, changes in demographics and the continued evolution of the regulatory landscape—each providing us with opportunities

to advise and service clients.

Key second quarter 2017 and subsequent events

Charles W. Scharf named chief executive officer; Gerald L. Hassell, chairman, to retire

In July 2017, Charles W. Scharf was appointed chief executive officer and member of the board of directors of the Company. Mr. Scharf succeeds Gerald L. Hassell, who will continue as the Company's chairman of the board of directors until his retirement at the end of the year. After Mr. Hassell's retirement, Mr. Scharf will become chairman, effective Jan. 1, 2018.

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Resolution plan

As required by the Dodd-Frank Act, BNY Mellon must submit annually to the Board of Governors of the Federal Reserve System (“Federal Reserve”) and the Federal Deposit Insurance Corporation (“FDIC”) a plan for its rapid and orderly resolution in the event of material financial distress or failure. BNY Mellon filed its 2017 resolution plan on July 1, 2017. We believe the 2017 resolution plan addresses all shortcomings and deficiencies identified by the FDIC and the Federal Reserve in the Company’s 2015 resolution plan. The public portion of our resolution plan is available on the Federal Reserve’s and FDIC’s websites.

Capital plan, share repurchase program and increase in cash dividend on common stock

In June 2017, BNY Mellon received confirmation that the Federal Reserve did not object to our 2017 capital plan submitted in connection with its Comprehensive Capital Analysis and Review (“CCAR”). Our board of directors subsequently approved the repurchase of up to \$2.6 billion of common stock and up to an additional \$500 million of common stock contingent on a prior issuance of \$500 million of noncumulative perpetual preferred stock starting in the third quarter of 2017 and continuing through the second quarter of 2018.

Additionally, in July 2017, the board of directors approved a 26% increase in the quarterly cash dividend on common stock, which was also included in the 2017 capital plan, from \$0.19 to \$0.24 per share. This increased quarterly cash dividend will be paid on Aug. 11, 2017.

Established BNY Mellon Government Securities Services Corp.

In the second quarter of 2017, BNY Mellon established BNY Mellon Government Securities Services Corp. (“GSS Corp.”) a U.S.-based wholly-owned operating subsidiary that houses the operations and technology supporting our U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement services. The board of directors of GSS Corp. provides oversight of business affairs, operational risk and performance, as well as direction on strategic initiatives to drive industry-leading practices and processes. The board currently consists of seven members, including three highly

accomplished industry veterans as independent members.

Established intermediate holding company

In connection with our single point of entry resolution strategy, we have established BNY Mellon IHC, LLC, a wholly-owned direct subsidiary of the Parent, (the “IHC”), to facilitate the provision of capital and liquidity resources to certain key subsidiaries in the event of material financial distress or failure. In the second quarter of 2017, we entered into a binding support agreement that requires the IHC to provide that support. See “Liquidity and dividends” beginning on page 35 for additional information.

Highlights of second quarter 2017 results

We reported net income applicable to common shareholders of \$926 million, or \$0.88 per diluted common share, in the second quarter of 2017. Net income applicable to common shareholders was \$825 million, or \$0.75 per diluted common share, in the second quarter of 2016 and \$880 million, or \$0.83 per diluted common share, in the first quarter of 2017.

Highlights of the second quarter of 2017 include:

-

AUC/A totaled a record \$31.1 trillion at June 30, 2017 compared with \$29.5 trillion at June 30, 2016. The 5% increase primarily reflects higher market values. (See “Investment Services business” beginning on page 19.) AUM totaled \$1.77 trillion at June 30, 2017 compared with \$1.66 trillion at June 30, 2016. The 6% increase primarily reflects higher market values and net inflows, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). AUM excludes securities lending cash management assets and assets managed in the Investment Services business. (See “Investment Management business” beginning on page 16.) Investment services fees totaled \$1.86 billion, an increase of 4% compared with \$1.79 billion in the second quarter of 2016. The increase primarily reflects growth in clearing services fees, net new business, including collateral management solutions, and higher equity market values, partially offset by the unfavorable impact of a stronger U.S. dollar. (See “Investment Services business” beginning on page 19.)

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Investment management and performance fees totaled \$879 million, an increase of 6% compared with \$830 million in the second quarter of 2016. The increase primarily reflects higher market values, money market fees and performance fees, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). (See “Investment Management business” beginning on page 16.)

Foreign exchange and other trading revenue totaled \$165 million compared with \$182 million in the second quarter of 2016. Foreign exchange revenue totaled \$151 million, a decrease of 9% compared with \$166 million in the second quarter of 2016, primarily reflecting lower volatility, partially offset by higher volumes. (See “Fee and other revenue” beginning on page 7.)

Investment and other income totaled \$122 million compared with \$74 million in the second quarter of 2016. The increase primarily reflects lease-related gains. (See “Fee and other revenue” beginning on page 7.)

Net interest revenue totaled \$826 million compared with \$767 million in the second quarter of 2016. The 8% increase was primarily driven by higher interest rates and lower premium amortization, partially offset by lower interest-earning assets and higher average long-term debt. Net interest margin was 1.14% in the second quarter of 2017 compared with 0.97% in the second quarter of 2016 and net interest margin (FTE) (Non-GAAP) was 1.16% in the second quarter of 2017 compared with 0.98% in the second quarter of 2016. (See “Net interest revenue” on page 10.)

The provision for credit losses was a credit of \$7 million in the second quarter of 2017 and a credit of \$9 million in the second quarter of 2016. (See “Asset quality and allowance for credit losses” beginning on page 31.)

Noninterest expense totaled \$2.66 billion compared with \$2.62 billion in the second quarter of 2016. The increase reflects higher professional, legal and other purchased services (related to regulatory and compliance costs, including the 2017 resolution plan), software and litigation expenses, partially offset by the favorable impact of a stronger U.S. dollar and lower net occupancy expense. (See “Noninterest expense” beginning on page 13.)

The provision for income taxes was \$332 million and the effective rate was 25.4% in the second quarter of 2017 compared with an income tax provision of \$290 million and an effective tax rate of 24.9% in the second quarter of 2016. (See “Income taxes” on page 14.)

The net unrealized pre-tax gain on the total investment securities portfolio was \$151 million at June 30, 2017 compared with a pre-tax loss of \$23 million at March 31, 2017. The net unrealized pre-tax gain was primarily driven by a decrease in market interest rates. (See “Investment securities” beginning on page 26.)

Our CET1 ratio under the Advanced Approach was 10.8% at June 30, 2017 and 10.4% at March 31, 2017. The increase was primarily driven by CET1 generation. Our CET1 ratio under the Standardized Approach was 12.0% at both June 30, 2017 and March 31, 2017. (See “Capital” beginning on page 40.)

Our estimated CET1 ratio (Non-GAAP) calculated under the Advanced Approach on a fully phased-in basis was 10.4% at June 30, 2017 and 10.0% at March 31, 2017. The increase primarily reflects CET1 generation. Our estimated CET1 ratio (Non-GAAP) calculated under the Standardized Approach on a fully phased-in basis was 11.5% at both June 30, 2017 and March 31, 2017. (See “Capital” beginning on page 40.)

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Fee and other revenue

Fee and other revenue	2Q17 vs.						YTD17 vs.		
(dollars in millions, unless otherwise noted)	2Q17	1Q17	2Q16	1Q17	2Q16	YTD17	YTD16	YTD16	
Investment services fees:									
Asset servicing (a)	\$1,085	\$1,063	\$1,069	2	%1	% \$2,148	\$2,109	2	%
Clearing services	394	376	350	5	13	770	700	10	
Issuer services	241	251	234	(4)	) 3	492	478	3	
Treasury services	140	139	139	1	1	279	270	3	
Total investment services fees	1,860	1,829	1,792	2	4	3,689	3,557	4	
Investment management and performance fees	879	842	830	4	6	1,721	1,642	5	
Foreign exchange and other trading revenue	165	164	182	1	(9)	) 329	357	(8))
Financing-related fees	53	55	57	(4)	) (7)	) 108	111	(3))
Distribution and servicing	41	41	43	—	(5)	) 82	82	—	
Investment and other income	122	77	74	N/M	N/M	199	179	N/M	
Total fee revenue	3,120	3,008	2,978	4	5	6,128	5,928	3	
Net securities gains	—	10	21	N/M	N/M	10	41	N/M	
Total fee and other revenue	\$3,120	\$3,018	\$2,999	3	%4	% \$6,138	\$5,969	3	%
Fee revenue as a percentage of total revenue	79	%78	%79	%		79	%79	%	

AUM at period end (in billions) (b)	\$1,771	\$1,727	\$1,664	3	%6	% \$1,771	\$1,664	6	%
AUC/A at period end (in trillions) (c)	\$31.1	\$30.6	\$29.5	2	%5	% \$31.1	\$29.5	5	%

(a) Asset servicing fees include securities lending revenue of \$48 million in the second quarter of 2017, \$49 million in the first quarter of 2017 and \$52 million in the second quarter of 2016.

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

(c) Includes the AUC/A of CIBC Mellon of \$1.2 trillion at June 30, 2017 and March 31, 2017 and \$1.1 trillion at June 30, 2016.

N/M - Not meaningful.

Fee and other revenue increased 4% compared with the second quarter of 2016 and 3% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect higher investment management and performance fees, investment and other income and clearing services fees. The increase compared with the second quarter of 2016 was partially offset by lower foreign exchange and other trading revenue.

Investment services fees

Investment services fees were impacted by the following compared with the second quarter of 2016 and the first quarter of 2017:

Asset servicing fees increased 1% compared with the second quarter of 2016 and 2% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect net new business, including growth of collateral management solutions, and higher equity market values. The increase compared with the second quarter of 2016 was partially offset by the unfavorable impact of a stronger U.S. dollar and

the impact of downsizing the retail UK transfer agency business.

Clearing services fees increased 13% compared with the second quarter of 2016 and 5% (unannualized) compared with the first quarter of 2017. Both increases were primarily driven by higher money market fees and growth in long-term mutual fund assets.

- Issuer services fees increased 3% compared with the second quarter of 2016 and decreased 4% (unannualized) compared with the first quarter of 2017. The increase primarily reflects higher Depository Receipts revenue.

The decrease primarily reflects seasonality in Depository Receipts revenue.

Treasury services fees increased 1% compared with both the second quarter of 2016 and first quarter of 2017. Both increases primarily reflect higher payment volumes, partially offset by higher compensating balance credits provided to clients, which reduces fee revenue and increases net interest revenue.

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

Investment management and performance fees

Investment management and performance fees increased 6% compared with the second quarter of 2016 and 4% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect higher market values, money market fees and performance fees. The increase compared with the second quarter of 2016 was partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). On a constant currency basis, investment management and performance fees increased 9% (Non-GAAP) compared with the second quarter of 2016. Performance fees were \$17 million in the second quarter of 2017, \$9 million in the second quarter of 2016 and \$12 million in the first quarter of 2017.

Total AUM for the Investment Management business increased 6% compared with June 30, 2016 and 3% compared with March 31, 2017. The increase compared with June 30, 2016 primarily reflects higher market values and net inflows, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). The increase compared with March 31, 2017 primarily reflects the favorable impact of the weaker U.S. dollar (principally versus the British pound) and net inflows. Net long-term inflows of \$3 billion in the second quarter of 2017 primarily reflect inflows of liability-driven and fixed income investments, partially offset by outflows of index investments. Net short-term inflows of \$11 billion in the second quarter of 2017 were a result of increased distribution through our liquidity portals.

See the “Investment Management business” in “Review of businesses” for additional details regarding the drivers of investment management and performance fees.

Foreign exchange and other trading revenue

Foreign exchange and other trading revenue

(in millions)	2Q17	1Q17	2Q16	YTD17	YTD16
Foreign exchange	\$ 151	\$ 154	\$ 166	\$ 305	\$ 337
Other trading revenue	14	10	16	24	20
Total foreign exchange and other trading revenue	\$ 165	\$ 164	\$ 182	\$ 329	\$ 357

Foreign exchange and other trading revenue decreased 9% compared with the second quarter of 2016 and increased 1% (unannualized) compared with the first quarter of 2017.

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 9% compared with the second quarter of 2016 and 2% (unannualized) compared with the first quarter of 2017. Both decreases primarily reflect lower volatility, partially offset by higher 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.

Our custody clients may enter into foreign exchange transactions in a number of ways, including through our standing instruction programs. While the shift of custody clients from our standing instruction programs to other trading options has recently abated, our foreign exchange revenue continues to be impacted by changes in volume and volatility. For the quarter ended June 30, 2017, our total revenue for all types of foreign exchange trading transactions was \$151 million, or 4% of our total revenue, and approximately 29% of our foreign exchange revenue was generated by transactions in our standing instruction programs.

Financing-related fees

Financing-related fees, which are primarily reported in the Investment Services business and the Other segment, include capital markets fees, loan commitment fees and credit-related fees. Financing-related fees decreased compared with both the second quarter of 2016 and first quarter of 2017, primarily reflecting lower underwriting fees.

Distribution and servicing fees

Distribution and servicing fees decreased compared with the second quarter of 2016 primarily reflecting fees paid to introducing brokers, partially offset by higher money market fees.

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Investment and other income

Investment and other income

(in millions)	2Q17	1Q17	2Q16	YTD17	YTD16
Corporate/bank-owned life insurance	\$43	\$ 30	\$31	\$ 73	\$ 62
Lease-related gains	51	1	—	52	44
Equity investment income (loss)	7	26	(4)	33	(7)
Expense reimbursements from joint venture	17	14	17	31	34
Seed capital gains (a)	10	9	11	19	22
Asset-related (losses) gains	(5)	3	1	(2)	1
Other (loss) income	(1)	(6)	18	(7)	23
Total investment and other income	\$122	\$ 77	\$ 74	\$ 199	\$ 179

Excludes the gains (losses) on seed capital investments in consolidated investment management funds which are reflected in operations of consolidated investment management funds, net of noncontrolling interests. The gains on (a) seed capital investments in consolidated investment management funds were \$7 million in the second quarter of 2017, \$15 million in the first quarter of 2017, \$6 million in the second quarter of 2016, \$22 million in the first six months of 2017 and \$7 million in the first six months of 2016.

Investment and other income increased compared with both the second quarter of 2016 and first quarter of 2017, primarily reflecting lease-related gains and higher income from corporate/bank-owned life insurance. The increase compared with the second quarter of 2016 was partially offset by the negative impact of foreign exchange translation and lower other income driven by losses on our investments in renewable energy. The pre-tax losses on the

renewable energy investments are offset by corresponding tax benefits and credits recorded as a reduction to the provision for income taxes. The increase in investment and other income compared with the first quarter of 2017 was partially offset by a net gain related to an equity investment recorded in the first quarter of 2017.

Year-to-date 2017 compared with year-to-date 2016

Fee and other revenue increased 3% in the first six months of 2017 compared with the first six months of 2016, primarily reflecting higher investment management and performance fees, clearing services fees and asset servicing fees, partially offset by lower net securities gains and foreign exchange and other trading revenue. The 5% increase in investment management and performance fees primarily reflects higher market values and performance fees, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). The 10% increase in clearing services fees primarily reflects higher money market fees and growth in long-term mutual fund assets. The 2% increase in asset servicing fees primarily reflects net new business, including growth of collateral management solutions and higher equity market values, partially offset by the unfavorable impact of a stronger U.S. dollar and the impact of downsizing the retail UK transfer agency business. The 8% decrease in foreign exchange and other trading revenue primarily reflects lower volatility.

Net interest revenue

Net interest revenue		2Q17 vs.					YTD17 vs.		
(dollars in millions)	2Q17	1Q17	2Q16	1Q17	2Q16	YTD17	YTD16	YTD16	
Net interest revenue	\$826	\$792	\$767	4%	8%	\$1,618	\$1,533	6%	
Tax equivalent adjustment	12	12	13	N/M	N/M	24	27	N/M	
Net interest revenue (FTE) – Non-GAAP (a)	\$838	\$804	\$780	4%	7%	\$1,642	\$1,560	5%	
Average interest-earning assets	\$289,496	\$283,421	\$318,433	2%	(9)%	\$286,475	\$314,556	(9)%	
Net interest margin	1.14	%1.13	%0.97	%1	bps 17	bps 1.14	%0.98	%16	bps
Net interest margin (FTE) – Non-GAAP (a)	1.16	%1.14	%0.98	%2	bps 18	bps 1.15	%1.00	%15	bps

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.

FTE - fully taxable equivalent.

N/M - Not meaningful.

bps - basis points.

Net interest revenue increased 8% compared with the second quarter of 2016 and 4% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect higher interest rates. The increase compared with the second quarter of 2016 also reflects lower premium amortization, partially offset by lower interest-earning assets and higher average long-term debt. The increase compared with the first quarter of 2017 also reflects an additional interest-earning day and higher interest-earning assets.

Net interest margin increased 17 basis points compared with the second quarter of 2016, primarily reflecting higher interest rates and lower interest-earning assets.

Average non-U.S. dollar deposits comprised approximately 25% of our average total deposits in the second quarter of 2017. Approximately 45% of the average non-U.S. dollar deposits in the second quarter of 2017 were euro-denominated.

Year-to-date 2017 compared with year-to-date 2016

Net interest revenue increased 6% in the first six months of 2017 compared with the first six months of 2016. The increase was primarily driven by higher interest rates and lower premium amortization, partially offset by lower interest-earning assets and higher average long-term debt. The increase in the net interest margin was primarily driven by the factors listed above.

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Average balances and interest rates (dollar amounts in millions, presented on an FTE basis)	Quarter ended			Quarter ended			Quarter ended			
	June 30, 2017			March 31, 2017			June 30, 2016			
	Average balance	Interest	Average rates	Average balance	Interest	Average rates	Average balance	Interest	Average rates	
Assets										
Interest-earning assets:										
Interest-bearing deposits with banks (primarily foreign banks)	\$14,832	\$27	0.73	% \$14,714	\$22	0.60	% \$14,394	\$24	0.68	%
Interest-bearing deposits held at the Federal Reserve and other central banks	69,316	71	0.41	66,043	57	0.35	97,788	72	0.30	
Federal funds sold and securities purchased under resale agreements	26,873	86	1.29	25,312	67	1.07	25,813	56	0.87	
Margin loans	15,058	87	2.32	15,753	75	1.94	18,226	64	1.40	
Non-margin loans:										
Domestic offices	30,734	207	2.70	30,963	188	2.44	29,413	165	2.25	
Foreign offices	13,001	65	1.99	13,596	57	1.71	12,645	49	1.57	
Total non-margin loans	43,735	272	2.49	44,559	245	2.22	42,058	214	2.04	
Securities:										
U.S. Government obligations	25,928	106	1.64	26,239	104	1.60	24,571	92	1.50	
U.S. Government agency obligations	59,533	290	1.95	56,857	271	1.90	56,050	236	1.68	
State and political subdivisions – tax-exempt	3,298	26	3.09	3,373	26	3.11	3,778	28	2.90	
Other securities	28,468	81	1.15	28,317	88	1.25	33,603	104	1.24	
Trading securities	2,455	18	2.85	2,254	17	3.12	2,152	13	2.45	
Total securities	119,682	521	1.74	117,040	506	1.74	120,154	473	1.57	
Total interest-earning assets (a)	\$289,496	\$1,064	1.47	% \$283,421	\$972	1.38	% \$318,433	\$903	1.14	%
Allowance for loan losses	(164)	)		(169)	)		(163))		
Cash and due from banks	4,972			5,097			4,141			
Other assets	47,303			46,731			50,563			
Assets of consolidated investment management funds	908			1,120			1,246			
Total assets	\$342,515			\$336,200			\$374,220			
Liabilities										
Interest-bearing liabilities:										
Interest-bearing deposits:										
Money market rate accounts	\$7,379	\$1	0.04	% \$7,510	\$1	0.05	% \$7,280	\$1	0.06	%
Savings	1,014	2	0.75	1,094	2	0.61	1,175	1	0.39	
Demand deposits	5,659	2	0.14	5,371	1	0.12	1,790	2	0.40	
Time deposits	34,757	15	0.18	35,429	11	0.12	46,629	6	0.06	
Foreign offices	93,527	12	0.05	90,416	(6)	(0.03)	108,248	2	0.01	
	142,336	32	0.09	139,820	9	0.03	165,122	12	0.03	

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Total interest-bearing deposits											
Federal funds purchased and securities sold under repurchase agreements	17,970	38	0.84	18,995	24	0.51	18,204	13	0.28		
Trading liabilities	1,216	2	0.61	908	2	0.89	662	1	0.66		
Other borrowed funds	1,193	4	1.24	822	2	0.98	847	2	0.97		
Commercial paper	2,215	5	0.95	2,164	5	0.88	3,781	4	0.37		
Payables to customers and broker-dealers	20,609	16	0.30	18,961	7	0.16	16,935	2	0.05		
Long-term debt	27,398	129	1.87	25,882	119	1.85	22,838	89	1.54		
Total interest-bearing liabilities	\$212,937	\$226	0.42	% \$207,552	\$168	0.33	% \$228,389	\$123	0.21	%	
Total noninterest-bearing deposits	73,886			73,555			84,033				
Other liabilities	15,545			15,600			22,345				
Liabilities and obligations of consolidated investment management funds	111			244			253				
Total liabilities	302,479			296,951			335,020				
Temporary equity											
Redeemable noncontrolling interests	172			161			181				
Permanent equity											
Total BNY Mellon shareholders' equity	39,404			38,507			38,379				
Noncontrolling interests	460			581			640				
Total permanent equity	39,864			39,088			39,019				
Total liabilities, temporary equity and permanent equity	\$342,515			\$336,200			\$374,220				
Net interest revenue (FTE) – Non-GAAP		\$838			\$804			\$780			
Net interest margin (FTE) – Non-GAAP			1.16	%		1.14	%		0.98	%	
Less: Tax equivalent adjustment (b)		12			12			13			
Net interest revenue – GAAP		\$826			\$792			\$767			
Net interest margin – GAAP			1.14	%		1.13	%		0.97	%	

Note: Interest and average rates were calculated on a taxable equivalent basis using dollar amounts in thousands and actual number of days in the year.

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

(b) Based on the applicable tax rate of 35%.

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Average balances and interest rates (dollar amounts in millions, presented on an FTE basis)	Year-to-date June 30, 2017			June 30, 2016			
	Average balance	Interest	Average rates	Average balance	Interest	Average rates	
Assets							
Interest-earning assets:							
Interest-bearing deposits with banks (primarily foreign banks)	\$14,773	\$49	0.66	% \$14,651	\$50	0.68	%
Interest-bearing deposits held at the Federal Reserve and other central banks	67,689	128	0.38	93,440	133	0.29	
Federal funds sold and securities purchased under resale agreements	26,097	153	1.18	24,718	105	0.85	
Margin loans	15,403	162	2.12	18,566	127	1.37	
Non-margin loans:							
Domestic offices	30,848	395	2.57	28,960	322	2.23	
Foreign offices	13,297	122	1.85	13,214	97	1.48	
Total non-margin loans	44,145	517	2.35	42,174	419	2.00	
Securities:							
U.S. Government obligations	26,083	210	1.62	24,526	184	1.50	
U.S. Government agency obligations	58,202	561	1.93	56,008	487	1.74	
State and political subdivisions – tax-exempt	3,335	52	3.10	3,879	57	2.89	
Other securities	28,393	169	1.20	33,858	207	1.23	
Trading securities	2,355	35	2.98	2,736	31	2.28	
Total securities	118,368	1,027	1.74	121,007	966	1.60	
Total interest-earning assets (a)	\$286,475	\$2,036	1.43	% \$314,556	\$1,800	1.15	%
Allowance for loan losses	(167)			(160)			
Cash and due from banks	5,035			4,010			
Other assets	47,019			49,704			
Assets of consolidated investment management funds	1,013			1,277			
Total assets	\$339,375			\$369,387			
Liabilities							
Interest-bearing liabilities:							
Interest-bearing deposits:							
Money market rate accounts	\$7,444	\$2	0.05	% \$7,332	\$2	0.06	%
Savings	1,054	4	0.68	1,205	2	0.33	
Demand deposits	5,515	3	0.13	1,327	3	0.43	
Time deposits	35,091	26	0.15	44,653	10	0.05	
Foreign offices	91,980	6	0.01	109,052	10	0.02	
Total interest-bearing deposits	141,084	41	0.06	163,569	27	0.03	
Federal funds purchased and securities sold under repurchase agreements	18,480	62	0.67	18,446	22	0.24	
Trading liabilities	1,063	4	0.73	606	3	1.01	
Other borrowed funds	1,009	6	1.13	803	4	0.97	
Commercial paper	2,190	10	0.91	1,902	4	0.37	
Payables to customers and broker-dealers	19,789	23	0.23	16,868	6	0.07	
Long-term debt	26,644	248	1.86	22,197	174	1.56	
Total interest-bearing liabilities	\$210,259	\$394	0.38	% \$224,391	\$240	0.21	%
Total noninterest-bearing deposits	73,721			83,489			
Other liabilities	15,573			22,323			

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Liabilities and obligations of consolidated investment management funds	177		256	
Total liabilities	299,730		330,459	
Temporary equity				
Redeemable noncontrolling interests	167		186	
Permanent equity				
Total BNY Mellon shareholders' equity	38,958		38,091	
Noncontrolling interests	520		651	
Total permanent equity	39,478		38,742	
Total liabilities, temporary equity and permanent equity	\$339,375		\$369,387	
Net interest revenue (FTE) – Non-GAAP	\$1,642		\$1,560	
Net interest margin (FTE) – Non-GAAP	1.15	%	1.00	%
Less: Tax equivalent adjustment (b)	24		27	
Net interest revenue – GAAP	\$1,618		\$1,533	
Net interest margin – GAAP	1.14	%	0.98	%

Note: Interest and average rates were calculated on a taxable equivalent basis using dollar amounts in thousands and actual number of days in the year.

