Bank of New York Mellon Corp
Form 10-Q
November 08, 2016

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

FORM 10-Q

[ X ] Quarterly Report Pursuant To Section 13 or 15(d)
of the Securities Exchange Act of 1934

For the Quarterly Period Ended Sept. 30, 2016

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 incorporation or organization) | (I.R.S. Employer Identification No.) |

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 X 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 X No ___

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

Large accelerated filer [ X ]  Accelerated filer [ ]
Non-accelerated filer [ ] (Do not check if a smaller reporting company)  Smaller reporting company [ ]

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

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 Sept. 30, 2016 |
|---|---|
| Common Stock, $0.01 par value | 1,057,336,621 |

THE BANK OF NEW YORK MELLON CORPORATION

Third Quarter 2016 Form 10-Q
Table of Contents

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

Consolidated Financial Highlights (unaudited)

| | Quarter ended | | | Year-to-date | |
|---|---|---|---|---|---|
| (dollar amounts in millions, except per common share amounts and unless otherwise noted) | Sept. 30, 2016 | June 30, 2016 | Sept. 30, 2015 | Sept. 30, 2016 | Sept. 30, 2015 |
| Results applicable to common shareholders of The Bank of New York Mellon Corporation: | | | | | |
| Net income | $974 | $825 | $820 | $2,603 | $2,416 |
| Basic earnings per share | 0.90 | 0.76 | 0.74 | 2.39 | 2.15 |
| Diluted earnings per share | 0.90 | 0.75 | 0.74 | 2.38 | 2.13 |
| Fee and other revenue | 3,150 | 2,999 | 3,053 | 9,119 | 9,132 |
| Income (loss) from consolidated investment management funds | 17 | 10 | (22) | 21 | 70 |
| Net interest revenue | 774 | 767 | 759 | 2,307 | 2,266 |
| Total revenue | $3,941 | $3,776 | $3,790 | $11,447 | $11,468 |
| Return on common equity (annualized) (a) | 10.8% | 9.3% | 9.1% | 9.8% | 9.1% |
| Adjusted return on common equity (annualized) – Non-GAAP (a)(b) | 11.3% | 9.7% | 9.7% | 10.3% | 9.7% |
| Return on tangible common equity (annualized) – Non-GAAP (a) | 23.5% | 20.4% | 20.8% | 21.5% | 20.9% |
| Adjusted return on tangible common equity (annualized) – Non-GAAP (a)(b)(c) | 23.6% | 20.5% | 21.0% | 21.7% | 21.2% |
| Return on average assets (annualized) | 1.10% | 0.89% | 0.87% | 0.96% | 0.86% |
| Fee revenue as a percentage of total revenue | 79% | 79% | 81% | 79% | 79% |
| Percentage of non-U.S. total revenue | 36% | 34% | 37% | 34% | 36% |
| Pre-tax operating margin (a) | 33% | 31% | 29% | 31% | 29% |
| Adjusted pre-tax operating margin – Non-GAAP (a)(b) | 35% | 33% | 31% | 33% | 31% |
| Net interest margin (FTE) | 1.06% | 0.98% | 0.98% | 1.02% | 0.98% |
| Assets under management (“AUM”) at period end (in billions) (d) | $1,715 | $1,664 | $1,625 | $1,715 | $1,625 |
| Assets under custody and/or administration (“AUC/A”) at period end (in trillions) (e) | $30.5 | $29.5 | $28.5 | $30.5 | $28.5 |
| Market value of securities on loan at period end (in billions) (f) | $288 | $278 | $288 | $288 | $288 |
| Average common shares and equivalents outstanding (in thousands): | | | | | |
| Basic | 1,062,248 | 1,072,583 | 1,098,003 | 1,071,457 | 1,110,056 |
| Diluted | 1,067,682 | 1,078,271 | 1,105,645 | 1,077,150 | 1,117,975 |

| | | | | | |
|---|---|---|---|---|---|
| Selected average balances: | | | | | |
| Interest-earning assets | $296,703 | $318,433 | $315,672 | $308,560 | $314,152 |
| Assets of operations | $350,190 | $372,974 | $371,328 | $362,092 | $371,156 |
| Total assets | $351,230 | $374,220 | $373,453 | $363,290 | $373,400 |
| Interest-bearing deposits | $155,109 | $165,122 | $169,753 | $160,728 | $166,700 |
| Noninterest-bearing deposits | $81,619 | $84,033 | $85,046 | $82,861 | $86,493 |
| Preferred stock | $3,284 | $2,552 | $2,552 | $2,798 | $2,146 |
| Total The Bank of New York Mellon Corporation common shareholders' equity | $35,767 | $35,827 | $35,588 | $35,616 | $35,530 |
| | | | | | |
| Other information at period end: | | | | | |
| Cash dividends per common share | $0.19 | $0.17 | $0.17 | $0.53 | $0.51 |
| Common dividend payout ratio | 21 % | 23 % | 23 % | 22 % | 24 % |
| Common dividend yield (annualized) | 1.9 % | 1.8 % | 1.7 % | 1.8 % | 1.7 % |
| Closing stock price per common share | $39.88 | $38.85 | $39.15 | $39.88 | $39.15 |
| Market capitalization | $42,167 | $41,479 | $42,789 | $42,167 | $42,789 |
| Book value per common share – GAAP (a) | $34.19 | $33.72 | $32.59 | $34.19 | $32.59 |
| Tangible book value per common share – Non-GAAP (a)(c) | $16.67 | $16.25 | $15.16 | $16.67 | $15.16 |
| Full-time employees | 52,300 | 52,200 | 51,300 | 52,300 | 51,300 |
| Common shares outstanding (in thousands) | 1,057,337 | 1,067,674 | 1,092,953 | 1,057,337 | 1,092,953 |