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

(b) Based on the applicable tax rate of 35%.

Noninterest expense

Noninterest expense	2Q17 vs.						YTD17 vs.			
(dollars in millions)	2Q17	1Q17	2Q16	1Q17	2Q16	YTD17	YTD16	YTD16		
Staff	\$1,417	\$1,472	\$1,412	(4	)%	\$2,889	\$2,871	1	%
Professional, legal and other purchased services	319	312	290	2	10	631	568	11		
Software	173	166	160	4	8	339	314	8		
Net occupancy	139	136	152	2	(9)	275	294	(6)
Distribution and servicing	104	100	102	4	2	204	202	1		
Sub-custodian	65	64	70	2	(7)	129	129	—	
Furniture and equipment	59	57	63	4	(6)	116	128	(9)
Bank assessment charges (a)	59	57	52	4	13	116	105	10		
Business development	63	51	65	24	(3)	114	122	(7)
Other (a)	192	167	188	15	2	359	376	(5)	
Amortization of intangible assets	53	52	59	2	(10)	105	116	(9)
M&I, litigation and restructuring charges	12	8	7	N/M	N/M	20	24	N/M		
Total noninterest expense – GAAP	\$2,655	\$2,642	\$2,620	—	% 1	% \$5,297	\$5,249	1	%	

Staff expense as a percentage of total revenue

36	% 38	% 37	%	37	% 38	%
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Full-time employees at period end

52,800	52,600	52,200	—	% 1	% 52,800	52,200	1	%
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Memo:

Adjusted total noninterest expense excluding amortization of intangible assets and M&I, litigation and restructuring charges – Non-GAAP

\$2,590	\$2,582	\$2,554	—	% 1	% \$5,172	\$5,109	1	%
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(a) In the first quarter of 2017, we began disclosing bank assessment charges on a quarterly basis. The bank assessment charges were previously included in other expense. All prior periods were reclassified.

N/M - Not meaningful.

Total noninterest expense increased 1% compared with the second quarter of 2016 and less than 1% (unannualized) compared with the first quarter of 2017. The increase compared with the second quarter of 2016 primarily reflects higher professional, legal and other purchased services, software and litigation expenses, partially offset by the favorable impact of a stronger U.S. dollar and lower net occupancy expense. The increase compared with the first quarter of 2017 primarily reflects higher other, business development and software expenses, partially offset by lower staff expense. Excluding amortization of intangible assets and M&I, litigation and restructuring charges, total noninterest expense, as adjusted (Non-GAAP), increased 1% compared with the second quarter of 2016 and less than 1% (unannualized) compared with the first quarter of 2017.

We continue to invest in our risk management, regulatory compliance and other control functions to improve our safety and soundness and in light of increasing global regulatory requirements. We expect a modest decrease in the run rate of the expenses relating to these functions in the second half of 2017

as a result of the submission of our 2017 resolution plan.

Staff expense

Given our mix of fee-based businesses, which are staffed with high-quality professionals, staff expense comprised 53% of total noninterest expense in the second quarter of 2017, 54% in the second quarter of 2016 and 56% in the first quarter of 2017.

Staff expense increased slightly compared with the second quarter of 2016 and decreased 4% (unannualized) compared with the first quarter of 2017. The increase compared with the second quarter of 2016 was partially offset by the favorable impact of a stronger U.S. dollar. The decrease compared with the first quarter of 2017 was primarily driven by the impact of vesting of long-term stock awards for retirement eligible employees recorded in the first quarter of 2017.

Non-staff expense

Non-staff expense includes certain expenses that vary with the levels of business activity and levels of

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expensed business investments, fixed infrastructure costs and expenses associated with corporate activities related to technology, compliance, legal, productivity initiatives and business development.

Non-staff expense totaled \$1.2 billion in the second quarter of 2017, an increase of 2% compared with the second quarter of 2016 and 6% (unannualized) compared with the first quarter of 2017. The increase compared with the second quarter of 2016 primarily reflects higher professional, legal and other purchased services expense related to regulatory and compliance costs, including the 2017 resolution plan, and higher software and litigation expenses. The increase was partially offset by lower net occupancy expense as we continue to benefit from the savings generated by the business improvement process. The increase compared with the first quarter of 2017 primarily reflects higher other, business development and software expenses.

Year-to-date 2017 compared with year-to-date 2016

Noninterest expense totaled \$5.3 billion in the first six months of 2017, a 1% increase compared with the first six months of 2016. The increase primarily reflects higher consulting and software expenses, partially offset by the favorable impact of a stronger U.S. dollar and lower net occupancy and other expenses. The increase in consulting expenses primarily reflects higher regulatory and compliance costs. Net occupancy expense decreased as we continue to benefit from the savings generated by the business improvement process.

Income taxes

BNY Mellon recorded an income tax provision of \$332 million (25.4% effective tax rate) in the second quarter of 2017. The income tax provision was \$290 million (24.9% effective tax rate) in the second quarter of 2016 and \$269 million (22.3% effective tax rate) in the first quarter of 2017. The lower effective tax in the first quarter of 2017 reflects an approximate 3% benefit related to applying the new accounting guidance required in ASU 2016-09, Compensation – Stock Compensation, to the annual vesting of stock awards and our stock price appreciating above the awards' original grant price.

For additional information, see Note 10 of the Notes to Consolidated Financial Statements.

We expect the effective tax rate to be approximately 25-26% in 2017 based on current income tax rates.

Any legislation affecting income tax rates could have an impact on our future effective tax rate, the significance of which would depend on the timing, nature and scope of any such legislation, as well as the level and composition of our earnings.

Review of businesses

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.

For information on the accounting principles of our businesses, the primary types of revenue by business and how our businesses are presented and analyzed, see Note 18 of the Notes to Consolidated Financial Statements.

Business results are subject to reclassification when organizational changes are made or when improvements are made in the measurement principles.

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. In the third quarter of 2017, we expect seasonally higher Depositary Receipts revenue, but at a reduced amount compared with historical levels due to the market environment. 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

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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.

The following table presents key market metrics at period end and on an average basis.

Key market metrics							2Q17 vs.		YTD17 vs.		
	2Q17	1Q17	4Q16	3Q16	2Q16	1Q17	2Q16	YTD17	YTD16	YTD16	
Standard & Poor's ("S&P") 500 Index (a)	2423	2363	2239	2168	2099	3 %	15 %	2423	2099	15 %	
S&P 500 Index – daily average	2398	2326	2185	2162	2075	3	16	2362	2015	17	
FTSE 100 Index (a)	7313	7323	7143	6899	6504	—	12	7313	6504	12	
FTSE 100 Index – daily average	7391	7274	6923	6765	6204	2	19	7331	6097	20	
MSCI EAFE (a)	1883	1793	1684	1702	1608	5	17	1883	1608	17	
MSCI EAFE – daily average	1856	1749	1660	1677	1648	6	13	1803	1620	11	
Barclays Capital Global Aggregate Bond SM Index (a)(b)	471	459	451	486	482	3	(2)	471	482	(2)	
NYSE and NASDAQ share volume (in billions)	199	186	189	186	203	7	(2)	385	422	(9)	
JPMorgan G7 Volatility Index – daily average (c)	7.98	10.10	10.24	10.19	11.12	(21)	(28)	9.04	10.86	(17)	
Average interest on excess reserves paid by the Federal Reserve	1.04 %	0.79 %	0.55 %	0.50 %	0.50 %	25 bps	54 bps	0.92 %	0.50 %	42 bps	
Foreign exchange rates vs. U.S. dollar:											
British pound (a)	\$1.30	\$1.25	\$1.23	\$1.30	\$1.34	4 %	(3) %	\$1.30	\$1.34	(3) %	
British pound – average rate	1.28	1.24	1.24	1.31	1.43	3	(10)	1.26	1.43	(12)	
Euro (a)	1.14	1.07	1.05	1.12	1.11	7	3	1.14	1.11	3	
Euro – average rate	1.10	1.07	1.08	1.12	1.13	3	(3)	1.08	1.12	(4)	

(a) Period end.

(b) Unhedged in U.S. dollar terms.

(c) The JPMorgan G7 Volatility Index is based on the implied volatility in 3-month currency options.

bps - basis points.

Fee revenue in Investment Management, and to a lesser extent in Investment Services, is impacted by the value of market indices. At June 30, 2017, 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 \$0.02 to \$0.04.

See Note 18 of the Notes to Consolidated Financial Statements for the consolidating schedules which show the contribution of our businesses to our overall profitability.

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Investment Management business

(dollars in millions)	2Q17	1Q17	4Q16	3Q16	2Q16	2Q17 vs.		YTD17	YTD16	YTD17 vs.	
						1Q17	2Q16			YTD16	YTD16
Revenue:											
Investment management fees:											
Mutual funds	\$314	\$299	\$297	\$309	\$304	5	% 3	% \$613	\$604	1	%
Institutional clients	362	348	340	362	344	4	5	710	678	5	
Wealth management	169	167	164	166	160	1	6	336	312	8	
Investment management fees (a)	845	814	801	837	808	4	5	1,659	1,594	4	
Performance fees	17	12	32	8	9	N/M	89	29	20	45	
Investment management and performance fees	862	826	833	845	817	4	6	1,688	1,614	5	
Distribution and servicing	53	52	48	49	49	2	8	105	95	11	
Other (a)	(16)	(1)	(1)	(18)	(10)	N/M	N/M	(17)	(41)	N/M	
Total fee and other revenue (a)	899	877	880	876	856	3	5	1,776	1,668	6	
Net interest revenue	87	86	80	82	82	1	6	173	165	5	
Total revenue	986	963	960	958	938	2	5	1,949	1,833	6	
Provision for credit losses	—	3	6	—	1	N/M	N/M	3	—	N/M	
Noninterest expense (ex. amortization of intangible assets)	683	668	672	680	684	2	—	1,351	1,344	1	
Amortization of intangible assets	15	15	22	22	19	—	(21)	30	38	(21)	
Total noninterest expense	698	683	694	702	703	2	(1)	1,381	1,382	—	
Income before taxes	\$288	\$277	\$260	\$256	\$234	4	% 23	% \$565	\$451	25	%

Income before taxes (ex. amortization of intangible assets) – Non-GAAP	\$303	\$292	\$282	\$278	\$253	4	% 20	%	\$595	\$489	22	%
Pre-tax operating margin	29	% 29	% 27	% 27	% 25	%			29	% 25	%	
Adjusted pre-tax operating margin – Non-GAAP (b)	34	% 34	% 33	% 33	% 30	%			34	% 30	%	
Average balances:												
Average loans	\$16,560	\$16,153	\$15,673	\$15,308	\$14,795	3	% 12	%	\$16,358	\$14,535	13	%
Average deposits	\$14,866	\$15,781	\$15,511	\$15,600	\$15,518	(6	)%(4	)%	\$15,380	\$15,745	(2)%

Total fee and other revenue includes the impact of the consolidated investment management funds, net of noncontrolling interests. See page 55 for a breakdown of the revenue line items in the Investment Management business impacted by the consolidated investment management funds. Additionally, other revenue includes asset servicing, treasury services, foreign exchange and other trading revenue and investment and other income.

Excludes amortization of intangible assets, provision for credit losses and distribution and servicing expense. See (b) “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 52 for the reconciliation of this Non-GAAP measure.

N/M - Not meaningful.

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AUM trends (a) (dollars in billions)	2Q17	1Q17	4Q16	3Q16	2Q16	2Q17 vs. 1Q17 2Q16		
AUM at period end, by product type:								
Equity	\$163	\$158	\$153	\$156	\$152	3	%7	%
Fixed income	198	191	186	194	192	4		3
Index	324	330	312	302	296	(2)	)	9
Liability-driven investments (b)	607	584	554	607	573	4		6
Multi-asset and alternative investments	192	188	181	189	183	2		5
Cash	287	276	262	267	268	4		7
Total AUM	\$1,771	\$1,727	\$1,648	\$1,715	\$1,664	3	%6	%

AUM at period end, by client type:								
Institutional	\$1,265	\$1,243	\$1,182	\$1,234	\$1,182	2	%7	%
Mutual funds	418	397	381	396	398	5		5
Private client	88	87	85	85	84	1		5
Total AUM	\$1,771	\$1,727	\$1,648	\$1,715	\$1,664	3	%6	%

Changes in AUM:

Beginning balance of AUM	\$1,727	\$1,648	\$1,715	\$1,664	\$1,639			
Net inflows (outflows):								
Long-term strategies:								
Equity	(2)	)4	)5	)6	)2)		
Fixed income	2	2	(1)	)1	)3)		
Liability-driven investments (b)	15	14	(7)	)4	15			
Multi-asset and alternative investments	1	2	3	7	2			
Total long-term active strategies inflows (outflows)	16	14	(10)	)4	12			
Index	(13)	)—	(1)	)3	)17)		
Total long-term strategies inflows (outflows)	3	14	(11)	)1	(5))		
Short term strategies:								
Cash	11	13	(3)	)1	)4			
Total net inflows (outflows)	14	27	(14)	)—	(1))		
Net market impact/other	1	41	(11)	)80	71			
Net currency impact	29	11	(42)	)29	)47)		
Acquisition	—	—	—	—	2			
Ending balance of AUM	\$1,771	\$1,727	\$1,648	\$1,715	\$1,664	3	%6	%

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

(b) Includes currency overlay AUM.

Business description

Our Investment Management business consists of our affiliated investment management boutiques, Wealth Management business and global distribution companies. See pages 19 and 20 of our 2016 Annual Report for additional information on our Investment Management business.

Review of financial results

AUM increased 6% compared with June 30, 2016 primarily reflecting higher market values and net inflows, partially offset by the unfavorable impact of the stronger U.S. dollar (principally versus the British pound). The increase compared with March 31, 2017 primarily reflects the favorable impact of the weaker U.S. dollar (principally versus

the British pound) and net inflows.

Net long-term inflows of \$3 billion in the second quarter of 2017 primarily reflect inflows of liability-driven and fixed income investments, partially offset by outflows of index investments. Net short-term inflows of \$11 billion in the second quarter of 2017 were a result of increased distribution through our liquidity portals. Market and regulatory trends have driven investable assets toward investments in lower fee asset management products, which negatively impacted our investment management fees.

Total revenue increased 5% compared with the second quarter of 2016 primarily reflecting higher market values, performance fees and net interest revenue. The increase of 2% (unannualized) compared with the first quarter of 2017 primarily reflects higher market values and performance fees, partially offset by lower seed capital gains.

Revenue generated in the Investment Management business included 40% from non-U.S. sources in the

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second quarter of 2017, second quarter of 2016 and first quarter of 2017.

Investment management fees in the Investment Management business increased 5% compared with the second quarter of 2016 and 4% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect higher market values and money market fees. The increase compared with the second quarter of 2016 was partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). On a constant currency basis, investment management fees increased 8% (Non-GAAP) compared with the second quarter of 2016.

Performance fees increased \$8 million compared with the second quarter of 2016 primarily reflecting liability-driven investment strategies.

Distribution and servicing fees increased compared with the second quarter of 2016 primarily reflecting higher money market fees.

Other revenue decreased compared with the second quarter of 2016 primarily reflecting higher payments to the Investment Services business related to higher money market fees. The decrease compared with the first quarter of 2017 was primarily driven by lower seed capital gains.

Net interest revenue increased 6% compared with the second quarter of 2016 and 1% (unannualized) compared with the first quarter of 2017, primarily reflecting higher interest rates on lower average deposits levels. Average loans increased 12% compared with the second quarter of 2016 and 3% compared with the first quarter of 2017 driven by

extending banking solutions to high net worth clients. Average deposits decreased 4% compared with the second quarter of 2016 and 6% compared with the first quarter of 2017.

Noninterest expense, excluding amortization of intangible assets, decreased slightly compared with the second quarter of 2016 and increased 2% (unannualized) compared with the first quarter of 2017. The decrease compared with the second quarter of 2016 primarily reflects the favorable impact of a stronger U.S. dollar (principally versus the British pound) and lower professional, legal and other purchased services, partially offset by higher incentive expense. The increase compared with the first quarter of 2017 primarily reflects higher business development and distribution and servicing expenses.

Year-to-date 2017 compared with year-to-date 2016

Income before taxes increased 25% compared with the first six months of 2016, primarily reflecting revenue growth. Fee and other revenue increased 6% compared with the first six months of 2016, primarily reflecting higher investment management and performance fees. The increase in investment management and performance fees primarily reflects higher market values and performance fees, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). Net interest revenue increased 5% compared with the first six months of 2016, primarily due to higher interest rates and average loans, partially offset by lower average deposits. Noninterest expense, excluding amortization of intangible assets, increased 1% compared with the first six months of 2016, primarily reflecting higher incentive expense, partially offset by the favorable impact of a stronger U.S. dollar (principally versus the British pound).

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Investment Services business

(dollar amounts in millions, unless otherwise noted)	2Q17 vs.									
Revenue:	2Q17	1Q17	4Q16	3Q16	2Q16	1Q17	2Q16	YTD17	YTD16	YTD16
Investment services fees:										
Asset servicing	\$1,061	\$1,038	\$1,043	\$1,039	\$1,043	2	% 2	% \$2,099	\$2,059	2
Clearing services	393	375	354	347	350	5	12	768	698	10
Issuer services	241	250	211	336	233	(4	) 3	491	477	3
Treasury services	139	139	139	136	137	—	1	278	266	5
Total investment services fees	1,834	1,802	1,747	1,858	1,763	2	4	3,636	3,500	4
Foreign exchange and other trading revenue	145	153	157	177	161	(5	) (10	) 298	329	(9
Other (a)	136	129	128	148	130	5	5	265	255	4
Total fee and other revenue	2,115	2,084	2,032	2,183	2,054	1	3	4,199	4,084	3
Net interest revenue	761	707	713	715	690	8	10	1,468	1,369	7
Total revenue	2,876	2,791	2,745	2,898	2,744	3	5	5,667	5,453	4
Provision for credit losses	(3	) —	—	1	(7	) N/M	N/M	(3	) 7	N/M
Noninterest expense (ex. amortization of intangible assets)	1,889	1,812	1,786	1,812	1,819	4	4	3,701	3,589	3
Amortization of intangible assets	38	37	38	39	40	3	(5	) 75	78	(4
Total noninterest expense	1,927	1,849	1,824	1,851	1,859	4	4	3,776	3,667	3
Income before taxes	\$952	\$942	\$921	\$1,046	\$892	1	% 7	% \$1,894	\$1,779	6
Income before taxes (ex. amortization of intangible	\$990	\$979	\$959	\$1,085	\$932	1	% 6	% \$1,969	\$1,857	6

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assets) –
Non-GAAP

Pre-tax operating margin	33	% 34	% 34	% 36	% 33	%			33	% 33	%
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Adjusted pre-tax operating margin (ex. provision for credit losses and	34	% 35	% 35	% 37	% 34	%			35	% 34	%
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amortization of intangible assets) –
Non-GAAP

Investment services fees as a percentage of noninterest expense (ex. amortization of intangible assets)	97	% 99	% 98	% 103	% 97	%			98	% 98	%
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Securities lending revenue	\$42	\$40	\$44	\$42	\$42	5	% —	%	\$82	\$84	(2)
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Metrics:											
Average loans	\$40,931	\$42,818	\$45,832	\$44,329	\$43,786	(4))(7))(7)	\$41,870	\$44,395	(6)
Average deposits	\$200,417	\$197,690	\$213,531	\$220,316	\$221,998	1	%(10))(10)	\$199,206	\$218,852	(9)

AUC/A at period end (in trillions) (b)	\$31.1	\$30.6	\$29.9	\$30.5	\$29.5	2	% 5	%	\$31.1	\$29.5	5
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Market value of securities on loan at period end (in billions) (c)	\$336	\$314	\$296	\$288	\$278	7	% 21	%	\$336	\$278	21
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Asset servicing: Estimated new business wins (AUC/A) (in billions)	\$152	\$109	\$141	\$150	\$167						
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Clearing
services:Average active
clearing
accounts (U.S. platform) (in
thousands)Average
long-term
mutual fund
assets (U.S.
platform)Average
investor
margin loans
(U.S. platform)Depository
Receipts:
Number of
sponsored
programsBroker-Dealer:
Average
tri-party repo
balances (in
billions)

6,159	6,058	5,960	5,942	5,946	2	%	4	%
\$480,532	\$460,977	\$438,460	\$443,112	\$431,150	4	%	11	%
\$9,812	\$10,740	\$10,562	\$10,834	\$10,633	(9	)%	(8)%
1,025	1,050	1,062	1,094	1,112	(2	)%	(8)%
\$2,498	\$2,373	\$2,307	\$2,212	\$2,108	5	%	19	%

(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 \$1.2 trillion at June 30, 2017, March 31, 2017, Dec. 31, 2016 and Sept. 30, 2016 and \$1.1 trillion at June 30, 2016.

(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 \$66 billion at June 30, 2017, \$65 billion at March 31, 2017, \$63 billion at Dec. 31, 2016, \$64 billion at Sept. 30, 2016 and \$56 billion at June 30, 2016.

N/M - Not meaningful.

Business description

BNY Mellon Investment Services provides business and technology solutions across the investments process to financial institutions, corporations, foundations and endowments, public funds and government agencies.

We are one of the leading global investment services providers with \$31.1 trillion of AUC/A at June 30, 2017.

We are a leader in both global and U.S. government securities clearance. We provide services to settle securities transactions in approximately 100 markets.

We are a leader in servicing tri-party repo collateral with approximately \$2.5 trillion serviced globally and approximately \$1.6 trillion, or approximately 86%, of the \$1.9 trillion tri-party repo market in the U.S.

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 \$3.2 trillion in 33 separate markets.

We serve as trustee and/or paying agent on more than 50,000 debt-related issuances globally.

As one of the largest providers of depositary receipts services in the world, we served as depositary for 1,025 sponsored American and global depositary receipt programs at June 30, 2017, acting in partnership with leading companies from 60 countries.

With NEXEN[®], our next generation digital technology ecosystem, we are leading the digital transformation of BNY Mellon and the services we provide to our clients. NEXEN provides us with many competitive advantages. It is creating internal efficiencies while reducing costs and increasing speed of delivery, enhancing our clients' experience and driving revenue opportunities as we continue to onboard clients to our new digital platform. We are collaborating with clients and leading financial technology startups, or fintechs, to develop and integrate new solutions and services, and attracting top information technology talent through our Innovation Centers worldwide.

We offer asset servicing, clearing services, issuer services and treasury services to our clients. BNY Mellon's comprehensive suite of asset servicing solutions includes: custody, foreign exchange, fund services, securities finance, investment manager outsourcing, performance and risk analytics, alternative investment services, broker-dealer services, and collateral and liquidity services.

As one of the largest fund accounting providers and a trusted partner, we offer services to ensure the safekeeping of assets in capital markets globally. These services include financial reporting, tax reporting services, calculating and reporting net asset values ("NAV"), computing yields, maintaining brokerage account records, and providing administrative support to clients so they may meet their Securities and Exchange Commission ("SEC") and other compliance requirements.

Our alternative investment services and structured products business provides a full range of solutions for alternative investment managers, including prime custody, fund accounting, client and regulatory reporting services. We also support exchange-traded funds and unit investment trusts, providing fund administration, custody, basket creation and dissemination, authorized participant interaction and order processing, among other services.

Securities finance delivers solutions on both an agency and principal basis. The principal finance program supports a diverse group of client segments, including hedge and liquid alternative funds and other institutional clients.

In liquidity services, our market leading portal enables cash investments for institutional clients via money market funds, deposit products, and direct investments in money market securities, and includes fund research and analytics.

Our broker-dealer services business clears and settles equity and fixed-income transactions globally and serves as custodian for tri-party repo collateral worldwide.

In the second quarter of 2017, BNY Mellon established BNY Mellon Government Securities Services Corp. (“GSS Corp.”), a wholly-owned operating subsidiary that houses the operations and technology supporting U.S. government securities clearing and settlement and U.S. tri-party repo

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clearing and settlement services (“GSS Services”). Given our leading role in the market, we are committed to continue to enhance the capabilities, governance, resilience and resolvability of our GSS Services activities.

Clearing services, primarily Pershing LLC, an indirect subsidiary of BNY Mellon (“Pershing”) and its affiliates, provides business and technology solutions to financial organizations globally, delivering dependable operational support, robust trading services, flexible technology, an expansive array of investment and retirement solutions, practice management support and service excellence.

Our collateral services include collateral management, administration and segregation. We offer innovative solutions, like new collateral types and transaction structures, automation and efficiency, access to global markets, and industry expertise, to help financial institutions and institutional investors mine opportunities from liquidity, financing, risk and balance sheet challenges.

We are a leading provider to the debt capital markets, providing customized and market-driven solutions to investors, bondholders and lenders. Our corporate trust business delivers a full range of issuer and related investor services, including trustee, paying agency, fiduciary, escrow and other financial services.

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

We also provide credit facilities and solutions to support our clients globally.

Role of BNY Mellon, as a trustee, for mortgage-backed securitizations

BNY Mellon acts as trustee and document custodian for certain mortgage-backed security (“MBS”) securitization trusts. The role of trustee for MBS securitizations is limited; our primary role as trustee is to calculate and distribute monthly bond payments to bondholders. As a document custodian, we hold the mortgage, note, and related documents provided to us by the loan originator or seller and provide periodic reporting to these parties. BNY Mellon, either as document custodian or trustee, does not receive mortgage underwriting files (the files that

contain information related to the creditworthiness of the borrower). As trustee or custodian, we have no responsibility or liability for the quality of the portfolio; we are liable only for performance of our limited duties as described above and in the trust documents. BNY Mellon is indemnified by the servicers or directly from trust assets under the governing agreements. BNY Mellon may appear as the named plaintiff in legal actions brought by servicers in foreclosure and other related proceedings because the trustee is the nominee owner of the mortgage loans within the trusts.

BNY Mellon also has been named as a defendant in legal actions brought by MBS investors alleging that the trustee has expansive duties under the governing agreements, including to investigate and pursue claims against other parties to the MBS transaction. For additional information on our legal proceedings related to this matter, see Note 17 of the Notes to Consolidated Financial Statements.

Review of financial results

AUC/A increased 5% compared with June 30, 2016 to a record \$31.1 trillion, primarily reflecting higher market values. AUC/A consisted of 36% equity securities and 64% fixed income securities at June 30, 2017 compared with 34% equity securities and 66% fixed income securities at June 30, 2016.

Investment services fees increased 4% compared with the second quarter of 2016 and 2% (unannualized) compared with the first quarter of 2017, reflecting the following factors:

Asset servicing fees (custody, fund services, broker-dealer services, securities finance, collateral and liquidity services) increased 2% compared with the second quarter of 2016 and 2% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect net new business, including growth of collateral management solutions, and higher equity market values. The increase compared with the second quarter of 2016 was partially offset by the unfavorable impact of a stronger U.S. dollar and the impact of downsizing the retail UK transfer agency business.

Clearing services fees increased 12% compared with the second quarter of 2016 and 5% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect higher

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money market fees and growth in long-term mutual fund assets.

Issuer services fees (Depository Receipts and Corporate Trust) increased 3% compared with the second quarter of 2016 and decreased 4% (unannualized) compared with the first quarter of 2017. The increase primarily reflects higher Depository Receipts revenue. The decrease primarily reflects seasonality in Depository Receipts revenue.

Treasury services fees (global payments, trade finance and cash management) increased 1% compared with the second quarter of 2016 and was unchanged compared with the first quarter of 2017. The increase primarily reflects higher payment volumes, partially offset by higher compensating balance credits provided to clients, which reduces fee revenue and increases 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.

Foreign exchange and other trading revenue decreased 10% compared with the second quarter of 2016 and 5% (unannualized) compared with the first quarter of 2017. Both decreases primarily reflect lower volatility, partially offset by higher volumes.

Other revenue increased 5% compared with the second quarter of 2016 and 5% (unannualized) compared with the first quarter of 2017. Both increases primarily reflect higher payments from Investment Management related to higher money market fees, partially offset by certain fees paid to introducing brokers.

Net interest revenue increased 10% compared with the second quarter of 2016 and 8% (unannualized) compared with the first quarter of 2017. The increase compared with the second quarter of 2016 primarily reflects the impact of the higher interest rates,

partially offset by lower deposits. The increase compared with the first quarter of 2017 primarily reflects higher rates.

Noninterest expense, excluding amortization of intangible assets, increased 4% compared with the second quarter of 2016 and 4% (unannualized) compared with the first quarter of 2017. The increase compared with the second quarter of 2016 primarily reflects higher expenses from regulatory and compliance costs and additional technology investments, partially offset by the favorable impact of a stronger U.S. dollar. The increase compared with the first quarter of 2017 primarily reflects additional technology investments, the unfavorable impact of a weaker U.S. dollar, higher business development expense and increased volume-related clearing and sub-custodian expenses.

Year-to-date 2017 compared with year-to-date 2016

Income before taxes increased 6% compared with the first six months of 2016 driven by revenue growth, partially offset by an increase in noninterest expense, excluding amortization of intangible assets. Fee and other revenue increased 3% compared with the first six months of 2016, primarily reflecting higher clearing services and asset servicing fees, partially offset by lower foreign exchange and other trading revenue. The increase in clearing services fees primarily reflects higher money market fees and growth in long-term mutual fund assets. The increase in asset servicing fees primarily reflects net new business, including growth of collateral management solutions and higher equity market values, partially offset by the unfavorable impact of a stronger U.S. dollar and the impact of downsizing the retail UK transfer agency business. The decrease in foreign exchange and other trading revenue primarily reflects lower volatility. Net interest revenue increased 7% compared with the first six months of 2016, primarily due to higher interest rates, partially offset by lower deposits. Noninterest expense, excluding amortization of intangible assets, increased 3% compared with the first six months of 2016, primarily reflecting higher expenses from regulatory and compliance costs and additional technology investments, partially offset by lower litigation expense and the favorable impact of a stronger U.S. dollar.

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Other segment

(in millions)	2Q17	1Q17	4Q16	3Q16	2Q16	YTD17	YTD16
Revenue:							
Fee and other revenue	\$113	\$72	\$42	\$100	\$95	\$185	\$224
Net interest (expense) revenue	(22)	(1)	38	(23)	(5)	(23)	(1)
Total revenue	91	71	80	77	90	162	223
Provision for credit losses	(4)	(8)	1	(20)	(3)	(12)	(6)
Noninterest expense (ex. M&I and restructuring charges)	28	106	108	88	53	134	194
M&I and restructuring charges	—	1	2	—	3	1	2
Total noninterest expense	28	107	110	88	56	135	196
Income (loss) before taxes	\$67	\$(28)	\$(31)	\$9	\$37	\$39	\$33
Income (loss) before taxes (ex. M&I and restructuring charges) – Non-GAAP	\$67	\$(27)	\$(29)	\$9	\$40	\$40	\$35
Average loans and leases	\$1,302	\$1,341	\$2,142	\$1,941	\$1,703	\$1,320	\$1,810

See page 26 of our 2016 Annual Report for additional information on the Other segment.

Review of financial results

Total fee and other revenue increased \$18 million compared with the second quarter of 2016 and \$41 million compared with the first quarter of 2017. Both increases primarily reflect lease-related gains and higher income from corporate/bank-owned life insurance. The increase compared with the second quarter of 2016 was partially offset by the negative impact of foreign exchange translation and lower other income driven by our investments in renewable energy. The increase compared with the first quarter of 2017 was partially offset by a net gain related to an equity investment recorded in the first quarter of 2017.

Net interest revenue decreased \$17 million compared with the second quarter of 2016 and \$21 million compared with the first quarter of 2017. Both decreases primarily reflect the impact of higher crediting rates to the businesses.

Noninterest expense, excluding M&I and restructuring charges, decreased \$25 million compared with the second quarter of 2016 and \$78 million compared with the first quarter of 2017. Both decreases are primarily driven by lower staff expense.

Year-to-date 2017 compared with year-to-date 2016

Income before taxes increased \$6 million compared with the first six months of 2016. Fee and other revenue decreased \$39 million compared with the

first six months of 2016, primarily reflecting lower net securities gains. Net interest revenue decreased \$22 million compared with the first six months of 2016, reflecting the impact of higher crediting rates to the businesses.

Noninterest expense, excluding M&I and restructuring charges, decreased \$60 million compared with the first six months of 2016, primarily reflecting lower staff expense.

Critical accounting estimates

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Our significant accounting policies are described in Note 1 of the Notes to Consolidated Financial Statements in our 2016 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	2016 Annual Report, pages 29 - 31.
Fair value of financial instruments and derivatives	2016 Annual Report, pages 31 - 32.
OTTI	2016 Annual Report, page 33.
Pension accounting	2016 Annual Report, pages 34 - 36.

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Goodwill and other intangible assets

We initially record all assets and liabilities acquired in purchase acquisitions, including goodwill, indefinite-lived intangibles and other intangibles, in accordance with ASC 805, Business Combinations. Goodwill, indefinite-lived intangibles and other intangibles are subsequently accounted for in accordance with ASC 350, Intangibles - Goodwill and Other. The initial measurement of goodwill and intangibles requires judgment concerning estimates of the fair value of the acquired assets and liabilities. Goodwill (\$17.5 billion at June 30, 2017) and indefinite-lived intangible assets (\$2.6 billion at June 30, 2017) are not amortized but subject to tests for impairment annually or more often if events or circumstances indicate it is more likely than not they may be impaired. Other intangible assets are amortized over their estimated useful lives and are subject to impairment if events or circumstances indicate a possible inability to realize the carrying value.

BNY Mellon's three business segments include eight reporting units for which annual goodwill impairment testing is performed in accordance with ASC 350, Intangibles - Goodwill and Other. The Investment Management segment is comprised of two reporting units; the Investment Services segment is comprised of five reporting units and one reporting unit is included in the Other segment.

The goodwill impairment test compares the estimated fair value of the reporting unit with its carrying amount, including goodwill. If the estimated fair value of the reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired. However, if the carrying amount of the reporting unit were to exceed its estimated fair value, an impairment loss would be recorded. A substantial goodwill impairment charge would not have a significant impact on our financial condition or our regulatory capital ratios, but could have an adverse impact on our results of operations. In addition, due to regulatory restrictions, the Company's subsidiary banks could be restricted from distributing available cash to the Parent, resulting in the Parent needing to issue additional long-term debt.

In the second quarter of 2017, we performed our annual goodwill test on all eight reporting units using an income approach, and in certain cases a combination of an income and market approach (which produced reasonably consistent results), to estimate the fair values of each reporting unit. Estimated cash flows used in the income approach were based on management's projections as of April 1, 2017. The discount rate applied to these cash flows ranged from 9.5% to 10.5% and incorporated a 6.0% market equity risk premium. Estimated cash flows extend several years into the future, and, by their nature, are difficult to estimate over such an extended time frame.

As a result of the annual goodwill impairment test of the eight reporting units, no goodwill impairment was recognized. The fair value of the Asset Management reporting unit, which is one of the two reporting units in the Investment Management segment, exceeded its carrying value by 16%. The Asset Management reporting unit had \$7.3 billion of allocated goodwill. For the Asset Management reporting unit, in the future, changes in the assumptions, such as changes in the level of AUM and operating margin, could produce a non-cash goodwill impairment.

Key judgments in accounting for intangibles include useful life and classification between goodwill and indefinite-lived intangibles or other intangibles requiring amortization.

Indefinite-lived intangible assets are evaluated for impairment at least annually by comparing their fair values, estimated using discounted cash flow analyses, to their carrying values. Other amortizing intangible assets (\$0.9 billion at June 30, 2017) are evaluated for impairment if events and circumstances indicate a possible impairment. Such evaluation of other intangible assets is initially based on undiscounted cash flow projections.

See Note 1 of the Notes to Consolidated Financial Statements in our 2016 Annual Report and Note 6 of the Notes to Consolidated Financial Statements for additional information regarding goodwill, intangible assets and the annual and interim impairment testing.

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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 ensure that the overall liquidity risk, including intra-day 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 June 30, 2017, total assets were \$355 billion compared with \$333 billion at Dec. 31, 2016. The increase in total assets was primarily driven by higher interest-bearing deposits with the Federal Reserve and other central banks, partially offset by lower loans. Deposits totaled \$236 billion at June 30, 2017 and \$221 billion at Dec. 31, 2016, and were driven by an increase in non-interest bearing deposits. At June 30, 2017, total interest-bearing deposits were 49% of total interest-earning assets, compared with 51% at Dec. 31, 2016.

At June 30, 2017, we had \$41 billion of liquid funds (which include interest-bearing deposits with banks and federal funds sold and securities purchased under resale agreements) and \$79 billion of cash (including \$74 billion of overnight deposits with the Federal Reserve and other central banks) for a total of \$120 billion of available funds. This compares with available funds of \$104 billion at Dec. 31, 2016. Total available funds as a percentage of total assets were 34% at June 30, 2017 compared with 31% at Dec. 31, 2016. For additional information on our liquid funds and available funds, see “Liquidity and dividends.”

Investment securities were \$119.3 billion, or 34% of total assets, at June 30, 2017, compared with \$114.7 billion, or 34% of total assets, at Dec. 31, 2016. The increase in investment securities primarily reflects

additional investments in mortgage-backed securities, partially offset by fewer investments in other asset-backed securities. For additional information on our investment securities portfolio, see “Investment securities” and Note 4 of the Notes to Consolidated Financial Statements.

Loans were \$61.7 billion, or 17% of total assets, at June 30, 2017, compared with \$64.5 billion, or 19% of total assets, at Dec. 31, 2016. The decrease in loans was primarily driven by lower margin loans, partially offset by higher overdrafts. For additional information on our loan portfolio, see “Loans” and Note 5 of the Notes to Consolidated Financial Statements.

Long-term debt totaled \$27.7 billion at June 30, 2017 and \$24.5 billion at Dec. 31, 2016. The increase primarily reflects issuances of long-term debt, partially offset by maturities of long-term debt and the redemption of trust preferred securities. For additional information on long-term debt, see “Liquidity and dividends.”

The Bank of New York Mellon Corporation total shareholders’ equity increased to \$40.0 billion from \$38.8 billion at Dec. 31, 2016. For additional information on our capital, see “Capital.”

Country risk exposure

We have exposure to certain countries and territories with higher risk profiles. Exposure described below reflects the country of operations and risk of the immediate counterparty. We continue to monitor our exposure to these and other countries as part of our risk management process. See “Risk management” in our 2016 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, Spain, Portugal and Greece

Over the past several years, there have been concerns about European sovereign debt and its impact on the European banking system, as a number of European countries, including Italy, Spain, Portugal and Greece, experienced credit deterioration. We had net exposure of \$1.2 billion to Italy and \$1.9 billion to

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Spain at June 30, 2017. We had net exposure of \$1.2 billion to Italy and \$2.0 billion to Spain at Dec. 31, 2016. At both June 30, 2017 and Dec. 31, 2016, exposure to Italy and Spain primarily consisted of investment grade sovereign debt. Investment securities exposure totaled \$1.0 billion in Italy and \$1.7 billion in Spain at June 30, 2017 and \$1.1 billion in Italy and \$1.8 billion in Spain at Dec. 31, 2016. At June 30, 2017 and Dec. 31, 2016, we had exposure to Portugal of \$5 million and \$2 million, respectively. At both June 30, 2017 and Dec. 31, 2016, BNY Mellon had exposure of less than \$1 million to Greece.

Brazil

Current conditions in Brazil have resulted in increased focus on its economic and political stability. We have operations in Brazil providing investment services and investment management services. In addition, at June 30, 2017 and Dec. 31, 2016, we had total net exposure to Brazil of \$1.4 billion and \$1.3 billion, respectively. This included \$1.3 billion at both periods, in loans, which are primarily short-term trade finance loans extended to large financial institutions. At June 30, 2017 and Dec. 31, 2016, we held \$136 million and \$73 million, respectively, of noninvestment grade sovereign debt.

Other countries and territories

Events in recent years have resulted in increased focus on exposures to Turkey, Russia and Puerto Rico. Related to Turkey, we mainly provide treasury and issuer services, as well as foreign exchange products primarily to the top-10 largest financial institutions in the country. As of June 30, 2017 and Dec. 31, 2016, our exposure totaled \$641 million and \$713 million, respectively, consisting primarily of syndicated credit facilities and trade finance loans. At June 30, 2017 and Dec. 31, 2016, our exposure to Russia was \$67 million and \$79 million, respectively. Related to Puerto Rico, BNY Mellon had \$5 million of securities held in the trading account measured at fair value at June 30, 2017. In addition, at Dec. 31, 2016, there was approximately \$45 million of margin loan exposure that was collateralized with a concentration of Puerto Rican securities. At June 30, 2017, there were no margin loans with a concentration of Puerto Rican securities as collateral.

Investment securities

In the discussion of our investment 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 investment securities portfolio could indicate increased credit risk for us and could be accompanied by a reduction in the fair value of our investment securities portfolio.

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

Investment securities portfolio (dollars in millions)	March 31, 2017	2Q17 change in	June 30, 2017		Fair value as a % of amortized cost (a)	Unrealized gain (loss)	Ratings (b)					
	Fair value	unrealized gain (loss)	Amortized cost	Fair value			AAA/AA-	A+/A-	BBB+	BBB-	BBB+	Not rated
Agency RMBS	\$47,680	\$ 79	\$49,829	\$49,544	99	%(285)	100	%—	%—	%—	%—	%—
U.S. Treasury Sovereign debt/sovereign guaranteed (c)	26,149	47	25,417	25,325	100	(92)	100	—	—	—	—	—
Non-agency RMBS (d)	13,885	(14)	13,880	14,025	101	145	74	6	19	1	—	—
Non-agency RMBS (d)	1,298	9	948	1,239	82	291	—	1	3	87	9	—
Non-agency RMBS	670	8	597	627	96	30	7	4	15	73	1	—
European floating rate notes (e)	639	3	528	523	98	(5)	70	30	—	—	—	—
Commercial MBS	8,796	20	10,597	10,574	100	(23)	99	1	—	—	—	—
State and political subdivisions	3,322	21	3,268	3,299	101	31	81	16	—	—	3	—
Foreign covered bonds (f)	2,144	(4)	2,458	2,471	101	13	100	—	—	—	—	—
Corporate bonds	1,366	4	1,309	1,318	101	9	17	70	13	—	—	—
CLOs	2,569	(1)	2,635	2,642	100	7	99	—	—	—	1	—
U.S. government agencies	1,985	—	2,196	2,210	101	14	100	—	—	—	—	—
Consumer ABS	1,456	2	1,326	1,330	100	4	90	4	4	2	—	—
Other (g)	3,553	—	3,746	3,758	100	12	79	19	—	—	2	—
Total investment securities	\$115,512 (h)	\$ 174	\$118,734	\$118,885 (h)	100	%(151) (i)	93	%3	%3	%1	%—	%—

(a) Amortized cost before impairments.

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

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

These RMBS were included in the former Grantor Trust and were marked-to-market in 2009. We believe these

(d) RMBS would receive higher credit ratings if these ratings incorporated, as additional credit enhancements, the difference between the written-down amortized cost and the current face amount of each of these securities.

(e) Includes RMBS and commercial MBS. Primarily consists of exposure to UK and the Netherlands.

(f) Primarily consists of exposure to Canada, Norway, the Netherlands and UK.

(g) Includes commercial paper with a fair value of \$701 million and \$700 million and money market funds with a fair value of \$853 million and \$896 million at March 31, 2017 and June 30, 2017, respectively.

(h) Includes net unrealized losses on derivatives hedging securities available-for-sale of \$134 million at March 31, 2017 and \$251 million at June 30, 2017.

(i) Unrealized gains of \$275 million at June 30, 2017 related to available-for-sale securities, net of hedges.

The fair value of our investment securities portfolio was \$118.9 billion at June 30, 2017, compared with \$114.3 billion at Dec. 31, 2016. The higher level of securities primarily reflects additional investments in commercial MBS and agency RMBS, partially offset by a decrease in consumer ABS.

At June 30, 2017, the total investment securities portfolio had a net unrealized pre-tax gain of \$151 million compared with a pre-tax loss of \$221 million at Dec. 31, 2016, including the impact of related hedges. The net unrealized pre-tax gain was primarily driven by a decrease in market interest rates.

The unrealized gain, net of tax, on our available-for-sale investment securities portfolio included in accumulated other comprehensive income was \$195 million at June 30, 2017, compared with \$45 million at Dec. 31, 2016.

At June 30, 2017, 93% of the securities in our portfolio were rated AAA/AA-, unchanged compared with Dec. 31, 2016.

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

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

Net premium amortization and discount accretion of investment securities (a) (dollars in millions)	2Q17	1Q17	4Q16	3Q16	2Q16
Amortizable purchase premium (net of discount) relating to investment securities:					
Balance at period end	\$2,111	\$2,058	\$2,188	\$2,267	\$2,251
Estimated average life remaining at period end (in years)	5.0	4.9	4.9	4.5	4.4
Amortization	\$134	\$138	\$146	\$163	\$169
Accretible discount related to the prior restructuring of the investment securities portfolio:					
Balance at period end	\$279	\$299	\$315	\$331	\$342
Estimated average life remaining at period end (in years)	6.3	6.2	6.2	5.9	5.9
Accretion	\$25	\$25	\$25	\$24	\$26

(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.

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

Net securities gains (losses) (in millions)	2Q17	1Q17	2Q16	YTD17	YTD16
Agency RMBS	\$ —	\$ 1	\$ 5	\$ 1	\$ 13
U.S. Treasury	(1)	—	4	(1)	5
Non-agency RMBS	—	(1)	4	(1)	2
Foreign covered bonds	—	—	—	—	10
Other	1	10	8	11	11
Total net securities gains	\$ —	\$ 10	\$ 21	\$ 10	\$ 41

On a quarterly basis, we perform our impairment analysis using several factors, including projected loss severities and default rates. In the second quarter of 2017, this analysis resulted in other-than-temporary credit losses of \$1 million primarily in our non-agency RMBS portfolio. At June 30, 2017, 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.

The following table shows the fair value of the European floating rate notes by geographical location at June 30, 2017. The unrealized loss on these securities was \$5 million at June 30, 2017, compared with \$11 million at Dec. 31, 2016.

European floating rate notes at June 30, 2017 (a)

(in millions)	RMBS	Other	Total fair value
United Kingdom	\$ 266	\$ 57	\$ 323
The Netherlands	200	—	200
Total fair value	\$ 466	\$ 57	\$ 523

- (a) Seventy percent of these securities are in the AAA to AA- ratings category.

See Note 14 of the Notes to Consolidated Financial Statements for details of securities by level in the fair value hierarchy.

Loans

Total exposure – consolidated (in billions)	June 30, 2017			Dec. 31, 2016		
	Loans	Unfunded commitments	Total exposure	Loans	Unfunded commitments	Total exposure
Non-margin loans:						
Financial institutions	\$13.2	\$ 33.0	\$ 46.2	\$14.7	\$ 33.7	\$ 48.4
Commercial	2.9	17.0	19.9	2.6	17.5	20.1
Subtotal institutional	16.1	50.0	66.1	17.3	51.2	68.5
Wealth management loans and mortgages	16.1	1.4	17.5	15.6	1.3	16.9
Commercial real estate	5.0	3.4	8.4	4.7	3.2	7.9
Lease financings	1.4	—	1.4	1.7	—	1.7
Other residential mortgages	0.8	—	0.8	0.9	—	0.9
Overdrafts	6.9	—	6.9	5.5	—	5.5
Other	1.2	—	1.2	1.2	—	1.2
Subtotal non-margin loans	47.5	54.8	102.3	46.9	55.7	102.6
Margin loans	14.2	—	14.2	17.6	0.1	17.7
Total	\$61.7	\$ 54.8	\$ 116.5	\$64.5	\$ 55.8	\$ 120.3

At June 30, 2017, total exposures were \$116.5 billion, a decrease of 3% compared with Dec. 31, 2016. The decrease in total exposure primarily reflects lower margin loans and exposure to financial institutions, partially offset by higher overdrafts and wealth management loans and mortgages.

Our financial institutions and commercial portfolios comprise our largest concentrated risk. These portfolios comprised 57% of our total exposure at both June 30, 2017 and Dec. 31, 2016. Additionally, a substantial portion of our overdrafts relate to financial institutions.

Financial institutions

The financial institutions portfolio is shown below.

Financial institutions portfolio exposure (dollar amounts in billions)	June 30, 2017					Dec. 31, 2016			
	Loans	Unfunded commitments	Total exposure	% Inv. grade	% due <1 yr.	Loans	Unfunded commitments	Total exposure	
Securities industry	\$3.4	\$ 19.4	\$ 22.8	98	%99	% \$3.8	\$ 19.2	\$ 23.0	
Banks	6.7	1.9	8.6	70	98	7.9	2.0	9.9	
Asset managers	1.8	6.2	8.0	97	82	1.5	6.2	7.7	
Insurance	0.2	3.3	3.5	99	16	0.1	3.8	3.9	
Government	—	0.9	0.9	91	52	0.1	0.9	1.0	
Other	1.1	1.3	2.4	98	45	1.3	1.6	2.9	
Total	\$13.2	\$ 33.0	\$ 46.2	93	%86	% \$14.7	\$ 33.7	\$ 48.4	

The financial institutions portfolio exposure was \$46.2 billion at June 30, 2017, compared with \$48.4 billion at Dec. 31, 2016. The decrease primarily reflects lower exposure in the banks, other and insurance portfolios.