Consolidated Financial Highlights (unaudited) (continued)

| Capital ratios | Sept. 30, 2016 | | June 30, 2016 | | Dec. 31, 2015 | |
|---|---|---|---|---|---|---|
| Consolidated regulatory capital ratios: (g) | | | | | | |
| Standardized: | | | | | | |
| Common equity Tier 1 (“CET1”) ratio | 12.2 | % | 11.8 | % | 11.5 | % |
| Tier 1 capital ratio | 14.4 | | 13.4 | | 13.1 | |
| Total (Tier 1 plus Tier 2) capital ratio | 14.8 | | 13.8 | | 13.5 | |
| Advanced: | | | | | | |
| CET1 ratio | 10.5 | | 10.2 | | 10.8 | |
| Tier 1 capital ratio | 12.5 | | 11.5 | | 12.3 | |
| Total (Tier 1 plus Tier 2) capital ratio | 12.6 | | 11.7 | | 12.5 | |
| Leverage capital ratio (g) | 6.6 | | 5.8 | | 6.0 | |
| Supplementary leverage ratio (“SLR”) (g) | 6.0 | | 5.3 | | 5.4 | |
| BNY Mellon shareholders’ equity to total assets ratio – GAAP (a) | 10.6 | | 10.4 | | 9.7 | |
| BNY Mellon common shareholders’ equity to total assets ratio – GAAP (a) | 9.7 | | 9.7 | | 9.0 | |
| BNY Mellon tangible common shareholders’ equity to tangible assets of operations ratio – Non-GAAP (a)(c) | 6.5 | | 6.6 | | 6.5 | |
| Selected regulatory capital ratios – fully phased-in – Non-GAAP: | | | | | | |
| Estimated CET1 ratio: (h) | | | | | | |
| Standardized Approach | 11.4 | | 11.0 | | 10.2 | |
| Advanced Approach | 9.8 | | 9.5 | | 9.5 | |
| Estimated SLR (i) | 5.7 | | 5.0 | | 4.9 | |

(a) See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 48 for a reconciliation of Non-GAAP measures.

(b) 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. Non-GAAP information for the third quarter of 2016 also excludes a recovery of the previously impaired Sentinel loan.

(c) Tangible book value per common share - Non-GAAP and tangible common equity exclude goodwill and intangible assets, net of deferred tax liabilities. See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 48 for the reconciliation of Non-GAAP measures.

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

(e) 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 Sept. 30, 2016, $1.1 trillion at June 30, 2016 and $1.0 trillion at Sept. 30, 2015.

(f) Represents the total amount of securities on loan managed by the Investment Services business. Excludes securities for which BNY Mellon acts as an agent on behalf of CIBC Mellon clients, which totaled $64 billion at Sept. 30, 2016, $56 billion at June 30, 2016 and $61 billion at Sept. 30, 2015.

(g) 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 37.

(h) The estimated fully phased-in CET1 ratios (Non-GAAP) are based on our interpretation of the U.S. capital 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 37.

(i) The estimated fully phased-in SLR (Non-GAAP) is based on our interpretation of the U.S. capital rules. When the SLR becomes effective in 2018 as a required minimum ratio, we expect to maintain an SLR of over 5%. The minimum required SLR is 3% and there is a 2% buffer, in addition to the minimum, that is applicable to BNY Mellon and other U.S. global systemically important banks ("G-SIBs"). For additional information on these Non-GAAP ratios, see "Capital" beginning on page 37.

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 refe 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, 2015 ("2015 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. See "Supplemental information - Explanation of GAAP and Non-GAAP financial measures" beginning on page 48 for a reconciliation of financial measures presented in accordance with GAAP to adjusted Non-GAAP financial measures.

We also present the net interest revenue and net interest margin on a fully taxable equivalent ("FTE") basis. We believe that this presentation allows for comparison 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.

When we refer to BNY Mellon's "Basel III" capital measures (e.g., CET1), we mean those capital measures as calculated under the U.S. capital rules.

Overview

The Bank of New York Mellon Corporation ("BNY Mellon") was the first company listed on the New York Stock Exchange (NYSE symbol: 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 Sept. 30, 2016, BNY Mellon had $30.5 trillion in assets under custody and/or administration, and $1.7 trillion in assets under management.