Financial institution exposures are high-quality, with 93% of the exposures meeting the investment grade equivalent criteria of our internal credit rating classification at June 30, 2017. 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, 86% expire within one year and 19% expire within 90 days. In addition, 81% 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.

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At June 30, 2017, the secured intraday credit provided to dealers in connection with their tri-party repo activity totaled \$18.8 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 98% due in less than one year. The

investment grade percentage of our bank exposure was 70% at June 30, 2017, compared with 69% at Dec. 31, 2016.

The asset manager portfolio exposure was high-quality with 97% of the exposures meeting our investment grade equivalent ratings criteria as of June 30, 2017. These exposures are generally short-term liquidity facilities, with the vast majority to regulated mutual funds.

Commercial

The commercial portfolio is presented below.

Commercial portfolio exposure (dollar amounts in billions)	June 30, 2017					Dec. 31, 2016		
	Loans	Unfunded commitments	Total exposure	% Inv. grade	% due <1 yr.	Loans	Unfunded commitments	Total exposure
Manufacturing	\$1.4	\$6.2	\$7.6	97	21	\$1.1	\$6.7	\$7.8
Energy and utilities	0.6	4.7	5.3	95	10	0.6	4.7	5.3
Services and other	0.7	4.4	5.1	95	24	0.6	4.3	4.9
Media and telecom	0.2	1.7	1.9	96	29	0.3	1.8	2.1
Total	\$2.9	\$17.0	\$19.9	96	20	\$2.6	\$17.5	\$20.1

The commercial portfolio exposure decreased slightly to \$19.9 billion at June 30, 2017, from \$20.1 billion at Dec. 31, 2016, primarily reflecting lower exposure in the manufacturing and media and telecom portfolios, partially offset by a slight increase in exposure in the services and other portfolio.

Utilities-related exposure represents approximately three-quarters of the energy and utilities portfolio. The remaining exposure in the energy and utilities portfolio, which includes exposure to refining, integrated companies, exploration and production companies and pipelines, was 76% investment grade at both June 30, 2017 and Dec. 31, 2016.

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

	June 30, 2017	March 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016
Financial institutions	93	%93	%92	%93	%92
Commercial	96	%95	%94	%94	%94

Our credit strategy is to focus on investment grade clients that are active users of our non-credit services. The execution of our strategy has resulted in 93% of

our financial institutions portfolio and 96% of our commercial portfolio rated as investment grade at June 30, 2017.

Wealth management loans and mortgages

Our wealth management exposure was \$17.5 billion at June 30, 2017, compared with \$16.9 billion at Dec. 31, 2016. 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. In the wealth management portfolio, less than 1% of the mortgages were past due at June 30, 2017.

At June 30, 2017, the wealth management mortgage portfolio consisted of the following geographic concentrations: California - 24%; New York - 19%; Massachusetts - 12%; Florida - 7%; and other - 38%.

Commercial real estate

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

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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. Our commercial real estate exposure totaled \$8.4 billion at June 30, 2017, compared with \$7.9 billion at Dec. 31, 2016.

At June 30, 2017, 59% of our commercial real estate portfolio was secured. The secured portfolio is diverse by project type, with 46% secured by residential buildings, 35% secured by office buildings, 11% secured by retail properties and 8% secured by other categories. Approximately 94% of the unsecured portfolio consists of real estate investment trusts ("REITs") and real estate operating companies, which are both predominantly investment grade.

At June 30, 2017, our commercial real estate portfolio consists of the following concentrations: New York metro - 41%; REITs and real estate operating companies - 39%; and other - 20%.

Lease financings

The leasing portfolio exposure totaled \$1.4 billion at June 30, 2017 compared with \$1.7 billion at Dec. 31, 2016. At June 30, 2017, approximately 94% of the leasing portfolio exposure was investment grade, or investment grade equivalent.

At June 30, 2017, the lease financings portfolio consisted of exposures backed by well-diversified assets, including large-ticket transportation equipment.

Other residential mortgages

The other residential mortgages portfolio primarily consists of 1-4 family residential mortgage loans and totaled \$780 million at June 30, 2017 and \$854 million at Dec. 31, 2016. Included in this portfolio at June 30, 2017 are \$194 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 June 30, 2017, 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 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 include \$4.7 billion at June 30, 2017 and \$6.3 billion at Dec. 31, 2016 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 and overdrafts associated with our custody and securities clearance businesses.

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Allowance for credit losses activity (dollar amounts in millions)	June 30, 2017	March 31, 2017	Dec. 31, 2016	June 30, 2016
Non-margin loans	\$47,516	\$44,719	\$46,868	\$45,601
Margin loans	14,157	16,149	17,590	18,594
Total loans	\$61,673	\$60,868	\$64,458	\$64,195
Beginning balance of allowance for credit losses	\$276	\$281	274	\$287
Provision for credit losses	(7)	(5)	7	(9)
Net recoveries (charge-offs):				
Other residential mortgages	1	—	—	1
Foreign	—	—	—	1
Net recoveries (charge-offs)	1	—	—	2
Ending balance of allowance for credit losses	\$270	\$276	\$281	\$280
Allowance for loan losses	\$165	\$164	\$169	\$158
Allowance for lending-related commitments	105	112	112	122
Allowance for loan losses as a percentage of total loans	0.27	%0.27	%0.26	%0.25
Allowance for loan losses as a percentage of non-margin loans	0.35	0.37	0.36	0.35
Total allowance for credit losses as a percentage of total loans	0.44	0.45	0.44	0.44
Total allowance for credit losses as a percentage of non-margin loans	0.57	0.62	0.60	0.61

Net recoveries were \$1 million in the second quarter of 2017 and \$2 million in the second quarter of 2016. There were no charge-offs or recoveries in the first quarter of 2017.

The provision for credit losses was a credit of \$7 million in the second quarter of 2017, a credit of \$5 million in the first quarter of 2017 and a credit of \$9 million in the second quarter of 2016.

The total allowance for credit losses was \$270 million at June 30, 2017, \$281 million at Dec. 31, 2016 and \$280 million at June 30, 2016. The ratio of the total allowance for credit losses to non-margin loans was 0.57% at June 30, 2017, 0.60% at Dec. 31, 2016 and 0.61% at June 30, 2016. The ratio of the allowance for loan losses to non-margin loans was 0.35% at June 30, 2017, 0.36% at Dec. 31, 2016 and 0.35% at June 30, 2016.

We had \$14.2 billion of secured margin loans on our balance sheet at June 30, 2017 compared with \$17.6 billion at Dec. 31, 2016 and \$18.6 billion at June 30, 2016. 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 probable losses inherent in our credit portfolio. This evaluation process is subject to numerous estimates and judgments. For

additional information on this process, see "Critical accounting estimates" in our 2016 Annual Report.

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 2016 Annual Report, we have allocated our allowance for credit losses as follows.

Allocation of allowance	June 30, 2017	March 31, 2017	Dec. 31, 2016	June 30, 2016
-------------------------	---------------	----------------	---------------	---------------

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Commercial	30	% 30	% 29	% 32	%
Commercial real estate	28	27	26	23	
Foreign	13	13	13	13	
Wealth management (a)	9	9	8	7	
Other residential mortgages	8	9	10	10	
Financial institutions	8	8	9	10	
Lease financing	4	4	5	5	
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 loss.

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 \$65 million, while if each credit were rated one grade worse, the allowance

would have increased by \$107 million. Similarly, if the loss given default were one rating worse, the allowance would have increased by \$40 million, while if the loss given default were one rating better, the allowance would have decreased by \$29 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

The following table shows the distribution of nonperforming assets.

Nonperforming assets (dollars in millions)	June 30, 2017	March 31, 2017	Dec. 31, 2016
Nonperforming loans:			
Other residential mortgages	\$ 84	\$ 88	\$ 91
Wealth management loans and mortgages	10	10	8
Financial institutions	2	—	—
Lease financings	—	—	4
Total nonperforming loans	96	98	103
Other assets owned	4	9	4
Total nonperforming assets	\$ 100	\$ 107	\$ 107
Nonperforming assets ratio	0.16 %	0.18 %	0.17 %
Nonperforming assets ratio, excluding margin loans	0.21	0.24	0.23
Allowance for loan losses/nonperforming loans	171.9	167.3	164.1
Allowance for loan losses/nonperforming assets	165.0	153.3	157.9
Total allowance for credit losses/nonperforming loans	281.3	281.6	272.8
Total allowance for credit losses/nonperforming assets	270.0	257.9	262.6

Nonperforming assets activity (in millions)	June 30, 2017	March 31, 2017	Dec. 31, 2016
Balance at beginning of quarter	\$ 107	\$ 107	\$ 109
Additions	2	9	4
Return to accrual status	—	(4)—
Charge-offs	—	(1)—
Paydowns/sales	(9	)(4	)(6
Balance at end of quarter	\$ 100	\$ 107	\$ 107

Nonperforming assets decreased \$7 million compared with Dec. 31, 2016, primarily reflecting lower other assets owned and other residential mortgages.

The nonperforming assets ratio was 0.16% at June 30, 2017, 0.18% at March 31, 2017 and 0.17% at Dec. 31, 2016. The ratio of the allowance for loan losses to nonperforming loans was 171.9% at June 30, 2017, 167.3% at March 31, 2017 and 164.1% at Dec. 31, 2016. The ratio of the total allowance for credit losses to nonperforming loans was 281.3% at June 30, 2017, 281.6% at March 31, 2017 and 272.8% at Dec. 31, 2016.

Deposits

Total deposits were \$235.7 billion at June 30, 2017, an increase of 6% compared with \$221.5 billion at

Dec. 31, 2016. The increase in deposits primarily reflects higher noninterest-bearing deposits in U.S. offices and interest-bearing deposits in Non-U.S. offices, partially offset by lower interest-bearing deposits in U.S. offices.

Noninterest-bearing deposits were \$89.1 billion at June 30, 2017 compared with \$78.3 billion at Dec. 31, 2016.

Interest-bearing deposits were \$146.6 billion at June 30, 2017 compared with \$143.2 billion at Dec. 31, 2016.

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.

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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		
	June 30, 2017	March 31, 2017	June 30, 2016
Maximum month-end balance during the quarter	\$19,786	\$18,703	\$23,355
Average daily balance	\$17,970	\$18,995	\$18,204
Weighted-average rate during the quarter	0.84	%0.51	%0.28
Ending balance	\$10,934	\$11,149	\$7,611
Weighted-average rate at period end	0.93	%0.53	%0.34

Fluctuations of federal funds purchased and securities sold under repurchase agreements between periods resulted from changes in overnight borrowing opportunities. The increase in the weighted-average rates, compared with prior periods, primarily reflects increases in the Fed Funds effective rate.

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

Payables to customers and broker-dealers

(dollars in millions)	Quarter ended		
	June 30, 2017	March 31, 2017	June 30, 2016
Maximum month-end balance during the quarter	\$21,622	\$21,306	\$21,642
Average daily balance (a)	\$21,078	\$20,840	\$21,144
Weighted-average rate during the quarter (a)	0.30	%0.16	%0.05
Ending balance	\$21,622	\$21,306	\$21,172
Weighted-average rate at period end	0.34	%0.18	%0.06

The weighted-average rate is calculated based on, and is applied to, the average interest-bearing payables to (a) customers and broker-dealers, which were \$20,609 million in the second quarter of 2017, \$18,961 million in the first quarter of 2017 and \$16,935 million in the second quarter of 2016.

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 (dollars in millions)	Quarter ended		
	June 30, 2017	March 31, 2017	June 30, 2016
Maximum month-end balance during the quarter	\$2,193	\$2,642	\$4,950
Average daily balance	\$2,215	\$2,164	\$3,781
Weighted-average rate during the quarter	0.95	%0.88	%0.37
Ending balance	\$876	\$2,543	\$—

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Weighted-average rate at period end 0.98 %0.93 %— %

The Bank of New York Mellon, our largest bank subsidiary, issues commercial paper that matures within 364 days from date of issue and is not redeemable prior to maturity or subject to voluntary prepayment. Fluctuations in commercial paper balances between periods reflect management of overall liquidity in a rising short-term rate environment. The increase in the weighted-average rates, compared with prior periods, 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 (dollars in millions)	Quarter ended		
	June 30, 2017	March 31, 2017	June 30, 2016
Maximum month-end balance during the quarter	\$2,379	\$1,173	\$1,098
Average daily balance	\$1,193	\$822	\$847
Weighted-average rate during the quarter	1.24	%0.98	%0.97
Ending balance	\$1,338	\$1,022	\$1,098
Weighted-average rate at period end	1.69	%1.30	%0.44

Other borrowed funds primarily include overdrafts of sub-custodian account balances in our Investment Services businesses, borrowings under lines of credit by our Pershing subsidiaries and capital lease obligations. Overdrafts typically relate to timing differences for settlements. Fluctuations in other borrowed funds balances compared with both prior periods primarily reflect an increase in capital lease obligations as a result of converting an operating lease to a capital lease.

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 rollover 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 intra-day 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 an inability to convert assets to cash, an 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 on hand 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 June 30, 2017, the Parent was in compliance with this policy. For additional information on our liquidity policy, see "Risk Management - Liquidity risk" in our 2016 Annual Report. Our overall approach to liquidity management is further described in "Liquidity and dividends" in our 2016 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 (in millions)	June 30, 2017	Dec. 31, 2016	Average 2Q17	1Q17	2Q16	
Available funds:						
Liquid funds:						
Interest-bearing deposits with banks	\$13,601	\$15,086	\$14,832	\$14,714	\$14,394	
Federal funds sold and securities purchased under resale agreements	27,440	25,801	26,873	25,312	25,813	
Total liquid funds	41,041	40,887	41,705	40,026	40,207	
Cash and due from banks	4,725	4,822	4,972	5,097	4,141	
Interest-bearing deposits with the Federal Reserve and other central banks	74,130	58,041	69,316	66,043	97,788	
Total available funds	\$119,896	\$103,750	\$115,993	\$111,166	\$142,136	
Total available funds as a percentage of total assets	34	%31	%34	%33	%38	%

We had \$41 billion of liquid funds at both June 30, 2017 and Dec. 31, 2016. Of the \$41 billion in liquid funds held at June 30, 2017, \$14 billion was placed in interest-bearing deposits with large, highly-rated global financial institutions with a weighted-average life to maturity of approximately 22 days. Of the \$14 billion, \$3 billion was placed with

banks in the Eurozone.

Total available funds totaled \$120 billion at June 30, 2017, compared with \$104 billion at Dec. 31, 2016. The increase was primarily due to an increase in interest-bearing deposits with the Federal Reserve and other central banks.

On an average basis for the six months ended June 30, 2017 and the six months ended June 30, 2016, non-core sources of funds, such as money market rate

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accounts, federal funds purchased and securities sold under repurchase agreements, trading liabilities, commercial paper and other borrowings, were \$30.2 billion and \$29.1 billion, respectively. The increase primarily reflects increases in trading liabilities, commercial paper and other borrowings.

Average foreign deposits, primarily from our European-based Investment Services business, were \$92.0 billion for the six months ended June 30, 2017, compared with \$109.1 billion for the six months ended June 30, 2016. Domestic savings, interest-bearing demand and time deposits averaged \$41.7 billion for the six months ended June 30, 2017 and \$47.2 billion for the six months ended June 30, 2016. The decrease primarily reflects a decrease in time deposits, partially offset by an increase in demand deposits.

Average payables to customers and broker-dealers were \$19.8 billion for the six months ended June 30, 2017 and \$16.9 billion for the six months ended June 30, 2016. Payables to customers and broker-dealers are driven by customer trading activity and market volatility.

Long-term debt averaged \$26.6 billion for the six months ended June 30, 2017 and \$22.2 billion for the six months ended June 30, 2016, reflecting issuances of long-term debt.

Average noninterest-bearing deposits decreased to \$73.7 billion for the six months ended June 30, 2017 from \$83.5 billion for the six months ended June 30, 2016, 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

In connection with our single point of entry resolution strategy, we have established the IHC to facilitate the provision of capital and liquidity resources to certain key subsidiaries in the event of material financial distress or failure. In the second quarter of 2017, we entered into a binding support agreement with those key subsidiaries and other related entities that requires the IHC to provide that support. The support

agreement required the Parent to transfer its intercompany loans and most of its cash to the IHC, and requires the Parent to continue to transfer cash and other liquid financial assets to the IHC, subject to certain amounts retained by the Parent to meet its near-term cash needs. The Parent’s and the IHC’s obligations under the support agreement are secured. In connection with the initial transfer, the IHC issued unsecured subordinated funding notes to the Parent. The IHC has also provided the Parent with a committed line of credit that allows the Parent to draw funds necessary to service near-term obligations. As a result, during business-as-usual circumstances, the Parent is expected to continue to have access to the funds necessary to pay dividends, repurchase common stock, service its debt and satisfy its other obligations. If our projected liquidity resources deteriorate so severely that resolution of the Parent becomes imminent, the committed line of credit the IHC provided to the Parent will automatically terminate, with all amounts outstanding becoming due and payable, the funding notes issued by the IHC would automatically be forgiven and the support agreement will require the Parent to transfer most of its remaining assets (other than stock in subsidiaries and a cash reserve to fund bankruptcy expenses) to the IHC. As a result, during a period of severe financial stress, the Parent might commence bankruptcy proceedings at an earlier time than it otherwise would if the support agreement had not been implemented. See “Supervision and Regulation - Recovery and Resolution” in our 2016 Annual Report and “Risk Factors” in this Form 10-Q for additional information.

Since July 2016, the Parent has issued an incremental \$3.75 billion of TLAC-qualifying debt in support of our resolution strategy.

The Parent's three major sources of liquidity are cash on hand and cash otherwise made readily available to the Parent through a committed credit facility with the IHC, access to the debt and equity markets and dividends from its subsidiaries.

The Parent had cash of \$652 million at June 30, 2017, compared with \$8.7 billion at Dec. 31, 2016, a decrease of \$8.1 billion, primarily reflecting the transfer of cash to the IHC pursuant to the support agreement.

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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 June 30, 2017

	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 \$27.7 billion at June 30, 2017 and \$24.5 billion at Dec. 31, 2016. The increase reflects issuances of \$4.0 billion, partially offset by the maturity of \$500 million and the redemption of trust preferred securities. The Parent has \$250 million of long-term debt that will mature in the remainder of 2017.

In May 2017, we issued \$1 billion of fixed to floating rate senior notes maturing in 2023 at an annual interest rate of 2.66% for the first five years, and thereafter 3-month LIBOR plus 63.4 basis points. We also issued \$750 million of fixed rate senior notes maturing in 2027 at an annual interest rate of 3.25%.

The Bank of New York Mellon, our largest bank subsidiary, issues commercial paper that matures within 364 days from date of issue and is not redeemable prior to maturity or subject to voluntary prepayment. The average commercial paper borrowings were \$2.2 billion in the second quarter of 2017 and \$3.8 billion in the second quarter of 2016. Commercial paper outstanding was \$876 million at June 30, 2017. There was no commercial paper outstanding at Dec. 31, 2016.

Subsequent to June 30, 2017, our U.S. bank subsidiaries could declare dividends to the Parent of approximately \$5.5 billion, without the need for a regulatory waiver. The Bank of New York Mellon,

our primary subsidiary, resumed paying regular dividends to the Parent in the second quarter of 2017. In addition, at June 30, 2017, non-bank subsidiaries of the Parent had liquid assets of approximately \$1.5 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 2016 Annual Report.

Pershing has uncommitted lines of credit in place for liquidity purposes which are guaranteed by the Parent. Pershing has eight separate uncommitted lines of credit amounting to \$1.5 billion in aggregate. There were no borrowings under these lines in the second quarter of 2017. 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 \$5 million, in aggregate, in the second quarter of 2017.

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

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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 fees representing approximately 80% of revenue, and the dividend capacity of our banking subsidiaries. Our double leverage ratio was 121.7% at June 30, 2017 and 119.1% at Dec. 31, 2016, 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, and loans to, its subsidiaries.

In May 2017, a quarterly cash dividend was paid to common shareholders of \$0.19 per common share. Our common stock dividend payout ratio was 22% for the first six months of 2017. The Federal Reserve's instructions for the 2017 CCAR provided that, for large bank holding companies like us, dividend payout ratios exceeding 30% of after-tax net income would receive particularly close scrutiny.

In July 2017, BNY Mellon increased the quarterly cash dividend on common stock by approximately 26%, from \$0.19 to \$0.24 per share. This dividend increase was included in the 2017 capital plan. This increased quarterly cash dividend will be paid on Aug. 11, 2017.

In the second quarter of 2017, we repurchased 11 million common shares at an average price of \$47.48 per common share for a total cost of \$506 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 June 30, 2017, and the average HQLA and average LCR for the second quarter of 2017.

Consolidated HQLA and LCR	June
(in billions)	30,
	2017
Securities (a)	\$ 106
Cash (b)	68
Total consolidated HQLA (c)	\$ 174

Total consolidated HQLA - average (c) \$ 166

Average LCR 116 %

(a) Primarily includes U.S. Treasury, U.S. agency, sovereign securities, securities of U.S. government-sponsored enterprises, investment-grade corporate debt and publicly traded common equity.

(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 \$138 billion at June 30, 2017 and averaged \$129 billion for the second quarter of 2017.

The U.S. LCR rules became fully phased-in on Jan. 1, 2017 and require BNY Mellon and our affected domestic bank subsidiaries to meet an LCR of at least 100%. The LCR for BNY Mellon and our domestic bank subsidiaries was compliant with the U.S. LCR requirements as of June 30, 2017. For additional information on the LCR, see “Supervision and Regulation - Liquidity Standards - Basel III and U.S. Rules and Proposals” in our 2016 Annual Report.

We also perform liquidity stress tests to evaluate whether the Company maintains sufficient liquidity resources under multiple stress scenarios. Stress tests 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’s liquidity is sufficient for severe market events and firm-specific events. Under our scenario testing program, the results of the tests indicate that the Company has sufficient liquidity.

As part of our resolution planning, we monitor, among other measures, our Resolution Liquidity Adequacy and Positioning (“RLAP”). The RLAP methodologies are 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.

Beginning on Jan. 1, 2015, Bank Holding Companies (“BHCs”) with total consolidated assets of \$50 billion

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or more were subject to the Federal Reserve's Enhanced Prudential Standards, which include liquidity standards, described under "Supervision and Regulation - Enhanced Prudential Standards and Large Exposures" in our 2016 Annual Report. BNY Mellon has taken actions to comply with these standards, including the adoption of various liquidity risk management standards and maintenance of a liquidity buffer of unencumbered highly liquid assets based on the results of internal liquidity stress testing.

Statement of cash flows

The following summarizes the activity reflected on the 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.

Cash used for operating activities was \$1.9 billion in the six months ended June 30, 2017, compared with cash provided by operating activities of \$1.5 billion in the six months ended June 30, 2016. In the six months ended June 30, 2017, cash flows used for operations were principally the result of changes in accruals partially offset by earnings. In the six months ended June 30, 2016, cash flows from operations were principally the result of earnings and changes in trading activities, partially offset by changes in accruals.

Cash used for investing activities was \$13.4 billion in the six months ended June 30, 2017, compared with cash provided by investing activities of \$25.7 billion in the six months ended June 30, 2016. In the six months ended June 30, 2017, purchases of securities and changes in interest-bearing deposits with the Federal Reserve and other central banks were significant uses of funds, partially offset by sales, paydowns and maturities of securities, changes in loans and changes in interest-bearing deposits with banks. In the six months ended June 30, 2016, changes in interest-bearing deposits with the Federal Reserve and other central banks and sales, paydowns and maturities of securities were significant sources of funds, partially offset by purchases of securities, changes in federal funds sold and securities purchased under resale agreements and changes in loans.

Cash provided by financing activities was \$15.1 billion in the six months ended June 30, 2017, compared with cash used for financing activities of \$27.7 billion in the six months ended June 30, 2016. In the six months ended June 30, 2017, changes in deposits and the proceeds from the issuance of long-term debt were significant sources of funds, partially offset by common stock repurchased. In the six months ended June 30, 2016, changes in deposits, changes in federal funds purchased and securities sold under repurchase agreements, the repayment of long-term debt and common stock repurchases were significant uses of funds, partially offset by the issuance of long-term debt.

Capital

Capital data (dollar amounts in millions except per share amounts; common shares in thousands)	June 30, 2017	March 31, 2017	Dec. 31, 2016	
Average common equity to average assets	10.5	% 10.4	% 10.2	%
At period end:				
BNY Mellon shareholders' equity to total assets ratio	11.3	% 11.6	% 11.6	%
BNY Mellon common shareholders' equity to total assets ratio	10.3	% 10.5	% 10.6	%
Total BNY Mellon shareholders' equity	\$39,974	\$39,138	\$38,811	
Total BNY Mellon common shareholders' equity	\$36,432	\$35,596	\$35,269	
BNY Mellon tangible common shareholders' equity – Non-GAAP (a)	\$18,106	\$17,310	\$16,957	
Book value per common share (a)	\$35.26	\$34.23	\$33.67	
Tangible book value per common share – Non-GAAP (a)	\$17.53	\$16.65	\$16.19	
Closing stock price per common share	\$51.02	\$47.23	\$47.38	
Market capitalization	\$52,712	\$49,113	\$49,630	
Common shares outstanding	1,033,156	1,039,877	1,047,488	
Cash dividends per common share	\$0.19	\$0.19	\$0.19	
Common dividend payout ratio	22	% 23	% 25	%
Common dividend yield	1.5	% 1.6	% 1.6	%

(a) See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 52 for a reconciliation of GAAP to Non-GAAP.

The Bank of New York Mellon Corporation total shareholders' equity increased to \$40.0 billion at June 30, 2017 from \$38.8 billion at Dec. 31, 2016. The increase primarily reflects earnings, approximately \$480 million resulting from stock awards, the exercise of stock options and stock issued for employee benefit plans, foreign currency translation adjustments and the unrealized gain in our investment securities portfolio, partially offset by share repurchases and dividends.

The unrealized gain, net of tax, on our available-for-sale investment securities portfolio recorded in accumulated other comprehensive income was \$195 million at June 30, 2017, compared with \$45 million at Dec. 31, 2016. The increase in the unrealized gain, net of tax, was primarily driven by a decrease in market interest rates.

In the second quarter of 2017, we repurchased 11 million common shares at an average price of \$47.48 per common share for a total cost of \$506 million.

In June 2017, BNY Mellon received confirmation that the Federal Reserve did not object to our 2017 capital plan submitted in connection with its CCAR. Our board of directors subsequently approved the repurchase of up to \$2.6 billion of common stock and up to an additional \$500 million of common stock contingent on a prior issuance of \$500 million of noncumulative perpetual preferred stock starting in

the third quarter of 2017 and continuing through the second quarter of 2018. This new share repurchase plan replaces all previously authorized share repurchase plans.

Also included in the 2017 capital plan was a 26% increase in the quarterly cash dividend on common stock, from \$0.19 to \$0.24 per share. This increased quarterly cash dividend will be paid on Aug. 11, 2017.

Capital adequacy

Regulators establish certain levels of capital for bank holding companies 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 June 30, 2017 and Dec. 31, 2016, 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

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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 2016 Annual Report.

The “well capitalized” and other capital categories (where applicable), as established by applicable regulations for bank holding companies and depository institutions, have been established by those regulations solely for purposes of implementing their respective requirements (for example, eligibility for financial holding company status in the case of bank holding companies and prompt corrective action measures in the case of depository institutions). A bank holding company’s or depository institution’s qualification for a capital category may not constitute an accurate representation of the entity’s overall financial condition or prospects.

The U.S. banking agencies’ capital rules have been 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 2016 Annual Report. BNY Mellon is subject to the U.S. capital rules, which are being gradually phased-in over a multi-year period through 2018.

Our estimated CET1 and SLR ratios on a fully phased-in basis are based on our current interpretation of the U.S. capital rules. Our risk-based capital adequacy is determined using the higher of risk-weighted assets (“RWAs”) determined using the Advanced Approach and Standardized Approach.

The transitional capital ratios for June 30, 2017 and March 31, 2017 included in the following table were negatively impacted by the additional phase-in requirements that became effective on Jan. 1, 2017.

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Consolidated and largest bank subsidiary regulatory capital ratios	June 30, 2017 Well capitalized	Minimum required	Capital (a)ratios	March 31, 2017	Dec. 31, 2016	
Consolidated regulatory capital ratios:						
(b)						
Standardized:						
CET1 ratio	N/A	(c) 6.5	% 12.0	% 12.0	% 12.3	%
Tier 1 capital ratio	6	% 8	14.3	14.4	14.5	
Total (Tier 1 plus Tier 2) capital ratio	10	10	14.8	14.9	15.2	
Advanced:						
CET1 ratio	N/A	(c) 6.5	% 10.8	% 10.4	% 10.6	%
Tier 1 capital ratio	6	% 8	12.9	12.5	12.6	
Total (Tier 1 plus Tier 2) capital ratio	10	10	13.2	12.8	13.0	
Leverage capital ratio (b)	N/A	(c) 4	6.7	6.6	6.6	
SLR (d)	5	(c)(e)3	6.2	6.1	6.0	

Selected regulatory capital ratios – fully phased-in – Non-GAAP: (c)

Estimated CET1 ratio:						
Standardized Approach	8.5	%(e) 6.5	% 11.5	% 11.5	% 11.3	%
Advanced Approach	8.5	(e) 6.5	10.4	10.0	9.7	
Estimated SLR	5	(e) 3	6.0	5.9	5.6	

The Bank of New York Mellon regulatory capital ratios: (b)

Advanced:						
CET1 ratio	6.5	% 5.75	% 14.1	% 13.9	% 13.6	%
Tier 1 capital ratio	8	7.25	14.4	14.2	13.9	
Total (Tier 1 plus Tier 2) capital ratio	10	9.25	14.8	14.6	14.2	
Leverage capital ratio	5	4	7.6	7.6	7.2	
SLR (d)	6	3	6.9	6.9	6.5	

Selected regulatory capital ratios – fully phased-in – Non-GAAP:

Estimated SLR	6	% 3	% 6.7	% 6.6	% 6.1	%
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(a) Minimum requirements for June 30, 2017 include Basel III minimum thresholds plus currently applicable buffers.

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

(c) The Federal Reserve's regulations do not establish well capitalized thresholds for these measures for bank holding companies.

(d) The SLR does not become a binding measure until the first quarter of 2018. The SLR is based on Tier 1 capital, as phased-in, and average quarterly assets and certain off-balance sheet exposures.

(e) Fully phased-in Basel III minimum with expected buffers. See page 44 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.

Our CET1 ratio determined under the Advanced Approach was 10.8% at June 30, 2017 and 10.6% at Dec. 31, 2016. The increase primarily reflects CET1 generation, partially offset by the additional phase-in requirements under the U.S. capital rules that became effective Jan. 1, 2017.

Our estimated CET1 ratio (Non-GAAP) calculated under the Advanced Approach on a fully phased-in basis was 10.4% at June 30, 2017 and 9.7% at Dec. 31, 2016. The increase primarily reflects CET1 generation. Our estimated CET1 ratio (Non-GAAP) calculated under the Standardized Approach on a fully phased-in basis was 11.5% at June 30, 2017 and 11.3% at Dec. 31, 2016.

The estimated fully phased-in SLR (Non-GAAP) of 6.0% at June 30, 2017 and 5.6% at Dec. 31, 2016 was based on our interpretation of the U.S. capital rules, as supplemented by the Federal Reserve's final rules on the SLR. BNY Mellon will be subject to an enhanced SLR, which will require a buffer in excess of 2% over the minimum SLR of 3%. The insured depository institution subsidiaries of the U.S. global systemically important banks ("G-SIBs"), including those of BNY Mellon, must maintain a 6% SLR to be considered "well capitalized."

For additional information on the U.S. capital rules, see "Supervision and Regulation - Capital Requirements - Generally" in our 2016 Annual Report.

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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.

Management views the estimated fully phased-in CET1 and other risk-based capital ratios and SLR as key measures in monitoring BNY Mellon's capital position and progress against future regulatory capital standards. Additionally, the presentation of the estimated fully phased-in CET1 and other risk-based capital ratios and SLR are intended to allow investors to compare these ratios with estimates presented by other companies.

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, 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.

Minimum capital ratios and capital buffers

The U.S. capital rules include a series of buffers and surcharges over required minimums that apply to bank holding companies, 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 minimums, buffers and surcharges apply to our banking subsidiaries.

The U.S. capital rules introduced a capital conservation buffer and countercyclical capital buffer that add to the minimum regulatory capital ratios. The capital conservation buffer—1.25% for 2017 and 2.5% when fully phased-in on Jan. 1, 2019—is designed to absorb losses during periods of economic stress and applies to all banking organizations. During periods of excessive growth, the capital conservation buffer may be expanded through the imposition of a countercyclical capital buffer that may be as high as an additional 2.5%. The countercyclical capital buffer, when applicable, applies only to Advanced Approach banking organizations. The countercyclical capital buffer is currently set to zero with respect to U.S. exposures, but it could increase if the banking agencies determine that systemic vulnerabilities are meaningfully above normal.

BNY Mellon is subject to an additional G-SIB surcharge, which is implemented as an extension of the capital conservation buffer and must be satisfied with CET1 capital. For 2017, the G-SIB surcharge applicable to BNY Mellon is 0.75%, and, when fully phased-in on Jan. 1, 2019, as calculated, applying metrics as currently applicable to BNY Mellon, would be 1.5%.

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. The U.S. capital rules also provide for transitional arrangements for qualifying instruments, deductions, and adjustments, which are not reflected in this table. Buffers and surcharges are not applicable to the leverage capital ratio. These buffers, other than the SLR buffer, and surcharge began to phase-in on Jan. 1, 2016 and will be fully implemented on Jan. 1, 2019.

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Consolidated capital ratio requirements	Well capitalized	Minimum ratios	Minimum ratios with buffers, as phased-in (a)			
			2017	2018	2019	
Capital conservation buffer (CET1)			1.25 %	1.875 %	2.5 %	
U.S. G-SIB surcharge (CET1) (b)(c)			0.75 %	1.125 %	1.5 %	
Consolidated:						
CET1 ratio	N/A	4.5	% 6.5	% 7.5	% 8.5	%
Tier 1 capital ratio	6.0	% 6.0	% 8.0	% 9.0	% 10.0	%
Total capital ratio	10.0	% 8.0	% 10.0	% 11.0	% 12.0	%
Enhanced SLR buffer (Tier 1 capital)	N/A		N/A	2.0 %	2.0 %	%
SLR	N/A	3.0	% N/A	5.0 %	5.0 %	%
Bank subsidiaries: (c)						
CET1 ratio	6.5	% 4.5	% 5.75	% 6.375	7.0 %	%
Tier 1 capital ratio	8.0	% 6.0	% 7.25	% 7.875	8.5 %	%
Total capital ratio	10.0	% 8.0	% 9.25	% 9.875	10.5 %	%
SLR	6.0	% 3.0	% N/A	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 table below presents the factors that impacted the transitional and fully phased-in CET1.

Estimated CET1 generation (in millions)	Quarter ended June 30, 2017	
	Transitional basis (a)	Fully phased-in - Non-GAAP (b)
CET1 – Beginning of period	\$17,606	\$ 16,835
Net income applicable to common shareholders of The Bank of New York Mellon Corporation	926	926
Goodwill and intangible assets, net of related deferred tax liabilities	(47)	(39)
Gross CET1 generated	879	887
Capital deployed:		
Common stock dividends	(199)	(199)
Common stock repurchased	(506)	(506)
Total capital deployed	(705)	(705)
Other comprehensive income:		
Foreign currency translation	324	324
Unrealized loss on assets available-for-sale	72	90
Defined benefit plans	13	16
Unrealized gain on cash flow hedges	1	1
Total other comprehensive income	410	431
Additional paid-in capital (c)	184	184
Other additions (deductions):		

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Deferred tax assets	(3)	(3)
Embedded goodwill	1		1	
Other	(1)	(1)
Total other deductions	(3)	(3)
Net CET1 generated	765		794	
CET1 – End of period	\$18,371		\$ 17,629	

(a) Reflects transitional adjustments to CET1 required under the U.S. capital rules.

(b) Estimated.

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

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The following table presents the components of our transitional and fully phased-in CET1, Tier 1 and Tier 2 capital, the RWAs determined under both the Standardized and Advanced Approaches, the average assets used for leverage capital purposes and the total leverage exposure for estimated SLR purposes.

Capital components and ratios (dollars in millions)	June 30, 2017		March 31, 2017		Dec. 31, 2016	
	Transitional Approach (a)	Fully phased-in - Non-GAAP (b)	Transitional Approach (a)	Fully phased-in - Non-GAAP (b)	Transitional Approach (a)	Fully phased-in - Non-GAAP (b)
CET1:						
Common shareholders' equity	\$36,652	\$ 36,432	\$35,837	\$35,596	\$35,794	\$35,269
Goodwill and intangible assets	(17,843)	(18,325)	(17,796)	(18,286)	(17,314)	(18,312)
Net pension fund assets	(72)	(90)	(72)	(90)	(55)	(90)
Equity method investments	(325)	(340)	(326)	(341)	(313)	(344)
Deferred tax assets	(30)	(37)	(27)	(34)	(19)	(32)
Other	(11)	(11)	(10)	(10)	—	(1)
Total CET1	18,371	17,629	17,606	16,835	18,093	16,490
Other Tier 1 capital:						
Preferred stock	3,542	3,542	3,542	3,542	3,542	3,542
Deferred tax assets	(7)	—	(7)	—	(13)	—
Net pension fund assets	(18)	—	(18)	—	(36)	—
Other	(24)	(24)	(14)	(14)	(121)	(121)
Total Tier 1 capital	\$21,864	\$ 21,147	\$21,109	\$20,363	\$21,465	\$19,911
Tier 2 capital:						
Subordinated debt	\$550	\$ 550	\$550	\$550	\$550	\$550
Allowance for credit losses	270	270	276	276	281	281
Trust preferred securities	—	—	—	—	148	—
Other	(7)	(7)	(2)	(2)	(12)	(11)
Total Tier 2 capital - Standardized Approach	813	813	824	824	967	820
Excess of expected credit losses	59	59	51	51	50	50
Less: Allowance for credit losses	270	270	276	276	281	281
Total Tier 2 capital - Advanced Approach	\$602	\$ 602	\$599	\$599	\$736	\$589
Total capital:						
Standardized Approach	\$22,677	\$ 21,960	\$21,933	\$21,187	\$22,432	\$20,731
Advanced Approach	\$22,466	\$ 21,749	\$21,708	\$20,962	\$22,201	\$20,500
Risk-weighted assets:						
Standardized Approach	\$153,179	\$ 152,645	\$146,747	\$146,122	\$147,671	\$146,475
Advanced Approach:						
Credit Risk	\$99,030	\$ 98,465	\$96,316	\$95,655	\$97,659	\$96,391
Market Risk	3,225	3,225	3,566	3,566	2,836	2,836
Operational Risk	67,788	67,788	69,313	69,313	70,000	70,000
Total Advanced Approach	\$170,043	\$ 169,478	\$169,195	\$168,534	\$170,495	\$169,227
Standardized Approach:						
CET1 ratio	12.0	%11.5	% 12.0	%11.5	% 12.3	%11.3
Tier 1 capital ratio	14.3	13.9	14.4	13.9	14.5	13.6

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Total (Tier 1 plus Tier 2) capital ratio	14.8	14.4	14.9	14.5	15.2	14.2	
Advanced Approach:							
CET1 ratio	10.8	% 10.4	% 10.4	% 10.0	% 10.6	% 9.7	%
Tier 1 capital ratio	12.9	12.5	12.5	12.1	12.6	11.8	
Total (Tier 1 plus Tier 2) capital ratio	13.2	12.8	12.8	12.4	13.0	12.1	

Average assets for leverage capital purposes	\$ 324,423		\$ 318,184		\$ 326,809	
Total leverage exposure for SLR purposes		\$ 352,448		\$ 346,772		\$ 355,083

(a) Reflects transitional adjustments to CET1, Tier 1 capital and Tier 2 capital required in 2017 and 2016 under the U.S. capital rules.

(b) Estimated.

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The following table presents the amount of capital by which BNY Mellon and our largest bank subsidiary, The Bank of New York Mellon, exceeded the capital thresholds determined under the transitional rules at June 30, 2017.

Capital above thresholds at June 30, 2017

(in millions)	Consolidated (a)	The Bank of New York Mellon (b)
CET1	\$ 7,318	\$ 10,526
Tier 1 capital	8,261	8,874
Total capital	5,462	6,593
Leverage capital	8,887	6,852

(a) Based on minimum required standards, with applicable buffers.

(b) Based on well capitalized standards.

The following table shows the impact on the consolidated capital ratios at June 30, 2017 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.

Sensitivity of consolidated capital ratios at June 30, 2017

(in basis points)	Increase or decrease of \$1 billion in RWA, \$100 million quarterly in average common assets or equity total leverage exposure	
CET1:		
Standardized Approach	7 bps	8 bps
Advanced Approach	6	6
Tier 1 capital:		
Standardized Approach	7	9
Advanced Approach	6	8
Total capital:		
Standardized Approach	7	10
Advanced Approach	6	8
Leverage capital	3	2
SLR	3	2
Estimated CET1 ratio, fully phased-in – Non-GAAP:		
Standardized Approach	7	8
Advanced Approach	6	6

Estimated SLR, fully phased-in – Non-GAAP 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.

Supplementary Leverage Ratio

BNY Mellon has presented its consolidated and largest bank subsidiary's estimated fully phased-in SLRs based on its interpretation of the U.S. capital rules, which are being gradually phased-in over a multi-year period and on the application of such rules to BNY Mellon's businesses as currently conducted.

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The following table presents the components of our SLR on both the transitional and fully phased-in basis for BNY Mellon and our largest bank subsidiary, The Bank of New York Mellon.

SLR (dollars in millions)	June 30, 2017		March 31, 2017		Dec. 31, 2016		
	Transitional basis	Fully phased-in - Non-GAAP (a)	Transitional basis	Fully phased-in - Non-GAAP (a)	Transitional basis	Fully phased-in - Non-GAAP (a)	
Consolidated:							
Total Tier 1 capital	\$21,864	\$21,147	\$21,109	\$ 20,363	\$21,465	\$ 19,911	
Total leverage exposure:							
Quarterly average total assets	\$342,515	\$342,515	\$336,200	\$ 336,200	\$344,142	\$ 344,142	
Less: Amounts deducted from Tier 1 capital	18,092	18,810	18,016	18,763	17,333	18,887	
Total on-balance sheet assets, as adjusted	324,423	323,705	318,184	317,437	326,809	325,255	
Off-balance sheet exposures:							
Potential future exposure for derivative contracts (plus certain other items)	6,014	6,014	5,898	5,898	6,021	6,021	
Repo-style transaction exposures	631	631	536	536	533	533	
Credit-equivalent amount of other off-balance sheet exposures (less SLR exclusions)	22,098	22,098	22,901	22,901	23,274	23,274	
Total off-balance sheet exposures	28,743	28,743	29,335	29,335	29,828	29,828	
Total leverage exposure	\$353,166	\$352,448	\$347,519	\$ 346,772	\$356,637	\$ 355,083	
SLR - Consolidated (b)	6.2	%6.0	% 6.1	%5.9	% 6.0	%5.6	%
The Bank of New York Mellon, our largest bank subsidiary:							
Tier 1 capital	\$19,897	\$19,125	\$19,320	\$ 18,523	\$19,011	\$ 17,708	
Total leverage exposure	\$286,983	\$286,634	\$281,114	\$ 280,741	\$291,022	\$ 290,230	
SLR - The Bank of New York Mellon (b)	6.9	%6.7	% 6.9	%6.6	% 6.5	%6.1	%

(a) Estimated.

The estimated fully phased-in SLR (Non-GAAP) is based on our interpretation of the U.S. capital rules. When the SLR is fully phased-in in 2018 as a required minimum ratio, we expect to maintain an SLR of over 5%. The (b) minimum required SLR is 3% and there is a 2% buffer, in addition to the minimum, that is applicable to U.S.

G-SIBs. The insured depository institution subsidiaries of the U.S. G-SIBs, including those of BNY Mellon, must maintain a 6% SLR to be considered "well-capitalized."

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 16 of the Notes to Consolidated Financial Statements for additional information on the VaR methodology.

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In an effort to improve our enterprise level risk management capabilities, we have changed our VaR model from Monte Carlo simulation to historical simulation for both management and RWA calculations. This change was effective as of Jan. 1, 2017. In addition to this model enhancement, the impact of credit valuation adjustment (“CVA”) is now included.

The following tables indicate the calculated VaR amounts for the trading portfolio for the designated periods using the newly implemented historical simulation VaR model. The impact of changes in methodology is not material.

VaR (a) (in millions)	2Q17			June 30, 2017
	Average	Minimum	Maximum	
Interest rate	\$3.3	\$ 2.8	\$ 4.1	\$ 4.0
Foreign exchange	4.3	3.4	5.8	4.6
Equity	0.2	0.1	1.1	1.1
Credit	1.1	0.5	1.4	0.8
Diversification	(4.8)	N/M	N/M	(5.8)
Overall portfolio	4.1	3.3	5.4	4.7

VaR (a) (in millions)	1Q17			March 31, 2017
	Average	Minimum	Maximum	
Interest rate	\$3.9	\$ 2.9	\$ 4.9	\$ 3.3
Foreign exchange	3.6	2.6	4.9	3.3
Equity	0.2	0.2	0.4	0.2
Credit	1.3	1.1	1.7	1.2
Diversification	(4.9)	N/M	N/M	(4.5)
Overall portfolio	4.1	3.3	5.0	3.5

VaR (a) (in millions)	YTD17		
	Average	Minimum	Maximum
Interest rate	\$3.6	\$ 2.8	\$ 4.9
Foreign exchange	3.9	2.6	5.8
Equity	0.2	0.1	1.1
Credit	1.2	0.5	1.7
Diversification	(4.8)	N/M	N/M
Overall portfolio	4.1	\$ 3.3	\$ 5.4

Beginning Jan. 1, 2017, the VaR figures reflect the impact of the CVA and hedges as per the guidance included in (a) ASC 820, Fair Value Measurement. 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 following tables indicate the calculated VaR amounts for the trading portfolio for the designated periods as previously reported under the former Monte Carlo simulation VaR model.

VaR (a) (in millions)	2Q16			June 30, 2016
	Average	Minimum	Maximum	
Interest rate	\$6.2	\$ 5.5	\$ 7.1	\$ 6.4
Foreign exchange	2.5	1.9	11.1	2.8
Equity	0.6	0.4	0.7	0.6

Credit	0.3	0.2	0.4	0.3
Diversification	(3.7)	N/M	N/M	(3.6)
Overall portfolio	5.9	5.0	6.9	6.5

VaR (a)	YTD16		
(in millions)	Average	Minimum	Maximum
Interest rate	\$5.8	\$ 4.3	\$ 7.1
Foreign exchange	2.0	1.2	11.1
Equity	0.6	0.4	0.8
Credit	0.3	0.2	0.4
Diversification	(3.1)	N/M	N/M
Overall portfolio	5.6	\$ 4.3	\$ 6.9

VaR figures do not reflect the impact of the CVA guidance in ASC 820, Fair Value Measurement. This is (a) consistent with the regulatory treatment. 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 second quarter of 2017, interest rate risk generated 37% of average gross VaR, foreign exchange risk generated 48% of average gross VaR, equity risk accounted for 2% of average gross VaR and credit risk generated 13% of average gross VaR. During the second quarter of 2017, our daily trading loss did not exceed our calculated VaR amount of the overall portfolio.

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.

Distribution of trading revenue (loss) (a)

(dollar amounts in millions)	Quarter ended				
	June 30, 2017	March 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016
Revenue range:	Number of days				
Less than \$(2.5)	—	—	—	—	1
\$(2.5) – \$0	2	1	3	6	2
\$0 – \$2.5	31	31	28	22	20
\$2.5 – \$5.0	27	26	23	25	38
More than \$5.0	4	4	7	11	3

Trading revenue (loss) includes realized and unrealized gains and losses primarily related to spot and forward (a) 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 \$5 billion at June 30, 2017 and \$6 billion at Dec. 31, 2016.

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 \$4 billion at June 30, 2017 and Dec. 31, 2016.

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 June 30, 2017, our OTC derivative assets of \$3.5 billion included a CVA deduction of \$32 million. Our OTC derivative liabilities of \$4.0 billion included a debit valuation adjustment (“DVA”) of \$2 million related to our own credit spread. Net of hedges, the CVA decreased by \$3 million and the DVA decreased by \$1 million in the second

quarter of 2017. The net impact of these adjustments increased foreign exchange and other trading revenue by \$2 million in the second quarter of 2017.

In the first quarter of 2017, net of hedges, the CVA decreased by \$2 million and the DVA was unchanged. The net impact of these adjustments increased foreign exchange and other trading revenue by \$2 million in the first quarter of 2017.

In the second quarter of 2016, net of hedges, the CVA decreased by \$4 million and the DVA was unchanged. The net impact of these adjustments increased foreign exchange and other trading revenue by \$4 million in the second quarter of 2016.

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.

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

	Quarter ended					
	June 30, 2017	March 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016	
Rating:						
AAA to AA-	44	%43	%35	%45	%38	%
A+ to A-	27	36	39	32	40	
BBB+ to BBB-	22	17	22	19	18	
Noninvestment grade (BB+ and lower)	7	4	4	4	4	
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 are 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, balance changes on core deposits, 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. As a result, the earnings simulation model cannot precisely estimate net interest revenue or the impact of higher or lower interest rates on net interest revenue. Actual results may differ 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.

The table below relies on certain critical assumptions regarding the balance sheet and depositors' behavior related to interest rate fluctuations and the prepayment and extension risk in certain of our assets. Generally, there has been an inverse relationship between interest rates and client deposit levels. To the extent that actual behavior is different from that assumed in the models, there could be a change in interest rate sensitivity.