BNY Mellon is focused on enhancing our clients' experience by leveraging our scale and expertise to deliver innovative and strategic solutions for our clients, 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 unique marketplace insights that enable us to support our clients' success.

BNY Mellon's businesses benefit from the 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 third quarter 2016 and subsequent events

Resolution plan

In April 2016, the Federal Deposit Insurance Corporation (the "FDIC") and the Board of Governors of the Federal Reserve System (the "Federal Reserve") jointly announced that the agencies had determined that the Company's 2015 resolution plan was not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code, the statutory standard established in the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), and issued a joint notice of deficiencies and shortcomings regarding the Company's plan and the actions that must be taken to address them. As required, we made an Oct. 1, 2016 submission to the agencies, which provided our plans to address the shortcomings and, we believe, addressed all of the deficiencies identified by the agencies.

Following the receipt of the agencies' April 2016 feedback, we have changed our preferred resolution strategy in the event of our material financial distress or failure to a single point of entry ("SPOE") strategy. We currently believe that this requires us to issue approximately \$2 - \$4 billion of incremental unsecured long-term debt above our typical funding requirements by July 2017 to satisfy resource needs in a time of distress. This estimate is subject to change as we further refine our strategy and related assumptions. The additional debt is currently expected to have a modest negative impact to net interest revenue.

Preferred stock issuance and increase in cash dividend on common stock

In conjunction with the Federal Reserve's non-objection to BNY Mellon's 2016 capital plan, in August 2016, we issued \$1 billion of noncumulative perpetual preferred stock, \$750 million of which satisfied the contingency for the repurchase of up to \$560 million of common stock in connection with our 2016 plan. In the third quarter of 2016, we repurchased \$464 million of common stock. See Note 12 of the Notes to Consolidated Financial Statements for additional information on our preferred stock. See Item 2 in Part II - Other information for additional information related to our common stock repurchase program.

Also included in the 2016 capital plan was a 12% increase in the quarterly cash dividend on common stock to \$0.19 per share. The first payment of the increased quarterly cash dividend was Aug. 12, 2016.

Settlement agreement with Sentinel's bankruptcy trustee

On July 13, 2016, a settlement agreement between BNY Mellon and the bankruptcy trustee for Sentinel Management Group, Inc. ("Sentinel") was accepted by the bankruptcy court. The settlement resulted in the release of trust assets to BNY Mellon. In the third quarter of 2016, we recorded a recovery of \$13 million related to Sentinel.

Highlights of third quarter 2016 results

We reported net income applicable to common shareholders of \$974 million, or \$0.90 per diluted common share, or \$979 million, or \$0.90 per diluted common share, as adjusted (Non-GAAP) in the third quarter of 2016. In the third quarter of 2015, net income applicable to common shareholders was \$820 million, or \$0.74 per diluted common share, or \$828 million, or \$0.74 per diluted common share, as adjusted (Non-GAAP). In the second quarter of 2016, net income applicable to common shareholders was \$825 million, or \$0.75 per diluted common share, or \$830 million, or \$0.76 per diluted common share, as adjusted (Non-GAAP). See "Supplemental information - Explanation of GAAP and Non-GAAP financial measures" beginning on page 48 for the reconciliation of Non-GAAP measures.

Highlights of the third quarter of 2016 include:

- AUC/A totaled \$30.5 trillion at Sept. 30, 2016 compared with \$28.5 trillion at Sept. 30, 2015. The 7% increase primarily reflects higher market values, partially offset by the unfavorable impact of a stronger U.S. dollar. (See "Investment Services business" beginning on page 19.)
- AUM totaled \$1.72 trillion at Sept. 30, 2016 compared with \$1.63 trillion at Sept. 30, 2015. The 6% increase primarily reflects higher market values, 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 and the Other segment. (See "Investment Management business" beginning on page 16.)
- 

Investment services fees totaled $1.89 billion, an increase of 2% compared with $1.85 billion in the third quarter of 2015. The increase primarily reflects higher money market fees, higher fees in Depositary Receipts and higher securities lending revenue, partially offset by the unfavorable impact of a stronger U.S. dollar. (See "Investment Services business" beginning on page 19.)

• Investment management and performance fees totaled $860 million, an increase of 4% compared with $829 million in the third quarter of 2015. The increase primarily reflects higher market values and money market fees, partially offset by the unfavorable impact of a stronger U.S. dollar and net outflows of AUM in prior periods. (See “Investment Management business” beginning on page 16.)