We evaluate the effect on earnings by running various interest rate ramp scenarios from a baseline scenario. The interest rate ramp scenarios are reviewed to examine the impact of large interest rate movements. In each scenario, all currencies interest rates are shifted higher or lower. 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 (dollars in millions)	June 30, 2017	March 31, 2017	Dec. 31, 2016	Sept. 30, 2016	June 30, 2016
up 200 bps parallel rate ramp vs. baseline (a)	\$(69)	\$(136)	\$6	\$62	\$91
up 100 bps parallel rate ramp vs. baseline (a)	58	87	145	147	158

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Long-term up 50 bps, short-term unchanged (b)	92	92	81	116	130
Long-term down 50 bps, short-term unchanged (b)	(85)(104)(88)(128)(96

(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.

The sequential decrease in the interest rate sensitivity was primarily driven by an increase in the expected baseline scenario, resulting from the recent short-term interest rate increases. The baseline scenario used for the calculations in the estimated changes in net interest revenue table above as of June 30, 2017, March 31, 2017 and Dec. 31, 2016 are based on our

quarter-end balance sheet and the spot yield curve. The baseline scenarios used for periods prior to Dec. 31, 2016 were based on implied forward yield curves. We revised the methodology as of Dec. 31, 2016 as we believe using the spot yield curve for the baseline scenario provides a more accurate reflection of net interest revenue sensitivity given the recent

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increase in short-term interest rates and the implied forward rates. Because interest rates and the implied forward yield curves were lower in prior periods, the impact of using a spot yield curve versus an implied forward yield curve was not as significant. 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.

Our net interest revenue sensitivity table above incorporates assumptions about the impact of changes in interest rates on depositor behavior based on historical experience. Given the current historically low interest rate environment and the potential change to the implementation of monetary policy, the impact of depositor behavior is highly uncertain. The lower sensitivity in the ramp up 200 basis point scenario compared with the 100 basis point scenario is driven by the assumption of increased deposit runoff and forecasted changes in the deposit pricing.

Growth or contraction of deposits could also be affected by the following factors:

- Monetary policy;
- Global economic uncertainty;
- Our ratings relative to other financial institutions' ratings; and
- Regulatory reform.

Any of these events could change our assumptions about depositor behavior and have a significant impact on our balance sheet and net interest revenue.

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 credit guarantees and a securitization. Guarantees include lending-related guarantees issued as part of our corporate banking business and securities lending indemnifications issued as part of our Investment Services business. See Note 17 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 based on estimated fully phased-in CET1 and other risk-based capital ratios, the estimated fully phased-in SLR and tangible common shareholders' equity. BNY Mellon believes that the CET1 and other risk-based capital ratios, on a fully phased-in basis, and the SLR, on a fully phased-in basis, are measures of capital strength that provide additional useful information to investors, supplementing the capital ratios which are, or were, required by regulatory authorities. The tangible common shareholders' equity ratio, which excludes goodwill and intangible assets, net of deferred tax liabilities, includes changes in investment securities valuations which are reflected in total shareholders' equity. In addition, this ratio is expressed as a percentage of the actual book value of assets. 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.

BNY Mellon has presented revenue measures, which exclude the effect of noncontrolling interests related to consolidated investment management funds, and expense measures, which exclude amortization of intangible assets and M&I, litigation and restructuring charges.

Operating margin, operating leverage and return on equity measures, which exclude some or all of these items, are also presented. Operating margin measures may also exclude the provision for credit losses and distribution and servicing expense. BNY Mellon believes that these measures are useful to investors because they permit a focus on period-to-period

comparisons, which relate to the ability of BNY Mellon to enhance revenues and limit expenses in circumstances where such matters are within BNY Mellon's control. M&I expenses primarily relate to acquisitions and generally continue for approximately three years after the transaction. Litigation charges represent accruals for loss contingencies that are both probable and reasonably estimable, but exclude standard business-related legal fees. Restructuring charges relate to our streamlining actions and Operational Excellence Initiatives. Excluding the charges mentioned above permits investors to view expenses on a basis consistent with how management views the business.

The presentation of revenue growth 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.

The presentation of income from consolidated investment management funds, net of net income (loss) attributable to noncontrolling interests related to the consolidation of certain investment management funds, permits investors to view revenue on a basis consistent with how management views the business. BNY Mellon believes that these presentations, as a supplement to GAAP information, give investors a clearer picture of the results of its primary businesses.

Each of these measures as described above is used by management to monitor financial performance, both on a company-wide and on a business-level basis.

The following table presents the reconciliation of the pre-tax operating margin ratio.

Reconciliation of income before income taxes – pre-tax operating margin (dollars in millions)	2Q17	1Q17	2Q16	YTD17	YTD16	
Income before income taxes – GAAP	\$1,308	\$1,206	\$1,165	\$2,514	\$2,256	
Less: Net income (loss) attributable to noncontrolling interests of consolidated investment management funds	3	18	4	21	(3)	
Add: Amortization of intangible assets	53	52	59	105	116	
M&I, litigation and restructuring charges	12	8	7	20	24	
Income before income taxes, as adjusted – Non-GAAP (a)	\$1,370	\$1,248	\$1,227	\$2,618	\$2,399	
Fee and other revenue – GAAP	\$3,120	\$3,018	\$2,999	\$6,138	\$5,969	
Income from consolidated investment management funds – GAAP	10	33	10	43	4	
Net interest revenue – GAAP	826	792	767	1,618	1,533	
Total revenue – GAAP	3,956	3,843	3,776	7,799	7,506	
Less: Net income (loss) attributable to noncontrolling interests of consolidated investment management funds	3	18	4	21	(3)	
Total revenue, as adjusted – Non-GAAP (a)	\$3,953	\$3,825	\$3,772	\$7,778	\$7,509	
Pre-tax operating margin – GAAP (b)(c)	33	%31	%31	%32	%30	%
Adjusted pre-tax operating margin – Non-GAAP (a)(b)(c)	35	%33	%33	%34	%32	%

Non-GAAP information for all periods presented excludes the net income (loss) attributable to noncontrolling interests of consolidated investment management funds, amortization of intangible assets and M&I, litigation and restructuring charges.

(b) Income before taxes divided by total revenue.

Our GAAP earnings include tax-advantaged investments such as low income housing, renewable energy, corporate/bank-owned life insurance and tax-exempt securities. The benefits of these investments are primarily reflected in tax expense. If reported on a tax-equivalent basis, these investments would increase revenue and income before taxes by \$106 million for the second quarter of 2017, \$101 million for the first quarter of 2017, \$74 million for the second quarter of 2016, \$207 million for the first six months of 2017 and \$151 million for the first six months of 2016 and would increase our pre-tax operating margin by approximately 1.8% for the second quarter of 2017 and the first quarter of 2017, 1.3% for the second quarter of 2016, 1.8% for the first six months of 2017 and 1.4% for the first six months of 2016.

The following table presents the reconciliation of operating leverage.

Operating leverage (dollars in millions)	2Q17	1Q17	2Q16	2Q17 vs. 1Q17	2Q16
Total revenue – GAAP	\$3,956	\$3,843	\$3,776	2.94%	4.77%
Less: Net income attributable to noncontrolling interests of consolidated investment management funds	3	18	4		
Total revenue, as adjusted – Non-GAAP	\$3,953	\$3,825	\$3,772	3.35%	4.80%
Total noninterest expense – GAAP	\$2,655	\$2,642	\$2,620	0.49%	1.34%
Less: Amortization of intangible assets	53	52	59		
M&I, litigation and restructuring charges	12	8	7		
Total noninterest expense, as adjusted – Non-GAAP	\$2,590	\$2,582	\$2,554	0.31%	1.41%

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Operating leverage – GAAP (a)	245	bps	343	bps
Adjusted operating leverage – Non-GAAP (a)(b)	304	bps	339	bps

(a) Operating leverage is the rate of increase (decrease) in total revenue less the rate of increase (decrease) in total noninterest expense.

Non-GAAP operating leverage for all periods presented excludes the net income attributable to noncontrolling interests of consolidated investment management funds, amortization of intangible assets and M&I, litigation and restructuring charges.

bps - basis points.

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

Return on common equity and tangible common equity (dollars in millions)	2Q17	1Q17	2Q16	YTD17	YTD16	
Net income applicable to common shareholders of The Bank of New York Mellon Corporation – GAAP	\$926	\$880	\$825	\$1,806	\$1,629	
Add: Amortization of intangible assets	53	52	59	105	116	
Less: Tax impact of amortization of intangible assets	19	18	21	37	41	
Adjusted net income applicable to common shareholders of The Bank of New York Mellon Corporation excluding amortization of intangible assets – Non-GAAP	960	914	863	1,874	1,704	
Add: M&I, litigation and restructuring charges	12	8	7	20	24	
Less: Tax impact of M&I, litigation and restructuring charges	3	2	2	5	8	
Adjusted net income applicable to common shareholders of The Bank of New York Mellon Corporation, as adjusted – Non-GAAP (a)	\$969	\$920	\$868	\$1,889	\$1,720	
Average common shareholders' equity	\$35,862	\$34,965	\$35,827	\$35,416	\$35,539	
Less: Average goodwill	17,408	17,338	17,622	17,373	17,592	
Average intangible assets	3,532	3,578	3,789	3,555	3,801	
Add: Deferred tax liability – tax deductible goodwill (b)	1,542	1,518	1,452	1,542	1,452	
Deferred tax liability – intangible assets (b)	1,095	1,100	1,129	1,095	1,129	
Average tangible common shareholders' equity – Non-GAAP	\$17,559	\$16,667	\$16,997	\$17,125	\$16,727	
Return on common equity – GAAP (c)	10.4	% 10.2	% 9.3	% 10.3	% 9.2	%
Adjusted return on common equity – Non-GAAP (a)(c)	10.8	% 10.7	% 9.7	% 10.8	% 9.7	%
Return on tangible common equity – Non-GAAP (c)	21.9	% 22.2	% 20.4	% 22.1	% 20.5	%
Adjusted return on tangible common equity – Non-GAAP (a)(c)	22.1	% 22.4	% 20.5	% 22.2	% 20.7	%

(a) Non-GAAP information for all periods presented excludes the amortization of intangible assets and M&I, litigation and restructuring charges.

(b) Deferred tax liabilities are based on fully phased-in Basel III rules.

(c) Quarterly returns are annualized.

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

Book value per common share (dollars in millions, unless otherwise noted)	June 30, 2017	March 31, 2017	Dec. 31, 2016	June 30, 2016
BNY Mellon shareholders' equity at period end – GAAP	\$ 39,974	\$ 39,138	\$ 38,811	\$ 38,559
Less: Preferred stock	3,542	3,542	3,542	2,552
BNY Mellon common shareholders' equity at period end – GAAP	36,432	35,596	35,269	36,007
Less: Goodwill	17,457	17,355	17,316	17,501
Intangible assets	3,506	3,549	3,598	3,738
Add: Deferred tax liability – tax deductible goodwill (a)	1,542	1,518	1,497	1,452
Deferred tax liability – intangible assets (a)	1,095	1,100	1,105	1,129
BNY Mellon tangible common shareholders' equity at period end – Non-GAAP	\$ 18,106	\$ 17,310	\$ 16,957	\$ 17,349
Period-end common shares outstanding (in thousands)	1,033,156	1,039,877	1,047,488	1,067,674

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Book value per common share – GAAP	\$ 35.26	\$ 34.23	\$ 33.67	\$ 33.72
Tangible book value per common share – Non-GAAP	\$ 17.53	\$ 16.65	\$ 16.19	\$ 16.25

(a)Deferred tax liabilities are based on fully phased-in Basel III rules.

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

Investment management and performance fees – Consolidated (dollars in millions)	2Q17 vs.		
	2Q17	2Q16		2Q16
Investment management and performance fees – GAAP	\$ 879	\$ 830	6 %
Impact of changes in foreign currency exchange rates	—	(26))
Investment management and performance fees, as adjusted – Non-GAAP	\$ 879	\$ 804	9 %

The following table presents income from consolidated investment management funds, net of noncontrolling interests.

Income from consolidated investment management funds, net of noncontrolling interests (in millions)	2Q17			YTD17		YTD16	
	Q1	Q2	Q3	Q1	Q2	Q3	Q4
Income from consolidated investment management funds	\$ 10	\$ 33	\$ 10	\$ 43	\$ 4		
Less: Net income (loss) attributable to noncontrolling interests of consolidated investment management funds	3	18	4	21	(3))	
Income from consolidated investment management funds, net of noncontrolling interests	\$ 7	\$ 15	\$ 6	\$ 22	\$ 7		

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

Investment management fees - Investment Management business (dollars in millions)	2Q17 vs.		
	2Q17	2Q16		2Q16
Investment management fees – GAAP	\$ 845	\$ 808	5 %
Impact of changes in foreign currency exchange rates	—	(25))
Investment management fees, as adjusted – Non-GAAP	\$ 845	\$ 783	8 %

The following table presents the revenue line items in the Investment Management business impacted by the consolidated investment management funds.

Income (loss) from consolidated investment management funds, net of noncontrolling interests - Investment Management business (in millions)	2Q17			3Q16		YTD17		YTD16	
	Q1	Q2	Q3	Q1	Q2	Q3	Q4	Q1	Q2
Investment management fees	\$ 2	\$ 2	\$ 4	\$ 2	\$ 3	\$ 4	\$ 5		
Other (Investment income (loss))	5	13	(3)	)6	3	18	2		
Income from consolidated investment management funds, net of noncontrolling interests	\$ 7	\$ 15	\$ 1	\$ 8	\$ 6	\$ 22	\$ 7		

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

Pre-tax operating margin - Investment Management business (dollars in millions)	2Q17	1Q17	4Q16	3Q16	2Q16	YTD17	YTD16	
Income before income taxes – GAAP	\$288	\$277	\$260	\$256	\$234	\$565	\$451	
Add: Amortization of intangible assets	15	15	22	22	19	30	38	
Provision for credit losses	—	3	6	—	1	3	—	
Adjusted income before income taxes, excluding amortization of intangible assets and provision for credit losses – Non-GAAP	\$303	\$295	\$288	\$278	\$254	\$598	\$489	
Total revenue – GAAP	\$986	\$963	\$960	\$958	\$938	\$1,949	\$1,833	
Less: Distribution and servicing expense	104	101	98	104	102	205	202	
Adjusted total revenue, net of distribution and servicing expense – Non-GAAP	\$882	\$862	\$862	\$854	\$836	\$1,744	\$1,631	
Pre-tax operating margin – GAAP (a)	29	%29	%27	%27	%25	%29	%25	%
Adjusted pre-tax operating margin, excluding amortization of intangible assets, provision for credit losses and distribution and servicing expense – Non-GAAP (a)	34	%34	%33	%33	%30	%34	%30	%
(a)Income before taxes divided by total revenue.								

Recent accounting and regulatory developments

Recently issued accounting standards

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

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 income statement. The ASU also permits only the service cost component of net benefit cost to be eligible for capitalization. The ASU is effective for the first quarter of 2018, with early adoption permitted. The guidance in this ASU should be applied retrospectively for the presentation of the service cost component and the other components in the income statement, and prospectively for the capitalization of the service cost component in assets. BNY Mellon is assessing the impacts of the new standard. For information on the components of our pension and post-retirement health plan costs, see

Note 9 of the Notes to Consolidated Financial Statements in this Form 10-Q and Note 16 of the Notes to Consolidated Financial Statements in our 2016 Annual Report. To the extent that our recent trend of having a net credit for pension and other post-retirement costs continues, the standard will result in an increase to staff expense and a reduction in other expense.

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

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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 statement of cash flows and is effective for the first quarter of 2018. Earlier application is permitted. BNY Mellon is assessing the impacts of the new standard, and expects to include restricted cash (which totaled \$3 billion as of June 30, 2017) with cash and due from banks when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows.

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

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guidance on eight specific cash flow presentation issues and is effective for the first quarter of 2018. Earlier application is permitted, however all of the amendments must be adopted in the same period. BNY Mellon is assessing the impacts of the new standard, and does not expect this ASU to materially affect the results of operations or financial condition.

ASU 2016-13, Financial Instruments – Credit Losses

In June 2016, the FASB issued an ASU, Financial Instruments – Credit Losses. 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. Earlier application is permitted beginning with the first quarter of 2019. BNY Mellon has begun its implementation efforts and is currently identifying key interpretive issues, and will assess existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. 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.

ASU 2014-09, Revenue from Contracts with Customers

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers, which provides guidance on the recognition of revenue related to the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In March 2016, the FASB issued ASU 2016-08, Principal versus Agent Considerations (Reporting Revenue Gross versus Net), which clarifies the guidance in determining revenue recognition as principal versus agent. In April 2016, the FASB issued ASU 2016-10, Identifying Performance Obligations and Licensing, which

provides guidance in accounting for immaterial performance obligations and shipping and handling. In May 2016, the FASB issued ASU 2016-12, Narrow-Scope Improvements and Practical Expedients, which provides clarification on assessing the collectability criterion, presentation of sales taxes, measurement date for non-cash consideration and completed contracts at transition, and provides a practical expedient for contract modifications. In December 2016, the FASB issued ASU 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers which provides amended guidance on narrow aspects of ASU 2014-09. The new standards are effective for the first quarter of 2018, with early adoption permitted. The standards permit the use of either the retrospective or cumulative effect transition method upon transition.

The Company has substantially completed its evaluation of the potential impact of this guidance on our accounting policies, and based on that evaluation, we expect the timing of most of our revenue recognition to remain the same and the impacts to not be material. To date, the impacts we have identified primarily relate to deferring and amortizing certain sales commission costs related to obtaining customer contracts and the timing of recognizing the contra revenue related to certain payments made to customers. The Company is considering using the retrospective method of adoption, but has not yet finalized its decision as we are still evaluating the related costs and benefits, including disclosure requirements in the year of adoption if the retrospective method is not used.

ASU 2016-02, Leases

In February 2016, the FASB issued ASU 2016-02, 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. ASU 2016-02 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.

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The standard is effective for the first quarter of 2019, with early adoption permitted. The standard requires that a modified retrospective transition approach be used by lessees and lessors to recognize and measure leases at the beginning of the earliest period presented. This modified retrospective approach includes a number of optional practical expedients that entities may elect to apply. We are currently evaluating the potential impact of the leasing standard on our consolidated financial statements and evaluating the practical expedients that may be elected. Upon adoption, the implementation of the leasing standard is expected to result in an immaterial increase in both assets and liabilities.

ASU 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU 2016-01, 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 apply. The first exception, a scope exception, allows Federal Reserve Bank Stock, Federal Home Loan Bank stock and other exchange memberships held by broker dealers to remain accounted for at cost, less impairment. The second exception, a practicability exception, will be available for equity investments that do not have readily determinable fair values and do not qualify for the practical expedient to estimate fair value under ASC 820, Fair Value Measurement. To the extent the practicability exception applies, such investments will be accounted for at cost adjusted for impairment, if any, plus or minus changes from observable price changes.

The amendments also require an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from the entity's "own credit risk" when the entity has elected to measure the liability at fair value. The amendments also eliminate the requirement to disclose the methods and significant assumptions used to estimate the fair values of financial instruments measured at amortized cost that are on the balance sheet.

This ASU is effective for the first quarter of 2018. If certain requirements are met, early adoption of the "own credit risk" provision is permitted; early adoption of the other provisions is not permitted. The FASB requires a modified retrospective method of adoption. BNY Mellon does not expect the adoption of this ASU to have a material impact.

Recent regulatory developments

For a summary of additional regulatory matters relevant to our operations, see Supervision and Regulation in our 2016 Annual Report.

Capital Planning and Stress Testing

We submitted our 2017 capital plan to the Federal Reserve in April 2017. On June 28, 2017 the Federal Reserve announced that it did not object to BNY Mellon's 2017 capital plan. The Dodd-Frank Act Stress Tests ("DFAST") substantially overlap with CCAR stress testing requirements. Under DFAST, BNY Mellon is required to undergo supervisory stress tests conducted by the Federal Reserve annually, and to conduct our own internal stress tests pursuant to regulatory requirements twice annually. The Federal Reserve published the results of its annual 2017 DFAST stress-test on June 22, 2017.

Resolution Plan

BNY Mellon filed its 2017 resolution plan with the Federal Reserve and the FDIC on July 1, 2017. The 2017 resolution plan is our first complete plan submission reflecting the change in our preferred resolution strategy in the event of our material financial distress or failure to a single point of entry ("SPOE") strategy, which involves recapitalization of our material operating subsidiaries prior to the Parent's entry into insolvency proceedings. BNY

Mellon believes its 2017 resolution plan addresses all shortcomings and deficiencies identified by the Federal Reserve and the FDIC in our 2015 resolution plan. The public portion of the 2017 resolution plan is available on the Federal Reserve's and FDIC's websites.

Department of Labor Fiduciary Rule

The U.S. Department of Labor's ("DOL") final rule regarding the conduct standards of certain service providers to employee benefit plans and individual retirement accounts became applicable on June 9,

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2017. The rule, among other things, expands the definition of who is designated a “fiduciary” of an employee benefit plan or individual retirement account, and provides certain prohibited transaction exemptions (PTE). The DOL has undertaken additional activity related to the implementation of the rule. This activity includes the release of a Field Assistance Bulletin, indicating that the DOL will not pursue claims against fiduciaries who are working diligently to comply with the rule during the implementation period ending Jan. 1, 2018, as well as a Request for Information that seeks input on the advisability of extending the Jan. 1, 2018 applicability date of the PTEs and input on several questions related to implementation of the rule. BNY Mellon businesses that are impacted by this rule have remained focused on conforming their business practices to address changes required by the rule. For more information regarding this rule, see “Supervision and Regulation” in our 2016 Annual Report.

Liquidity Coverage Ratio

The U.S. LCR rules became fully phased-in on Jan. 1, 2017 and require BNY Mellon and our affected domestic bank subsidiaries to meet an LCR of 100%. The LCR for BNY Mellon and our domestic bank subsidiaries was compliant with the in requirements of the U.S. LCR as of June 30, 2017. On Dec. 19, 2016, the Federal Reserve issued a final rule requiring that large banking organizations, including BNY Mellon, publicly disclose certain quantitative liquidity metrics, including their consolidated average LCR each quarter and consolidated average HQLA amounts, broken down by HQLA category, along with a qualitative discussion of material drivers of the ratio and related changes. BNY Mellon will commence this disclosure for the second quarter of 2017. For additional information on the LCR, see “Supervision and Regulation - Liquidity Standards - Basel III and U.S. Rules and Proposals” in our 2016 Annual Report.

FX Global Code

On May 25, 2017, the Foreign Exchange Working Group, comprised of officials of the largest central banks, released the FX Global Code (the “Code”). The Code is a principles-based document for all FX market participants and does not impose legal or regulatory obligations. Rather, it is intended to supplement applicable law by identifying good

practices and processes in the areas of ethics, governance, execution, information-sharing, risk management and compliance, and confirmation and settlement. BNY Mellon is implementing the Code as appropriate.

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 SEC filings, 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, SEC Forms 3, 4 and 5 and any proxy statement mailed by us in connection with the solicitation of proxies;

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); 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 and Nominating, Corporate Social Responsibility, Human Resources and Compensation, Risk and Technology Committees of our Board of Directors.

The contents of the website listed above or any other websites referenced herein are not incorporated into this Quarterly Report on Form 10-Q.

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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	
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Fee and other revenue					
Investment services fees:					
Asset servicing	\$1,085	\$1,063	\$1,069	\$2,148	\$2,109
Clearing services	394	376	350	770	700
Issuer services	241	251	234	492	478
Treasury services	140	139	139	279	270
Total investment services fees	1,860	1,829	1,792	3,689	3,557
Investment management and performance fees	879	842	830	1,721	1,642
Foreign exchange and other trading revenue	165	164	182	329	357
Financing-related fees	53	55	57	108	111
Distribution and servicing	41	41	43	82	82
Investment and other income	122	77	74	199	179
Total fee revenue	3,120	3,008	2,978	6,128	5,928
Net securities gains — including other-than-temporary impairment	—	10	21	10	40
Noncredit-related portion of other-than-temporary impairment (recognized in other comprehensive income)	—	—	—	—	(1)
Net securities gains	—	10	21	10	41
Total fee and other revenue	3,120	3,018	2,999	6,138	5,969
Operations of consolidated investment management funds					
Investment income	10	37	10	47	7
Interest of investment management fund note holders	—	4	—	4	3
Income from consolidated investment management funds	10	33	10	43	4
Net interest revenue					
Interest revenue	1,052	960	890	2,012	1,773
Interest expense	226	168	123	394	240
Net interest revenue	826	792	767	1,618	1,533
Total revenue	3,956	3,843	3,776	7,799	7,506
Provision for credit losses	(7)	(5)	(9)	(12)	1
Noninterest expense					
Staff	1,417	1,472	1,412	2,889	2,871
Professional, legal and other purchased services	319	312	290	631	568
Software	173	166	160	339	314
Net occupancy	139	136	152	275	294
Distribution and servicing	104	100	102	204	202
Sub-custodian	65	64	70	129	129
Furniture and equipment	59	57	63	116	128
Bank assessment charges (a)	59	57	52	116	105
Business development	63	51	65	114	122
Other (a)	192	167	188	359	376
Amortization of intangible assets	53	52	59	105	116

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Merger and integration, litigation and restructuring charges	12	8	7	20	24
Total noninterest expense	2,655	2,642	2,620	5,297	5,249
Income					
Income before income taxes	1,308	1,206	1,165	2,514	2,256
Provision for income taxes	332	269	290	601	573
Net income	976	937	875	1,913	1,683
Net (income) loss attributable to noncontrolling interests (includes \$(3), \$(18), \$(4), \$(21) and \$3 related to consolidated investment management funds, respectively)	(1	)(15	)(2	)(16	)7
Net income applicable to shareholders of The Bank of New York Mellon Corporation	975	922	873	1,897	1,690
Preferred stock dividends	(49	)(42	)(48	)(91	)(61
Net income applicable to common shareholders of The Bank of New York Mellon Corporation	\$926	\$ 880	\$825	\$1,806	\$1,629

(a) In the first quarter of 2017, we began disclosing bank assessment charges on a quarterly basis. The bank assessment charges were previously included in other expense. All prior periods were reclassified.