- Foreign exchange and other trading revenue totaled $183 million compared with $179 million in the third quarter of 2015. Foreign exchange revenue totaled $175 million, a decrease of 3% compared with $180 million in the third quarter of 2015. The decrease primarily reflects lower volumes and volatility, partially offset by the positive net impact of foreign currency hedging activity. (See “Fee and other revenue” beginning on page 7.)
- Financing-related fees totaled $58 million compared with $71 million in the third quarter of 2015. The decrease primarily reflects lower underwriting fees and lower fees related to secured intraday credit provided to dealers in connection with their tri-party repo activity. (See “Fee and other revenue” beginning on page 7.)
- Investment and other income totaled $92 million compared with $59 million in the third quarter of 2015. The increase primarily reflects higher asset-related and seed capital gains. (See “Fee and other revenue” beginning on page 7.)
- Net interest revenue totaled $774 million compared with $759 million in the third quarter of 2015. The increase primarily reflects the actions we have taken to reduce the levels of our lower yielding interest-earning assets and higher yielding interest-bearing deposits, as well as the impact of higher market interest rates. Net interest margin (FTE) was 1.06% in the third quarter of 2016 compared with 0.98% in the third quarter of 2015. (See “Net interest revenue” beginning on page 10.)
- The provision for credit losses was a credit of $19 million, driven by net recoveries of $13 million. The provision for credit losses was $1 million in the third quarter of 2015. (See “Asset quality and allowance for credit losses” beginning on page 29.)

- Noninterest expense totaled $2.64 billion compared with $2.68 billion in the third quarter of 2015. The decrease primarily reflects lower expenses in most expense categories, primarily driven by the favorable impact of a stronger U.S. dollar, lower other, furniture and equipment, legal, net occupancy and business development expenses, partially offset by higher staff and distribution and servicing expenses. (See “Noninterest expense” beginning on page 13.)
- The provision for income taxes was $324 million and the effective rate was 24.6% in the third quarter 2016 compared with an income tax provision of $282 million and an effective tax rate of 25.4% in the third quarter of 2015. (See “Income taxes” on page 14.)
- The net unrealized pre-tax gain on the total investment securities portfolio was $1.4 billion at Sept. 30, 2016 compared with $1.6 billion at June 30, 2016. The decrease primarily reflects an increase in market interest rates. (See “Investment securities” beginning on page 25.)
- Our CET1 ratio under the Advanced Approach was 10.5% at Sept. 30, 2016 and 10.2% at June 30, 2016. The increase reflects an increase in capital and a decrease in risk-weighted assets. Our CET1 ratio under the Standardized Approach was 12.2% at Sept. 30, 2016 and 11.8% at June 30, 2016. (See “Capital” beginning on page 37.)
- Our estimated CET1 ratio (Non-GAAP) calculated under the Advanced Approach on a fully phased-in basis was 9.8% at Sept. 30, 2016 and 9.5% at June 30, 2016. The increase reflects an increase in capital and a decrease in risk-weighted assets. Our estimated CET1 ratio (Non-GAAP) calculated under the Standardized Approach on a fully phased-in basis was 11.4% at Sept. 30, 2016 and 11.0% at June 30, 2016. (See “Capital” beginning on page 37.)

Fee and other revenue

| Fee and other revenue | | | | 3Q16 vs. | | | | YTD16 vs. |
|---|---|---|---|---|---|---|---|---|
| (dollars in millions, unless otherwise noted) | 3Q16 | 2Q16 | 3Q15 | 2Q16 | 3Q15 | YTD16 | YTD15 | YTD15 |
| Investment services fees: | | | | | | | | |
| Asset servicing (a) | $1,067 | $1,069 | $1,057 | — % | 1 % | $3,176 | $3,155 | 1 % |
| Clearing services | 349 | 350 | 345 | — | 1 | 1,049 | 1,036 | 1 |
| Issuer services | 337 | 234 | 313 | 44 | 8 | 815 | 779 | 5 |
| Treasury services | 137 | 139 | 137 | (1 ) | — | 407 | 418 | (3 ) |
| Total investment services fees | 1,890 | 1,792 | 1,852 | 5 | 2 | 5,447 | 5,388 | 1 |
| Investment management and performance fees | 860 | 830 | 829 | 4 | 4 | 2,502 | 2,574 | (3 ) |
| Foreign exchange and other trading revenue | 183 | 182 | 179 | 1 | 2 | 540 | 595 | (9 ) |
| Financing-related fees | 58 | 57 | 71 | 2 | (18 ) | 169 | 169 | — |
| Distribution and servicing | 43 | 43 | 41 | — | 5 | 125 | 121 | 3 |
| Investment and other income | 92 | 74 | 59 | 24 | 56 | 271 | 223 | 22 |
| Total fee revenue | 3,126 | 2,978 | 3,031 | 5 | 3 | 9,054 | 9,070 | — |
| Net securities gains | 24 | 21 | 22 | N/M | N/M | 65 | 62 | 5 |
| Total fee and other revenue | $3,150 | $2,999 | $3,053 | 5 % | 3 % | $9,119 | $9,132 | — % |
| | | | | | | | | |
| Fee revenue as a percentage of total revenue | 79 % | 79 % | 81 % | | | 79 % | 79 % | |
| | | | | | | | | |
| AUM at period end (in billions) (b) | $1,715 | $1,664 | $1,625 | 3 % | 6 % | $1,715 | $1,625 | 6 % |
| AUC/A at period end (in trillions) (c) | $30.5 | $29.5 | $28.5 | 3 % | 7 % | $30.5 | $28.5 | 7 % |

(a) Asset servicing fees include securities lending revenue of $51 million in the third quarter of 2016, $52 million in the second quarter of 2016, $38 million in the third quarter of 2015, $153 million in the first nine months of 2016 and $130 million in the first nine months of 2015.

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

(c) Includes the AUC/A of CIBC Mellon of $1.2 trillion at Sept. 30, 2016, $1.1 trillion at June 30, 2016 and $1.0 trillion at Sept. 30, 2015.

N/M - Not meaningful.

Fee and other revenue increased 3% compared with the third quarter of 2015 and increased 5% (unannualized) compared with the second quarter of 2016. The year-over-year increase primarily reflects higher investment and other income, investment management and performance fees and issuer services fees, partially offset by lower financing-related fees. The sequential increase primarily reflects higher issuer services fees, investment management and performance fees and investment and other income.

Investment services fees

Investment services fees were impacted by the following compared with the third quarter of 2015 and the second quarter of 2016:

- Asset servicing fees increased 1% compared with the third quarter of 2015 and slightly decreased compared with the second quarter of 2016. The year-over-year increase primarily reflects higher money market fees and securities lending revenue, partially offset by the unfavorable impact of a stronger U.S. dollar and downsizing of the UK transfer agency business.

- Clearing services fees increased 1% compared with the third quarter of 2015 and decreased slightly compared with the second quarter of 2016. The year-over-year increase was primarily driven by higher money market fees, partially offset by the impact of the previously disclosed lost business.
- Issuer services fees increased 8% compared with the third quarter of 2015 and increased 44% (unannualized) compared with the second quarter of 2016. The year-over-year increase primarily reflects increased activity in Depositary Receipts and higher money market fees in Corporate Trust. The sequential increase primarily reflects seasonally higher fees in Depositary Receipts.
- Treasury services fees were unchanged compared with the third quarter of 2015 and decreased 1% (unannualized) compared with the second quarter of 2016.

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

Investment management and performance fees

Investment management and performance fees totaled $860 million in the third quarter of 2016, an increase of 4% compared with the third quarter of 2015 and 4% (unannualized) compared with the second quarter of 2016. The increase compared with the third quarter of 2015 primarily reflects higher market values and money market fees, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound) and net outflows of assets under management in prior periods. The increase compared with the second quarter of 2016 primarily reflects higher market values. Performance fees were $8 million in the third quarter of 2016, $7 million in the third quarter of 2015 and $9 million in the second quarter of 2016.

Total AUM for the Investment Management business was $1.7 trillion at Sept. 30, 2016, an increase of 6% compared with Sept. 30, 2015 and 3% compared with June 30, 2016. The year-over-year increase primarily reflects higher market values, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound). Net long-term inflows of $1 billion in the third quarter of 2016 were a combination of $3 billion of inflows into actively managed strategies and $2 billion of outflows from index strategies.  Net short-term outflows totaled $1 billion in the third quarter of 2016.

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

Foreign exchange and other trading revenue

Foreign exchange and other trading revenue

| | | | | Year-to-date | |
|---|---|---|---|---|---|
| (in millions) | 3Q16 | 2Q16 | 3Q15 | 2016 | 2015 |
| Foreign exchange | $ 175 | $ 166 | $ 180 | $ 512 | $ 578 |
| Other trading revenue (loss) | 8 | 16 | (1 ) | 28 | 17 |
| Total foreign exchange and other trading revenue | $ 183 | $ 182 | $ 179 | $ 540 | $ 595 |

Foreign exchange and other trading revenue totaled $183 million in the third quarter of 2016, $179 million in the third quarter of 2015 and $182 million in the second quarter of 2016.

Foreign exchange trading 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. In the third quarter of 2016, foreign exchange revenue totaled $175 million, a decrease of 3% compared with the third quarter of 2015 and an increase of 5% (unannualized) compared with the second quarter of 2016. The year-over-year decrease primarily reflects lower volumes and volatility, partially offset by the positive net impact of foreign currency hedging activity. The year-over-year decrease also reflects the continued trend of clients migrating to lower margin products. The sequential increase primarily reflects higher Depositary Receipt-related foreign exchange activity, partially offset by lower volatility.  Foreign exchange revenue is reported in the Investment Services business and the Other segment.

Generally speaking, custody clients enter into foreign exchange transactions in one of three ways: negotiated trading with BNY Mellon, BNY Mellon’s standing instruction programs, or transactions with third-party foreign exchange providers. Negotiated transactions generally refer to transactions entered into by the client or the client’s investment manager, with all decisions related to a transaction made by the client or its investment manager. The preponderance of the notional value of our trading volume with clients is in negotiated trading. Our standing instruction programs, which are Session Range and our standard Defined Spread program, provide custody clients and their investment managers with an end-to-end solution that allows them to shift to BNY Mellon the cost, management and execution risk, often in small transactions or transactions in restricted and difficult to trade currencies. A shift by custody clients from our standing instruction programs to other trading options combined with competitive market pressures on the foreign exchange business is negatively impacting our foreign exchange revenue. For the quarter ended Sept. 30, 2016, total revenue for all types of foreign exchange trading transactions was approximately 4% of our total revenue, and approximately 27% of our foreign exchange revenue was generated by transactions in our standing instruction programs.