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

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 (in millions)	Quarter ended			Year-to-date	
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Net income applicable to common shareholders of The Bank of New York Mellon Corporation	\$926	\$ 880	\$ 825	\$ 1,806	\$ 1,629
Less: Earnings allocated to participating securities	13	14	13	27	24
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	\$913	\$ 866	\$ 812	\$ 1,779	\$ 1,605

Average common shares and equivalents outstanding of The Bank of New York Mellon Corporation (in thousands)	Quarter ended			Year-to-date	
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Basic	1,035,829	1,041,158	1,072,583	1,038,479	1,076,112
Common stock equivalents	15,598	17,886	14,551	16,710	14,714
Less: Participating securities	(9,548)	(11,298)	(8,863)	(10,380)	(8,979)
Diluted	1,041,879	1,047,746	1,078,271	1,044,809	1,081,847
Anti-dilutive securities (a)	16,256	17,359	32,974	16,756	32,929

Earnings per share applicable to common shareholders of The Bank of New York Mellon Corporation (b) (in dollars)	Quarter ended			Year-to-date	
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Basic	\$0.88	\$ 0.83	\$ 0.76	\$ 1.71	\$ 1.49
Diluted	\$0.88	\$ 0.83	\$ 0.75	\$ 1.70	\$ 1.48

(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.

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 Notes to Consolidated Financial Statements.

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

Consolidated Comprehensive Income Statement (unaudited)

(in millions)	Quarter ended			Year-to-date	
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Net income	\$976	\$ 937	\$ 875	\$1,913	\$1,683
Other comprehensive income (loss), net of tax:					
Foreign currency translation adjustments	330	125	(284)	455	(247)
Unrealized gain on assets available-for-sale:					
Unrealized gain arising during the period	91	94	117	185	280
Reclassification adjustment	(1	)(6	)(13	)(7	)(28
Total unrealized gain on assets available-for-sale	90	88	104	178	252
Defined benefit plans:					
Net gain arising during the period	—	2	—	2	2
Amortization of prior service credit, net loss and initial obligation included in net periodic benefit cost	16	18	14	34	29
Total defined benefit plans	16	20	14	36	31
Net unrealized gain (loss) on cash flow hedges	1	10	(9	) 11	(6
Total other comprehensive income (loss), net of tax (a)	437	243	(175	) 680	30
Total comprehensive income	1,413	1,180	700	2,593	1,713
Net (income) loss attributable to noncontrolling interests	(1	)(15	)(2	)(16	)7
Other comprehensive (income) loss attributable to noncontrolling interests	(6	)(2	) 13	(8	) 18
Comprehensive income applicable to shareholders of The Bank of New York Mellon Corporation	\$1,406	\$ 1,163	\$ 711	\$2,569	\$1,738

Other comprehensive income (loss) attributable to The Bank of New York Mellon Corporation shareholders was \$431 million for the quarter ended June 30, 2017, \$241 million for the quarter ended March 31, 2017, \$(162) million for the quarter ended June 30, 2016, \$672 million for the six months ended June 30, 2017 and \$48 million for the six months ended June 30, 2016.

See accompanying Notes to Consolidated Financial Statements.

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

Consolidated Balance Sheet (unaudited)

(dollars in millions, except per share amounts)	June 30, 2017	Dec. 31, 2016
Assets		
Cash and due from:		
Banks	\$4,725	\$4,822
Interest-bearing deposits with the Federal Reserve and other central banks	74,130	58,041
Interest-bearing deposits with banks	13,601	15,086
Federal funds sold and securities purchased under resale agreements	27,440	25,801
Securities:		
Held-to-maturity (fair value of \$40,862 and \$40,669)	40,986	40,905
Available-for-sale	78,274	73,822
Total securities	119,260	114,727
Trading assets	5,279	5,733
Loans	61,673	64,458
Allowance for loan losses	(165)	(169)
Net loans	61,508	64,289
Premises and equipment	1,640	1,303
Accrued interest receivable	567	568
Goodwill	17,457	17,316
Intangible assets	3,506	3,598
Other assets (includes \$911 and \$1,339, at fair value)	25,000	20,954
Subtotal assets of operations	354,113	332,238
Assets of consolidated investment management funds, at fair value	702	1,231
Total assets	\$354,815	\$333,469
Liabilities		
Deposits:		
Noninterest-bearing (principally U.S. offices)	\$89,063	\$78,342
Interest-bearing deposits in U.S. offices	48,798	52,049
Interest-bearing deposits in Non-U.S. offices	97,816	91,099
Total deposits	235,677	221,490
Federal funds purchased and securities sold under repurchase agreements	10,934	9,989
Trading liabilities	4,100	4,389
Payables to customers and broker-dealers	21,622	20,987
Commercial paper	876	—
Other borrowed funds	1,338	754
Accrued taxes and other expenses	5,670	5,867
Other liabilities (including allowance for lending-related commitments of \$105 and \$112, also includes \$815 and \$597, at fair value)	6,379	5,635
Long-term debt (includes \$368 and \$363, at fair value)	27,699	24,463
Subtotal liabilities of operations	314,295	293,574
Liabilities of consolidated investment management funds, at fair value	22	315
Total liabilities	314,317	293,889
Temporary equity		
Redeemable noncontrolling interests	181	151
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

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Common stock – par value \$0.01 per share; authorized 3,500,000,000 shares; issued 1,349,181,914 and 1,333,706,427 shares	13	13
Additional paid-in capital	26,432	25,962
Retained earnings	24,027	22,621
Accumulated other comprehensive loss, net of tax	(3,093)	(3,765)
Less: Treasury stock of 316,025,713 and 286,218,126 common shares, at cost	(10,947)	(9,562)
Total The Bank of New York Mellon Corporation shareholders' equity	39,974	38,811
Nonredeemable noncontrolling interests of consolidated investment management funds	343	618
Total permanent equity	40,317	39,429
Total liabilities, temporary equity and permanent equity	\$354,815	\$333,469

See accompanying Notes to Consolidated Financial Statements.

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

Consolidated Statement of Cash Flows (unaudited)

(in millions)	Six months ended June 30,	
	2017	2016
Operating activities		
Net income	\$1,913	\$1,683
Net (income) loss attributable to noncontrolling interests	(16)	7
Net income applicable to shareholders of The Bank of New York Mellon Corporation	1,897	1,690
Adjustments to reconcile net income to net cash (used for) provided by operating activities:		
Provision for credit losses	(12)	1
Pension plan contributions	(8)	(13)
Depreciation and amortization	693	748
Deferred tax expense (benefit)	124	(299)
Net securities (gains)	(10)	(41)
Change in trading assets and liabilities	167	1,914
Originations of loans held-for-sale	—	(171)
Proceeds from the sales of loans originated for sale	—	280
Change in accruals and other, net	(4,706)	(2,647)
Net cash (used for) provided by operating activities	(1,855)	1,462
Investing activities		
Change in interest-bearing deposits with banks	1,961	1,979
Change in interest-bearing deposits with the Federal Reserve and other central banks	(13,836)	25,717
Purchases of securities held-to-maturity	(4,494)	(2,165)
Paydowns of securities held-to-maturity	2,146	2,209
Maturities of securities held-to-maturity	2,825	2,471
Purchases of securities available-for-sale	(13,569)	(14,524)
Sales of securities available-for-sale	2,093	4,624
Paydowns of securities available-for-sale	4,679	4,155
Maturities of securities available-for-sale	3,842	6,086
Net change in loans	2,653	(1,080)
Sales of loans and other real estate	364	170
Change in federal funds sold and securities purchased under resale agreements	(1,639)	(3,665)
Net change in seed capital investments	(23)	(49)
Purchases of premises and equipment/capitalized software	(722)	(349)
Acquisitions, net of cash	—	(38)
Other, net	292	155
Net cash (used for) provided by investing activities	(13,428)	25,696
Financing activities		
Change in deposits	10,812	(20,265)
Change in federal funds purchased and securities sold under repurchase agreements	945	(7,391)
Change in payables to customers and broker-dealers	626	(730)
Change in other borrowed funds	196	551
Change in commercial paper	876	—
Net proceeds from the issuance of long-term debt	3,990	2,990
Repayments of long-term debt	(796)	(1,450)
Proceeds from the exercise of stock options	256	106
Issuance of common stock	14	13
Treasury stock acquired	(1,385)	(1,086)

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Common cash dividends paid	(400)	(370)
Preferred cash dividends paid	(91)	(61)
Other, net	30	(13)
Net cash provided by (used for) financing activities	15,073	(27,706)
Effect of exchange rate changes on cash	113	(180)
Change in cash and due from banks		
Change in cash and due from banks	(97)	(728)
Cash and due from banks at beginning of period	4,822	6,537
Cash and due from banks at end of period	\$4,725	\$5,809
Supplemental disclosures		
Interest paid	\$385	\$241
Income taxes paid	220	223
Income taxes refunded	2	26
See accompanying Notes to Consolidated Financial Statements.		

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

Consolidated Statement of Changes in Equity (unaudited)

(in millions, except per share amount)	The Bank of New York Mellon Corporation shareholders					Treasury stock	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 income, net of tax				
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	—	—	—	—	—	—	—	—	29
Redemption of subsidiary shares from noncontrolling interests	—	—	—	—	—	—	—	—	(16)
Other net changes in noncontrolling interests	—	—	(9)	—	—	—	(296)	(305)	14
Net income (loss)	—	—	—	1,897	—	—	21	1,918	(5)
Other comprehensive income	—	—	—	—	672	—	—	672	8
Dividends:									
Common stock at \$0.38 per share	—	—	—	(400)	—	—	—	(400)	—
Preferred stock	—	—	—	(91)	—	—	—	(91)	—
Repurchase of common stock	—	—	—	—	—	(1,385)	—	(1,385)	—
Common stock issued under:									
Employee benefit plans	—	—	15	—	—	—	—	15	—
Direct stock purchase and dividend reinvestment plan	—	—	10	—	—	—	—	10	—
Stock awards and options exercised	—	—	454	—	—	—	—	454	—
Balance at June 30, 2017	\$3,542	\$ 13	\$26,432	\$24,027	\$ (3,093)	\$(10,947)	\$ 343	\$40,317	(a) \$ 181

(a) Includes total The Bank of New York Mellon Corporation common shareholders' equity of \$35,269 million at Dec. 31, 2016 and \$36,432 million at June 30, 2017.

See accompanying Notes to Consolidated Financial Statements.

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, 2016. 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 the allowance for loan losses and lending-related commitments, the 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 investment securities, goodwill and intangible assets and establishment of allowances for loan losses and lending-related commitments as well as changes in pension and post-retirement expense.

Note 2 - Accounting change and new accounting guidance

ASU 2017-04, Simplifying the Test for Goodwill Impairment

In January 2017, the FASB issued ASU 2017-04, Simplifying the Test for Goodwill Impairment. This ASU simplifies the annual goodwill impairment test by eliminating Step 2. The Step 2 calculation estimated the implied goodwill using the fair values of all assets, including previously unrecorded intangibles, and liabilities at the date of the test. Step 2 was required if the first step of the annual test indicated that the fair value of a reporting unit is less than its carrying value. After adopting this ASU, the amount of any goodwill impairment will be determined by the excess of the carrying value of a reporting unit over its fair value. The Company early adopted this ASU in the second quarter of 2017, in conjunction with its annual goodwill impairment test. The annual test did not result in any impairment.

ASU 2016-09, Compensation – Stock Compensation

In March 2016, the FASB issued ASU 2016-09, Compensation – Stock Compensation. This ASU simplifies several aspects of the accounting for share-based payment transactions, including income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. The adoption of this ASU results in increased volatility to the Company’s income tax expense. The income tax volatility is dependent on the Company’s stock price at dates restricted stock units vest, which occur on award vesting dates primarily in the first quarter of each year, and when employees choose to exercise stock options. The Company adopted this ASU effective

Jan. 1, 2017.

As a result of applying this ASU, in the first quarter of 2017, we recorded an income tax benefit of approximately \$32 million, or \$0.03 per common share, related to the annual vesting of stock awards and our stock price appreciating above the awards' original grant price. Our effective tax rate in the first quarter of 2017 benefited by approximately 3%.

We also determined that we will continue applying the accounting policy election to estimate forfeitures.

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Notes to Consolidated Financial Statements (continued)

Additionally, we are reporting excess tax benefits as operating activities on the statement of cash flows on a prospective basis and the employee taxes paid will continue to be reported as financing activities.

Note 3 - Acquisitions

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 second quarter of 2017 or the first six months of 2017.

At June 30, 2017, we are potentially obligated to pay additional consideration which, using reasonable assumptions, could range from \$2 million to \$18 million over the next two years, but could be higher as certain of the arrangements do not contain a contractual maximum. The acquisition described below did not have a material impact on BNY Mellon's results of operations.

Acquisition in 2016

On April 1, 2016, BNY Mellon acquired the assets of Atherton Lane Advisers, LLC, a U.S.-based investment manager with approximately \$2.45 billion in AUM and servicer for approximately 700 high net worth clients, for cash of \$38 million, plus contingent payments measured at \$22 million. Goodwill related to this acquisition totaled \$29 million and is included in the Investment Management business. The customer relationship intangible asset related to this acquisition is included in the Investment Management business, with an estimated life of 14 years, and totaled \$30 million at acquisition.

Note 4 - Securities

The following tables present the amortized cost, the gross unrealized gains and losses and the fair value of securities at June 30, 2017 and Dec. 31, 2016.

Securities at June 30, 2017 (in millions)	Gross			Fair value
	Amortized cost	unrealized Gains	Losses	
Available-for-sale:				
U.S. Treasury	\$ 15,046	\$ 247	\$ 124	\$ 15,169
U.S. government agencies	557	3	5	555
State and political subdivisions	3,251	61	30	3,282
Agency RMBS	24,045	137	282	23,900
Non-agency RMBS	531	34	6	559
Other RMBS	332	3	6	329
Commercial MBS	816	9	7	818
Agency commercial MBS	8,741	47	62	8,726
CLOs	2,635	10	3	2,642
Other asset-backed securities	1,326	5	1	1,330
Foreign covered bonds	2,378	21	9	2,390
Corporate bonds	1,309	20	11	1,318
Sovereign debt/sovereign guaranteed	12,114	197	23	12,288
Other debt securities	2,821	19	10	2,830

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Equity securities	2	1	—	3
Money market funds	896	—	—	896
Non-agency RMBS (a)	948	293	2	1,239
Total securities available-for-sale (b)	\$ 77,748	\$ 1,107	\$ 581	\$ 78,274
Held-to-maturity:				
U.S. Treasury	\$ 10,371	\$ 24	\$ 31	\$ 10,364
U.S. government agencies	1,639	—	7	1,632
State and political subdivisions	17	—	—	17
Agency RMBS	25,784	88	228	25,644
Non-agency RMBS	66	4	2	68
Other RMBS	138	—	2	136
Commercial MBS	7	—	—	7
Agency commercial MBS	1,091	4	6	1,089
Foreign covered bonds	80	1	—	81
Sovereign debt/sovereign guaranteed	1,766	30	—	1,796
Other debt securities	27	1	—	28
Total securities held-to-maturity	\$ 40,986	\$ 152	\$ 276	\$ 40,862
Total securities	\$ 118,734	\$ 1,259	\$ 857	\$ 119,136

(a) Previously included in the Grantor Trust. The Grantor Trust was dissolved in 2011.

Includes gross unrealized gains of \$55 million and gross unrealized losses of \$168 million recorded in accumulated other comprehensive income related to investment 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.

Notes to Consolidated Financial Statements (continued)

Securities at Dec. 31, 2016 (in millions)	Gross Amortized cost	unrealized		Fair value
		Gains	Losses	
Available-for-sale:				
U.S. Treasury	\$ 14,373	\$ 115	\$ 181	\$ 14,307
U.S. government agencies	366	2	9	359
State and political subdivisions	3,392	38	52	3,378
Agency RMBS	22,929	148	341	22,736
Non-agency RMBS	620	31	13	638
Other RMBS	517	4	8	513
Commercial MBS	931	8	11	928
Agency commercial MBS	6,505	28	84	6,449
CLOs	2,593	6	1	2,598
Other asset-backed securities	1,729	4	6	1,727
Foreign covered bonds	2,126	24	9	2,141
Corporate bonds	1,391	22	17	1,396
Sovereign debt/sovereign guaranteed	12,248	261	20	12,489
Other debt securities	1,952	19	10	1,961
Equity securities	2	1	—	3
Money market funds	842	—	—	842
Non-agency RMBS (a)	1,080	286	9	1,357
Total securities available-for-sale (b)	\$ 73,596	\$ 997	\$ 771	\$ 73,822
Held-to-maturity:				
U.S. Treasury	\$ 11,117	\$ 22	\$ 41	\$ 11,098
U.S. government agencies	1,589	—	6	1,583
State and political subdivisions	19	—	1	18
Agency RMBS	25,221	57	299	24,979
Non-agency RMBS	78	4	2	80
Other RMBS	142	—	4	138
Commercial MBS	7	—	—	7
Agency commercial MBS	721	1	10	712
Foreign covered bonds	74	1	—	75
Sovereign debt/sovereign guaranteed	1,911	42	—	1,953
Other debt securities	26	—	—	26
Total securities held-to-maturity	\$ 40,905	\$ 127	\$ 363	\$ 40,669
Total securities	\$ 114,501	\$ 1,124	\$ 1,134	\$ 114,491

(a) Previously included in the Grantor Trust. The Grantor Trust was dissolved in 2011.

Includes gross unrealized gains of \$62 million and gross unrealized losses of \$190 million recorded in accumulated other comprehensive income related to investment securities that were transferred from available-for-sale to (b) 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 gross securities gains, losses and impairments.

Net securities gains (losses) (in millions)	2Q17	1Q17	2Q16	YTD17	YTD16
Realized gross gains	\$ 3	\$ 11	\$ 23	\$ 14	\$ 45

Realized gross losses	(2)	—	—	(2)	—
Recognized gross impairments	(1)	(1)	(2)	(2)	(4)
Total net securities gains	\$ —	\$ 10	\$ 21	\$ 10	\$ 41

Temporarily impaired securities

At June 30, 2017, the unrealized losses on the investment 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, \$168 million of the unrealized losses at June 30, 2017 and \$190 million at Dec. 31, 2016 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.

Notes to Consolidated Financial Statements (continued)

The following tables show the aggregate related fair value of investments 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 June 30, 2017 and Dec. 31, 2016.

Temporarily impaired securities at June 30, 2017 (in millions)	Less than 12 months		12 months or more		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
Available-for-sale:						
U.S. Treasury	\$8,023	\$ 123	\$—	\$ 1	\$8,023	\$ 124
U.S. government agencies	286	5	—	—	286	5
State and political subdivisions	589	12	129	18	718	30
Agency RMBS	10,592	98	4,376	184	14,968	282
Non-agency RMBS	4	—	279	6	283	6
Other RMBS	—	—	95	6	95	6
Commercial MBS	249	5	81	2	330	7
Agency commercial MBS	3,422	55	540	7	3,962	62
CLOs	679	3	25	—	704	3
Other asset-backed securities	174	—	147	1	321	1
Corporate bonds	491	11	8	—	499	11
Sovereign debt/sovereign guaranteed	2,107	23	58	—	2,165	23
Non-agency RMBS (a)	5	—	30	2	35	2
Other debt securities	1,226	10	25	—	1,251	10
Foreign covered bonds	1,143	9	—	—	1,143	9
Total securities available-for-sale (b)	\$28,990	\$ 354	\$5,793	\$ 227	\$34,783	\$ 581
Held-to-maturity:						
U.S. Treasury	\$7,533	\$ 31	\$—	\$ —	\$7,533	\$ 31
U.S. government agencies	1,558	7	—	—	1,558	7
Agency RMBS	19,045	225	163	3	19,208	228
Non-agency RMBS	3	—	41	2	44	2
Agency Commercial MBS	572	6	—	—	572	6
Other RMBS	—	—	111	2	111	2
Total securities held-to-maturity	\$28,711	\$ 269	\$315	\$ 7	\$29,026	\$ 276
Total temporarily impaired securities	\$57,701	\$ 623	\$6,108	\$ 234	\$63,809	\$ 857

(a) Previously included in the Grantor Trust. The Grantor Trust was dissolved in 2011.

(b) Gross unrealized losses for 12 months or more of \$168 million were recorded in accumulated other comprehensive income and related to investment 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.

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Notes to Consolidated Financial Statements (continued)

Temporarily impaired securities at Dec. 31, 2016 (in millions)	Less than 12 months		12 months or more		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
Available-for-sale:						
U.S. Treasury	\$8,489	\$ 181	\$—	\$ —	\$8,489	\$ 181
U.S. government agencies	257	9	—	—	257	9
State and political subdivisions	1,058	33	131	19	1,189	52
Agency RMBS	14,766	141	1,673	200	16,439	341
Non-agency RMBS	21	—	332	13	353	13
Other RMBS	26	—	136	8	162	8
Commercial MBS	302	7	163	4	465	11
Agency commercial MBS	3,570	78	589	6	4,159	84
CLOs	443	1	404	—	847	1
Other asset-backed securities	276	1	357	5	633	6
Corporate bonds	594	16	7	1	601	17
Sovereign debt/sovereign guaranteed	1,521	20	63	—	1,584	20
Non-agency RMBS (a)	25	—	47	9	72	9
Other debt securities	742	10	50	—	792	10
Foreign covered bonds	712	9	—	—	712	9
Total securities available-for-sale (b)	\$32,802	\$ 506	\$3,952	\$ 265	\$36,754	\$ 771
Held-to-maturity:						
U.S. Treasury	\$6,112	\$ 41	\$—	\$ —	\$6,112	\$ 41
U.S. government agencies	1,533	6	—	—	1,533	6
State and political subdivisions	—	—	4	1	4	1
Agency RMBS	19,498	297	102	2	19,600	299
Non-agency RMBS	4	—	48	2	52	2
Agency commercial MBS	621	10	—	—	621	10
Other RMBS	15	—	123	4	138	4
Total securities held-to-maturity	\$27,783	\$ 354	\$277	\$ 9	\$28,060	\$ 363
Total temporarily impaired securities	\$60,585	\$ 860	\$4,229	\$ 274	\$64,814	\$ 1,134

(a) Previously included in the Grantor Trust. The Grantor Trust was dissolved in 2011.

Includes gross unrealized losses for 12 months or more of \$190 million recorded in accumulated other comprehensive income related to investment securities that were transferred from available-for-sale to

(b) 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 investment securities portfolio at June 30, 2017.

Maturity distribution and yield on investment securities at June 30, 2017 (dollars in millions)	U.S. Treasury		U.S. government agencies		State and political subdivisions		Other bonds, notes and debentures		Mortgage/asset-backed and equity securities		Total
	Amount	Yield (a)	Amount	Yield (a)	Amount	Yield (a)	Amount	Yield (a)	Amount	Yield (a)	

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Securities available-for-sale:											
One year or less	\$2,559	0.99	% \$—	—	% \$358	2.60	% \$3,328	1.04	% \$—	—	% \$6,328
Over 1 through 5 years	4,830	1.65	129	1.29	1,663	2.99	12,471	1.00	—	—	19,000
Over 5 through 10 years	4,289	1.89	426	2.48	1,068	3.48	2,836	0.83	—	—	8,610
Over 10 years	3,491	3.11	—	—	193	2.14	191	1.64	—	—	3,875
Mortgage-backed securities	—	—	—	—	—	—	—	—	35,571	2.75	35,571
Asset-backed securities	—	—	—	—	—	—	—	—	3,972	2.19	3,972
Equity securities (b)	—	—	—	—	—	—	—	—	899	—	899
Total	\$15,169	1.94	% \$555	2.20	% \$3,282	3.05	% \$18,826	0.99	% \$40,442	2.63	% \$78,000
Securities held-to-maturity:											
One year or less	\$5,328	0.95	% \$550	0.91	% \$—	—	% \$801	0.61	% \$—	—	% \$6,328
Over 1 through 5 years	3,636	1.67	1,064	1.30	1	6.91	370	0.69	—	—	5,071
Over 5 through 10 years	1,407	1.92	25	2.25	2	6.84	702	0.71	—	—	2,111
Over 10 years	—	—	—	—	14	5.33	—	—	—	—	14
Mortgage-backed securities	—	—	—	—	—	—	—	—	27,086	2.78	27,086
Total	\$10,371	1.33	% \$1,639	1.18	% \$17	5.64	% \$1,873	0.66	% \$27,086	2.78	% \$40,000

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

(b) Includes money market funds.