Total other trading revenue was $8 million in the third quarter of 2016, compared with a $1 million loss in the third quarter of 2015 and $16 million in the second quarter of 2016. The year-over-year increase primarily reflects higher fixed income trading, partially offset by lower equity and other trading.

The sequential decrease primarily reflects lower results from derivative trading and hedging activity. Other trading revenue is reported in all three business segments.

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 totaled $58 million in the third quarter of 2016, $71 million in the third quarter of 2015 and $57 million in the second quarter of 2016. The year-over-year decrease primarily reflects lower underwriting fees and lower fees related to secured intraday credit provided to dealers in connection with their tri-party repo activity.

Distribution and servicing fees

Distribution and servicing fee revenue was $43 million in the third quarter of 2016, $41 million in the third quarter of 2015 and $43 million in the second quarter of 2016. The year-over-year increase primarily reflects higher money market fees, partially offset by fees paid to introducing brokers.

Investment and other income

Investment and other income

| | | | | Year-to-date | |
|---|---|---|---|---|---|
| (in millions) | 3Q16 | 2Q16 | 3Q15 | 2016 | 2015 |
| Corporate/bank-owned life insurance | $34 | $31 | $32 | $96 | $96 |
| Expense reimbursements from joint venture | 18 | 17 | 16 | 52 | 47 |
| Lease-related gains | — | — | — | 44 | 53 |
| Seed capital gains (a) | 16 | 11 | 7 | 38 | 25 |
| Asset-related gains (losses) | 8 | 1 | (9) | 9 | (5) |
| Equity investment (losses) | (1) | (4) | (6) | (8) | (17) |
| Other income | 17 | 18 | 19 | 40 | 24 |
| Total investment and other income | $92 | $74 | $59 | $271 | $223 |

(a) Does not include the gain (loss) on seed capital investments in consolidated investment management funds which are reflected in operations of consolidated investment management funds, net of noncontrolling interests. The gain (loss) on seed capital investments in consolidated investment management funds was $8 million in the third quarter of 2016, $6 million in the second quarter of 2016, $(17) million in the third quarter of 2015, $15 million in the first nine months of 2016 and $7 million in the first nine months of 2015.

Investment and other income includes corporate and bank-owned life insurance contracts, expense reimbursements from our CIBC Mellon joint venture, lease-related gains, seed capital gains, asset-related gains, equity investment losses and other income. Expense reimbursements from our CIBC Mellon joint venture relate to expenses incurred by BNY Mellon on behalf of the CIBC Mellon joint venture. Asset-related gains include real estate, loan and other asset dispositions. Other income primarily includes foreign currency remeasurement gain (loss), other investments and various miscellaneous revenues. Investment and other income was $92 million in the third quarter of 2016 compared with $59 million in the third quarter of 2015 and $74 million in the second quarter of 2016. Both increases primarily reflect higher asset-related and seed capital gains.

Year-to-date 2016 compared with year-to-date 2015

Fee and other revenue for the first nine months of 2016 totaled $9.12 billion compared with $9.13 billion in the first nine months of 2015. The decrease primarily reflects lower investment management and performance fees and foreign exchange and other trading revenue, partially offset by higher investment and other income, issuer services fees and asset servicing fees. The decrease in investment management and performance fees primarily reflects outflows in prior periods, the unfavorable impact of a stronger U.S. dollar (principally versus the British pound), the July 2015 sale of Meriten and lower performance fees, partially offset by higher money market fees. The decrease in foreign exchange and other trading revenue primarily reflects lower volumes and the continued trend of clients migrating to lower margin products. The increase in investment and other income primarily reflects foreign currency remeasurement gains and higher asset-related and seed capital gains. The increase in issuer services fees primarily reflects higher money market fees in Corporate Trust. The increase in asset servicing fees primarily reflects net new business, higher money market fees and higher securities lending revenue, partially offset by the unfavorable impact of a stronger U.S. dollar.

Net interest revenue

| Net interest revenue | | | | 3Q16 vs. | | Year-to-date | | YTD16 vs. |
|---|---|---|---|---|---|---|---|---|
| (dollars in millions) | 3Q16 | 2Q16 | 3Q15 | 2Q16 | 3Q15 | 2016 | 2015 | YTD15 |
| Net interest revenue (non-FTE) | $774 | $767 | $759 | 1% | 2% | $2,307 | $2,266 | 2% |
| Tax equivalent adjustment | 12 | 13 | 14 | (8 ) | (14 ) | 39 | 44 | (11 ) |
| Net interest revenue (FTE) | $786 | $780 | $773 | 1% | 2% | $2,346 | $2,310 | 2% |
| Average interest-earning assets | $296,703 | $318,433 | $315,672 | (7)% | (6)% | $308,560 | $314,152 | (2)% |
| Net interest margin (FTE) | 1.06 % | 0.98 % | 0.98 % | 8 bps | 8 bps | 1.02 % | 0.98 % | 4 bps |

FTE - fully taxable equivalent.
bps - basis points.