Notes to Consolidated Financial Statements (continued)

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 investment securities portfolio in 2009, at June 30, 2017 and Dec. 31, 2016.

Projected weighted-average default rates and loss severities

	June 30, 2017		Dec. 31, 2016		
	Default rate	Severity	Default rate	Severity	
Alt-A	30	%54	% 30	%54	%
Subprime	48	%67	% 49	%70	%
Prime	19	%39	% 18	%39	%

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

Net securities gains (losses)

(in millions)	2Q17	1Q17	2Q16	YTD17	YTD16
Agency RMBS	\$ —	\$ 1	\$ 5	\$ 1	\$ 13
U.S. Treasury	(1)	—	4	(1)	5
Non-agency RMBS	—	(1)	4	(1)	2
Foreign covered bonds	—	—	—	—	10
Other	1	10	8	11	11
Total net securities gains	\$ —	\$ 10	\$ 21	\$ 10	\$ 41

The following tables reflect investment 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)	2Q172Q16	
Beginning balance as of March 31	\$ 89	\$ 93
Add: Initial OTTI credit losses	—	—
Subsequent OTTI credit losses	1	2
Less: Realized losses for securities sold	5	4
Ending balance as of June 30	\$ 85	\$ 91

Debt securities credit loss roll forward		
(in millions)	YTD17YTD16	
Beginning balance as of Jan. 1	\$ 88	\$ 91
Add: Initial OTTI credit losses	—	—
Subsequent OTTI credit losses	2	4
Less: Realized losses for securities sold	5	4
Ending balance as of June 30	\$ 85	\$ 91

Pledged assets

At June 30, 2017, BNY Mellon had pledged assets of \$108 billion, including \$90 billion pledged as collateral for potential borrowings at the Federal Reserve Discount Window. The components of the assets pledged at June 30, 2017 included \$93 billion of securities, \$12 billion of loans, \$2 billion of trading assets and \$1 billion of interest-bearing deposits with banks.

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Notes to Consolidated Financial Statements (continued)

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, 2016, BNY Mellon had pledged assets of \$102 billion, including \$84 billion pledged as collateral for potential borrowing at the Federal Reserve Discount Window. The components of the assets pledged at Dec. 31, 2016 included \$87 billion of securities, \$8 billion of loans, \$4 billion of interest-bearing deposits with banks and \$3 billion of trading assets.

At June 30, 2017 and Dec. 31, 2016, pledged assets included \$9 billion and \$6 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 June 30, 2017 and Dec. 31, 2016, the market value of the securities received that can be sold or repledged was \$55 billion and \$50 billion, respectively. We routinely sell or repledge these securities through delivery to third parties. As of June 30, 2017 and Dec. 31, 2016, the market value of securities collateral sold or repledged was \$28 billion and \$20 billion, respectively.

Restricted cash and securities

Cash and securities may also be segregated under federal and other regulations or requirements. At June 30, 2017 and Dec. 31, 2016, cash segregated under federal and other regulations or requirements was \$3 billion and \$3 billion, respectively. Restricted cash is included in interest-bearing deposits with banks on the consolidated balance sheet. Securities segregated for these purposes were \$2 billion at June 30, 2017 and \$2 billion at Dec. 31, 2016. Restricted securities were sourced from securities purchased under resale agreements at June 30, 2017 and Dec. 31, 2016 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 June 30, 2017 and Dec. 31, 2016.

Loans (in millions)	June 30, Dec. 31,	
	2017	2016
Domestic:		
Financial institutions	\$5,954	\$6,342
Commercial	2,580	2,286
Wealth management loans and mortgages	16,031	15,555
Commercial real estate	5,017	4,639
Lease financings	847	989
Other residential mortgages	780	854
Overdrafts	855	1,055
Other	1,122	1,202
Margin loans	13,973	17,503

Total domestic	47,159	50,425
Foreign:		
Financial institutions	7,267	8,347
Commercial	267	331
Wealth management loans and mortgages	111	99
Commercial real estate	14	15
Lease financings	527	736
Other (primarily overdrafts)	6,144	4,418
Margin loans	184	87
Total foreign	14,514	14,033
Total loans (a)	\$61,673	\$64,458

(a) Net of unearned income of \$424 million at June 30, 2017 and \$527 million at Dec. 31, 2016 primarily on 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.

Notes to Consolidated Financial Statements (continued)

Allowance for credit losses

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

Allowance for credit losses activity for the quarter ended June 30, 2017	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
(in millions)									
Beginning balance	\$ 82	\$ 73	\$ 23	\$ 10	\$ 26	\$ 25	\$—	\$37	\$276
Charge-offs	—	—	—	—	—	—	—	—	—
Recoveries	—	—	—	—	—	1	—	—	1
Net recoveries	—	—	—	—	—	1	—	—	1
Provision	(2)	2	—	—	(1)	(3)	—	(3)	(7)
Ending balance	\$ 80	\$ 75	\$ 23	\$ 10	\$ 25	\$ 23	\$—	\$34	\$270
Allowance for:									
Loan losses	\$ 26	\$ 55	\$ 7	\$ 10	\$ 21	\$ 23	\$—	\$23	\$165
Lending-related commitments	54	20	16	—	4	—	—	11	105
Individually evaluated for impairment:									
Loan balance	\$ —	\$ —	\$ 2	\$ —	\$ 7	\$ —	\$—	\$—	\$9
Allowance for loan losses	—	—	2	—	3	—	—	—	5
Collectively evaluated for impairment:									
Loan balance	\$ 2,580	\$ 5,017	\$ 5,952	\$ 847	\$ 16,024	\$ 780	\$ 15,950(a)	\$ 14,514	\$ 61,664
Allowance for loan losses	26	55	5	10	18	23	—	23	160

(a) Includes \$855 million of domestic overdrafts, \$13,973 million of margin loans and \$1,122 million of other loans at June 30, 2017.

Allowance for credit losses activity for the quarter ended March 31, 2017	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
(in millions)									
Beginning balance	\$ 82	\$ 73	\$ 26	\$ 13	\$ 23	\$ 28	\$—	\$36	\$281
Charge-offs	—	—	—	—	—	(1)	—	—	(1)
Recoveries	—	—	—	—	—	1	—	—	1
Net recoveries	—	—	—	—	—	—	—	—	—
Provision	—	—	(3)	(3)	3	(3)	—	1	(5)
Ending balance	\$ 82	\$ 73	\$ 23	\$ 10	\$ 26	\$ 25	\$—	\$37	\$276
Allowance for:									
Loan losses	\$ 24	\$ 54	\$ 5	\$ 10	\$ 22	\$ 25	\$—	\$24	\$164
Lending-related commitments	58	19	18	—	4	—	—	13	112
Individually evaluated for impairment:									
Loan balance	\$ —	\$ —	\$ —	\$ —	\$ 5	\$ —	\$—	\$—	\$5
Allowance for loan losses	—	—	—	—	3	—	—	—	3

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Collectively evaluated for
impairment:

Loan balance	\$ 2,543	\$ 4,698	\$ 5,387	\$ 846	\$ 15,904	\$ 817	\$ 17,873(a)	\$ 12,795	\$ 60,863
Allowance for loan losses	24	54	5	10	19	25	—	24	161

(a) Includes \$673 million of domestic overdrafts, \$16,081 million of margin loans and \$1,119 million of other loans at March 31, 2017.

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Notes to Consolidated Financial Statements (continued)

Allowance for credit losses activity for the quarter ended June 30, 2016	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
(in millions)									
Beginning balance	\$ 88	\$ 62	\$ 32	\$ 16	\$ 18	\$ 32	\$—	\$ 39	\$ 287
Charge-offs	—	—	—	—	—	—	—	—	—
Recoveries	—	—	—	—	—	1	—	1	2
Net recoveries	—	—	—	—	—	1	—	1	2
Provision	2	1	(3)	(2)	—	(4)	—	(3)	(9)
Ending balance	\$ 90	\$ 63	\$ 29	\$ 14	\$ 18	\$ 29	\$—	\$ 37	\$ 280
Allowance for:									
Loan losses	\$ 25	\$ 43	\$ 9	\$ 14	\$ 15	\$ 29	\$—	\$ 23	\$ 158
Lending-related commitments	65	20	20	—	3	—	—	14	122
Individually evaluated for impairment:									
Loan balance	\$ —	\$ 2	\$ 171	\$ 4	\$ 8	\$ —	\$—	\$—	\$ 185
Allowance for loan losses	—	1	—	2	1	—	—	—	4
Collectively evaluated for impairment:									
Loan balance	\$ 2,377	\$ 4,222	\$ 6,690	\$ 1,023	\$ 14,437	\$ 945	\$ 20,842(a)	\$ 13,474	\$ 64,010
Allowance for loan losses	25	42	9	12	14	29	—	23	154

(a) Includes \$1,331 million of domestic overdrafts, \$18,388 million of margin loans and \$1,123 million of other loans at June 30, 2016.

Allowance for credit losses activity for the six months ended June 30, 2017	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
(in millions)									
Beginning balance	\$ 82	\$ 73	\$ 26	\$ 13	\$ 23	\$ 28	\$ —	\$ 36	\$ 281
Charge-offs	—	—	—	—	—	(1)	—	—	(1)
Recoveries	—	—	—	—	—	2	—	—	2
Net recoveries	—	—	—	—	—	1	—	—	1
Provision	(2)	(2)	(3)	(3)	(2)	(6)	—	(2)	(12)
Ending balance	\$ 80	\$ 75	\$ 23	\$ 10	\$ 25	\$ 23	\$ —	\$ 34	\$ 270

Allowance for credit losses activity for the six months ended June 30, 2016	Commercial	Commercial real estate	Financial institutions	Lease financings	Wealth management loans and mortgages	Other residential mortgages	All other	Foreign	Total
(in millions)									
Beginning balance	\$ 82	\$ 59	\$ 31	\$ 15	\$ 19	\$ 34	\$ —	\$ 35	\$ 275
Charge-offs	—	—	—	—	—	—	—	—	—
Recoveries	—	—	—	—	—	3	—	1	4
Net recoveries	—	—	—	—	—	3	—	1	4
Provision	8	4	(2)	(1)	(1)	(8)	—	1	1
Ending balance	\$ 90	\$ 63	\$ 29	\$ 14	\$ 18	\$ 29	\$ —	\$ 37	\$ 280

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Notes to Consolidated Financial Statements (continued)

Nonperforming assets

The table below presents the distribution of our nonperforming assets.

Nonperforming assets (in millions)	June 30, 2017	Dec. 31, 2016
Nonperforming loans:		
Other residential mortgages	\$ 84	\$ 91
Wealth management loans and mortgages	10	8
Financial institutions	2	—
Lease financings	—	4
Total nonperforming loans	96	103
Other assets owned	4	4
Total nonperforming assets	\$ 100	\$ 107

At June 30, 2017, undrawn commitments to borrowers whose loans were classified as nonaccrual or reduced rate were not material.

Lost interest

The table below presents the amount of lost interest income.

Lost interest (in millions)	2Q17	1Q17	2Q16	YTD17	YTD16
Amount by which interest income recognized on nonperforming loans exceeded reversals	\$ —	\$ —	\$ —	\$ —	\$ —
Amount by which interest income would have increased if nonperforming loans at period end had been performing for the entire period	\$ 1	\$ 1	\$ 1	\$ 3	\$ 3

Impaired loans

The tables below provide information about our impaired loans. We use the discounted cash flow method as the primary method for valuing impaired loans.

Impaired loans (in millions)	2Q17		1Q17		2Q16		YTD17		YTD16	
	Average recorded investment	Interest income recognized	Average recorded investment	Interest income recognized	Average recorded investment	Interest income recognized	Average recorded investment	Interest income recognized	Average recorded investment	Interest income recognized
Impaired loans with an allowance:										
Commercial real estate	\$ —	\$ —	\$ —	\$ —	\$ 1	\$ —	\$ —	\$ —	\$ 1	\$ —
Financial institutions	1	—	—	—	—	—	1	—	—	—
Wealth management loans and mortgages	3	—	3	—	6	—	3	—	6	—
Lease financings	—	—	2	—	4	—	1	—	3	—
	4	—	5	—	11	—	5	—	10	—

Total impaired loans with an allowance

Impaired loans without an allowance:

Commercial real estate	—	—	—	—	1	—	—	—	1	—
Financial institutions	—	—	—	—	171	—	—	—	171	—
Wealth management loans and mortgages	3	—	2	—	2	—	2	—	2	—
Total impaired loans without an allowance (a)	3	—	2	—	174	—	2	—	174	—
Total impaired loans	\$ 7	\$	—\$ 7	\$	—\$ 185	\$	—\$ 7	\$	—\$ 184	\$ —

(a) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under the accounting standard related to impaired loans.

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Notes to Consolidated Financial Statements (continued)

Impaired loans (in millions)	June 30, 2017		Dec. 31, 2016	
	Recorded investment principal balance	Related allowance (a)	Recorded investment principal balance	Related allowance (a)
Impaired loans with an allowance:				
Commercial real estate	\$—\$ 3	\$ —	\$—\$ 3	\$ —
Financial institutions	2 2	2	— —	—
Wealth management loans and mortgages	3 3	3	3 3	3
Lease financings	— —	—	4 4	2
Total impaired loans with an allowance	5 8	5	7 10	5
Impaired loans without an allowance:				
Wealth management loans and mortgages	4 4	N/A	2 2	N/A
Total impaired loans without an allowance (b)	4 4	N/A	2 2	N/A
Total impaired loans (c)	\$9\$ 12	\$ 5	\$9\$ 12	\$ 5

(a) The allowance for impaired loans is included in the allowance for loan losses.

(b) When the discounted cash flows, collateral value or market price equals or exceeds the carrying value of the loan, then the loan does not require an allowance under the accounting standard related to impaired loans.

Excludes an aggregate of less than \$1 million of impaired loans in amounts individually less than \$1 million at both (c) June 30, 2017 and Dec. 31, 2016, respectively. The allowance for loan losses associated with these loans totaled less than \$1 million at both June 30, 2017 and Dec. 31, 2016, respectively.

Past due loans

The table below sets forth information about our past due loans.

Past due loans and still accruing interest (in millions)	June 30, 2017			Dec. 31, 2016		
	Days past due	Total past due		Days past due	Total past due	
	30-59	60-89	≥90	30-59	60-89	≥90
Other residential mortgages	\$19\$ 3	\$3\$ 25		\$20\$ 6	\$7\$ 33	
Wealth management loans and mortgages	18 2	1 21		21 2	— 23	
Commercial real estate	7 12	— 19		78 —	— 78	
Financial institutions	— —	— —		1 27	— 28	
Total past due loans	\$44\$ 17	\$4\$ 65		\$120\$ 35	\$7\$ 162	

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. A TDR may include a transfer of real estate or other assets from the debtor to the creditor, or a modification of the term of the loan. Not all modified loans are considered TDRs.

The following table presents TDRs that occurred in the second quarter of 2017, first quarter of 2017 and second quarter of 2016.

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TDRs (dollars in millions)	2Q17			1Q17			2Q16		
	Number of contracts	Outstanding recorded investment		Number of contracts	Outstanding recorded investment		Number of contracts	Outstanding recorded investment	
		Pre-modification	Post-modification		Pre-modification	Post-modification		Pre-modification	Post-modification
Other residential mortgages	16	\$ 4	\$ 4	6	\$ 2	\$ 2	23	\$ 4	\$ 5
Wealth management loans and mortgages	—	—	—	1	4	4	—	—	—
Total TDRs	16	\$ 4	\$ 4	7	\$ 6	\$ 6	23	\$ 4	\$ 5

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Notes to Consolidated Financial Statements (continued)

Other residential mortgages

The modifications of the other residential mortgage loans in the second quarter of 2017, first quarter of 2017 and second quarter of 2016 consisted of reducing the stated interest rates and, in certain cases, a forbearance of default and extending the maturity dates. The modified loans are primarily collateral dependent for which the value is based on the fair value of the collateral.

TDRs that subsequently defaulted

There were five residential mortgage loans and one wealth management loan and mortgage that had been restructured in a TDR during the previous 12 months and have subsequently defaulted in the second quarter of 2017. The total recorded investment of these loans was \$2 million.

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 set forth information about credit quality indicators.

Commercial loan portfolio

Commercial loan portfolio – Credit risk profile by creditworthiness category (in millions)	Commercial		Commercial real estate		Financial institutions	
	June 30, 2017	Dec. 31, 2016	June 30, 2017	Dec. 31, 2016	June 30, 2017	Dec. 31, 2016
Investment grade	\$2,698	\$2,397	\$ 4,305	\$ 3,823	\$ 10,241	\$ 11,459
Non-investment grade	149	220	726	831	2,980	3,230
Total	\$2,847	\$2,617	\$ 5,031	\$ 4,654	\$ 13,221	\$ 14,689

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

(in millions)	June 30, 2017	Dec. 31, 2016
Wealth management loans:		
Investment grade	\$7,277	\$7,127

Non-investment grade	149	260
Wealth management mortgages	8,716	8,267
Total	\$16,142	\$15,654

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 June 30, 2017.

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Notes to Consolidated Financial Statements (continued)

At June 30, 2017, the wealth management mortgage portfolio consisted of the following geographic concentrations: California - 24%; New York - 19%; Massachusetts - 12%; Florida - 7%; and other - 38%.

Other residential mortgages

The other residential mortgage portfolio primarily consists of 1-4 family residential mortgage loans and totaled \$780 million at June 30, 2017 and \$854 million at Dec. 31, 2016. These loans are not typically correlated to external ratings. Included in this portfolio at June 30, 2017 are \$194 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 June 30, 2017, 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 \$6.9 billion at June 30, 2017 and \$5.5 billion at Dec. 31, 2016. Overdrafts occur on a daily basis 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 \$14.2 billion of secured margin loans on our balance sheet at June 30, 2017 compared with \$17.6 billion at Dec. 31, 2016. 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 (in millions)	Investment Management	Investment Services	Other	Consolidated
Balance at Dec. 31, 2016	\$ 9,000	\$ 8,269	\$ 47	\$ 17,316

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Foreign currency translation	69	72	—	141
Balance at June 30, 2017	\$ 9,069	\$ 8,341	\$ 47	\$ 17,457

Goodwill by business (in millions)	Investment Management	Investment Services	Other	Consolidated
Balance at Dec. 31, 2015	\$ 9,207	\$ 8,366	\$ 45	\$ 17,618
Acquisitions	29	—	—	29
Foreign currency translation	(121)	(25)	—	(146)
Other (a)	2	(4)	2	—
Balance at June 30, 2016	\$ 9,117	\$ 8,337	\$ 47	\$ 17,501

(a) Other changes in goodwill include purchase price adjustments and certain other reclassifications.

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Notes to Consolidated Financial Statements (continued)

Intangible assets

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

Intangible assets – net carrying amount by business (in millions)	Investment Management	Investment Services	Other	Consolidated
Balance at Dec. 31, 2016	\$ 1,717	\$ 1,032	\$ 849	\$ 3,598
Amortization	(30)	(75)	—	(105)
Foreign currency translation	10	3	—	13
Balance at June 30, 2017	\$ 1,697	\$ 960	\$ 849	\$ 3,506

Intangible assets – net carrying amount by business (in millions)	Investment Management	Investment Services	Other	Consolidated
Balance at Dec. 31, 2015	\$ 1,807	\$ 1,186	\$ 849	\$ 3,842
Acquisitions	30	2	—	32
Amortization	(38)	(78)	—	(116)
Foreign currency translation	(21)	1	—	(20)
Balance at June 30, 2016	\$ 1,778	\$ 1,111	\$ 849	\$ 3,738

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

Intangible assets (in millions)	June 30, 2017				Dec. 31, 2016		
	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 relationships—Investment Management	\$1,456	\$ (1,179)	\$ 277	11 years	\$1,439	\$ (1,136)	\$ 303
Customer contracts—Investment Services	2,252	(1,665)	587	10 years	2,249	(1,590)	659
Other	25	(22)	3	2 years	37	(33)	4
Total subject to amortization	3,733	(2,866)	867	10 years	3,725	(2,759)	966
Not subject to amortization: (b)							
Trade name	1,349	N/A	1,349	N/A	1,348	N/A	1,348
Customer relationships	1,290	N/A	1,290	N/A	1,284	N/A	1,284
Total not subject to amortization	2,639	N/A	2,639	N/A	2,632	N/A	2,632
Total intangible assets	\$6,372	\$ (2,866)	\$ 3,506	N/A	\$6,357	\$ (2,759)	\$ 3,598

(a) Excludes fully amortized intangible assets.

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

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

For the year ended Dec. 31, Estimated amortization

	expense (in millions)
2017	\$ 209
2018	179
2019	108
2020	98
2021	75

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.

BNY Mellon's three business segments include eight reporting units for which goodwill impairment testing is performed on an annual basis. In the second quarter of 2017, BNY Mellon conducted an annual goodwill impairment test on all eight reporting units.

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As a result of the annual goodwill impairment test of the eight reporting units, no goodwill impairment was recognized.

Note 7 - Other assets

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

Other assets (in millions)	June 30, Dec. 31,	
	2017	2016
Accounts receivable	\$6,707	\$4,060
Corporate/bank-owned life insurance	4,804	4,789
Fails to deliver	3,547	1,732
Software	1,480	1,451
Renewable energy investments	1,245	1,282
Income taxes receivable	1,081	1,172
Equity in a joint venture and other investments	1,066	1,063
Qualified affordable housing project investments	982	914
Prepaid pension assets	913	836
Prepaid expenses	550	438
Federal Reserve Bank stock	472	466
Fair value of hedging derivatives	423	784
Seed capital	315	395
Due from customers on acceptances	276	340
Private equity	47	43
Other (a)	1,092	1,189
Total other assets	\$25,000	\$20,954

(a) At June 30, 2017, other assets include \$8 million of Federal Home Loan Bank stock, at cost.

Certain seed capital and private equity investments valued using net asset value per share

In our Investment Management business, we manage investment assets, including equities, fixed income, money market and alternative investment funds for institutions and other investors. As part of that activity, we make seed capital investments in certain funds. BNY Mellon also holds private equity investments, specifically in small business investment companies ("SBICs"), which are compliant with the Volcker Rule. Seed capital and private equity investments are included in other assets.

The fair value of certain of these investments has been estimated using the NAV per share of BNY Mellon's ownership interest in the funds. The table below presents information about BNY Mellon's investments in seed capital and private equity investments that have been valued using NAV.

Seed capital and private equity investments valued using NAV

(dollar amounts in millions)	June 30, 2017			Dec. 31, 2016		
	Fair value	Unfunded commitments	Redemption frequency	Fair value	Unfunded commitments	Redemption frequency
Seed capital and other funds (a)	\$114	\$ 14	Daily-quarterly	\$171	\$ 1	Daily-quarterly
			1-95 days			1-180 days

Private equity investments (SBICs) (b)	47	44	N/A	N/A	43	46	N/A	N/A
Total	\$161	\$ 58			\$214	\$ 47		

(a) Other funds include various hedge funds, leveraged loans and structured credit funds. Redemption notice periods vary by fund.

(b) 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 are liquidated.

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 \$982 million at June 30, 2017 and \$914 million at Dec. 31, 2016. Commitments to fund future investments in qualified affordable housing projects totaled \$414 million at June 30, 2017 and \$369 million at Dec. 31,

2016. A summary of the commitments to fund future investments is as follows: 2017 – \$80 million; 2018 – \$154 million; 2019 – \$85 million; 2020 – \$79 million; 2021 – \$1 million; and 2022 and thereafter – \$15 million.

Tax credits and other tax benefits recognized were \$38 million in the second quarter of 2017, \$38 million in the second quarter of 2016, \$38 million in

Notes to Consolidated Financial Statements (continued)

the first quarter of 2017, \$76 million in the first six months of 2017 and \$76 million in the first six months of 2016.

Amortization expense included in the provision for income taxes was \$28 million in the second quarter of

2017, \$28 million in the second quarter of 2016, \$27 million in the first quarter of 2017, \$55 million in the first six months of 2017 and \$56 million in the first six months of 2016.

Note 8 - Net interest revenue

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

Net interest revenue (in millions)	Quarter ended			Year-to-date	
	June 30, 2017	March 31, 2017	June 30, 2016	June 30, 2017	June 30, 2016
Interest revenue					
Non-margin loans	\$272	\$ 245	\$ 214	\$ 517	\$ 419
Margin loans	87	75	64	162	127
Securities:					
Taxable	476	461	429	937	873
Exempt from federal income taxes	16	17	18	33	36
Total securities	492	478	447	970	909
Deposits with banks	27	22	24	49	50
Deposits with the Federal Reserve and other central banks	71	57	72	128	133
Federal funds sold and securities purchased under resale agreements	86	67	56	153	105
Trading assets	17	16	13	33	30
Total interest revenue	1,052	960	890	2,012	1,773
Interest expense					
Deposits	32	9	12	41	27
Federal funds purchased and securities sold under repurchase agreements	38	24	13		