Net interest revenue totaled $774 million in the third quarter of 2016, an increase of $15 million compared with the third quarter of 2015 and an increase of $7 million compared with the second quarter of 2016. Both increases primarily reflect the actions we have taken to reduce the levels of our lower yielding interest-earning assets and higher yielding interest-bearing deposits, as well as the impact of higher market interest rates. The sequential increase also reflects higher average loans.

The net interest margin (FTE) was 1.06% in the third quarter of 2016 compared with 0.98% in the third quarter of 2015 and 0.98% in the second quarter of 2016. The year-over-year and sequential increases primarily reflect the factors noted above.

Average non-U.S. dollar deposits comprised approximately 20% of our average total deposits in the third quarter of 2016. Approximately 40% of the average non-U.S dollar deposits were euro-denominated in the third quarter of 2016.

As previously indicated, we evaluated the impact of our resolution plan strategy on net interest revenue. We currently believe that it requires us to issue approximately $2 - $4 billion of incremental unsecured long-term debt above our typical funding requirements by July 2017 to satisfy resource needs in a time of distress. This estimate is subject to change as we further refine our strategy and related assumptions. The additional debt is currently expected to have a modest negative impact to net interest revenue.

Year-to-date 2016 compared with year-to-date 2015

Net interest revenue totaled $2.3 billion in the first nine months of 2016, an increase of $41 million compared with the first nine months of 2015. The increase in net interest revenue primarily reflects the impact of higher market interest rates, partially offset by the negative impact of interest rate hedging activities and lower securities due to lower deposits. The net interest margin (FTE) was 1.02% in the first nine months of 2016, compared with 0.98% in the first nine months of 2015. The increase in the net interest margin (FTE) primarily reflects the factors noted above.

| Average balances and interest rates | Quarter ended | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sept. 30, 2016 | | | June 30, 2016 | | | Sept. 30, 2015 | | |
| (dollar amounts in millions, presented on an FTE basis) | 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) | $14,066 | $26 | 0.74 % | $14,394 | $24 | 0.68 % | $20,549 | $24 | 0.45 % |
| Interest-bearing deposits held at the Federal Reserve and other central banks | 74,102 | 37 | 0.20 | 97,788 | 72 | 0.30 | 84,175 | 43 | 0.20 |
| Federal funds sold and securities purchased under resale agreements | 26,376 | 62 | 0.93 | 25,813 | 56 | 0.87 | 25,366 | 39 | 0.61 |
| Margin loans | 18,132 | 67 | 1.48 | 18,226 | 64 | 1.40 | 19,839 | 53 | 1.05 |
| Non-margin loans: | | | | | | | | | |
| Domestic offices | 30,534 | 171 | 2.22 | 29,413 | 165 | 2.25 | 27,411 | 147 | 2.15 |
| Foreign offices | 12,912 | 47 | 1.45 | 12,645 | 49 | 1.57 | 14,407 | 41 | 1.13 |
| Total non-margin loans | 43,446 | 218 | 1.99 | 42,058 | 214 | 2.04 | 41,818 | 188 | 1.80 |
| Securities: | | | | | | | | | |
| U.S. Government obligations | 25,279 | 94 | 1.49 | 24,571 | 92 | 1.50 | 23,935 | 92 | 1.52 |
| U.S. Government agency obligations | 56,464 | 240 | 1.70 | 56,050 | 236 | 1.68 | 55,624 | 245 | 1.76 |
| State and political subdivisions – tax-exempt | 3,598 | 27 | 2.98 | 3,778 | 28 | 2.90 | 4,465 | 31 | 2.81 |
| Other securities | 33,064 | 102 | 1.23 | 33,603 | 104 | 1.24 | 37,164 | 119 | 1.28 |
| Trading securities | 2,176 | 13 | 2.62 | 2,152 | 13 | 2.45 | 2,737 | 18 | 2.74 |
| Total securities | 120,581 | 476 | 1.58 | 120,154 | 473 | 1.57 | 123,925 | 505 | 1.63 |
| Total interest-earning assets | $296,703 | $886 (a) | 1.19 % | $318,433 | $903 (a) | 1.14 % | $315,672 | $852 (a) | 1.08 % |
| Allowance for loan losses | (165) | | | (163) | | | (184) | | |
| Cash and due from banks | 4,189 | | | 4,141 | | | 6,140 | | |
| Other assets | 49,463 | | | 50,563 | | | 49,700 | | |
| Assets of consolidated investment management funds | 1,040 | | | 1,246 | | | 2,125 | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total assets | $351,230 | | | | $374,220 | | | | $373,453 | | | |
| Liabilities | | | | | | | | | | | | |
| Interest-bearing liabilities: | | | | | | | | | | | | |
| Interest-bearing deposits: | | | | | | | | | | | | |
| Money market rate accounts | $7,346 | $1 | 0.06 | % | $7,280 | $1 | 0.06 | % | $7,518 | $1 | 0.08 | % |
| Savings | 1,201 | 1 | 0.41 | | 1,175 | 1 | 0.39 | | 1,279 | 1 | 0.27 | |
| Demand deposits | 2,681 | 3 | 0.36 | | 1,790 | 2 | 0.40 | | 3,105 | 2 | 0.25 | |
| Time deposits | 45,186 | 7 | 0.07 | | 46,629 | 6 | 0.06 | | 43,529 | 4 | 0.04 | |
| Foreign offices | 98,695 | (18) | (0.08) | | 108,248 | 2 | 0.01 | | 114,322 | 1 | — | |
| Total interest-bearing deposits | 155,109 | (6) | (0.02) | | 165,122 | 12 | 0.03 | | 169,753 | 9 | 0.02 | |
| Federal funds purchased and securities sold under repurchase agreements | 9,585 | 6 | 0.24 | | 18,204 | 13 | 0.28 | | 14,796 | (1) | (0.04) | |
| Trading liabilities | 735 | 2 | 1.11 | | 662 | 1 | 0.66 | | 475 | 2 | 1.42 | |
| Other borrowed funds | 874 | 1 | 0.76 | | 847 | 2 | 0.97 | | 628 | 2 | 1.18 | |
| Commercial paper | 1,173 | 1 | 0.35 | | 3,781 | 4 | 0.37 | | 2,195 | 1 | 0.11 | |
| Payables to customers and broker-dealers | 16,873 | 3 | 0.07 | | 16,935 | 2 | 0.05 | | 11,504 | 1 | 0.06 | |
| Long-term debt | 23,930 | 93 | 1.54 | | 22,838 | 89 | 1.54 | | 21,070 | 65 | 1.21 | |
| Total interest-bearing liabilities | $208,279 | $100 | 0.19 | % | $228,389 | $123 | 0.21 | % | $220,421 | $79 | 0.14 | % |
| Total noninterest-bearing deposits | 81,619 | | | | 84,033 | | | | 85,046 | | | |
| Other liabilities | 21,343 | | | | 22,345 | | | | 27,880 | | | |
| Liabilities and obligations of consolidated investment management funds | 238 | | | | 253 | | | | 841 | | | |
| Total liabilities | 311,479 | | | | 335,020 | | | | 334,188 | | | |
| Temporary equity | | | | | | | | | | | | |
| Redeemable noncontrolling interests | 179 | | | | 181 | | | | 252 | | | |
| Permanent equity | | | | | | | | | | | | |
| Total BNY Mellon shareholders' equity | 39,051 | | | | 38,379 | | | | 38,140 | | | |
| Noncontrolling interests | 521 | | | | 640 | | | | 873 | | | |
| | 39,572 | | | | 39,019 | | | | 39,013 | | | |

| | | | |
|---|---|---|---|
| Total permanent equity | | | |
| Total liabilities, temporary equity and permanent equity | $351,230 | $374,220 | $373,453 |
| Net interest margin (FTE) | 1.06 % | 0.98 % | 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) The tax equivalent adjustment was $12 million in the third quarter of 2016, $13 million in the second quarter of 2016 and $14 million in the third quarter of 2015, and is based on the applicable tax rate (35%).

| Average balances and interest rates | Year-to-date | | | | Sept. 30, 2015 | | | |
|---|---|---|---|---|---|---|---|---|
| | Sept. 30, 2016 | | | | | | | |
| (dollar amounts in millions, presented on an FTE basis) | Average balance | Interest | Average rates | | Average balance | Interest | Average rates | |
| Assets | | | | | | | | |
| Interest-earning assets: | | | | | | | | |
| Interest-bearing deposits with banks (primarily foreign banks) | $14,455 | $76 | 0.70 | % | $20,946 | $82 | 0.52 | % |
| Interest-bearing deposits held at the Federal Reserve and other central banks | 86,947 | 170 | 0.26 | | 82,405 | 131 | 0.21 | |
| Federal funds sold and securities purchased under resale agreements | 25,275 | 167 | 0.88 | | 23,127 | 105 | 0.61 | |
| Margin loans | 18,420 | 194 | 1.41 | | 20,118 | 154 | 1.02 | |
| Non-margin loans: | | | | | | | | |
| Domestic offices | 29,488 | 493 | 2.23 | | 26,469 | 419 | 2.11 | |
| Foreign offices | 13,112 | 144 | 1.47 | | 13,649 | 121 | 1.18 | |
| Total non-margin loans | 42,600 | 637 | 2.00 | | 40,118 | 540 | 1.80 | |
| Securities: | | | | | | | | |
| U.S. Government obligations | 24,778 | 278 | 1.50 | | 26,560 | 286 | 1.44 | |
| U.S. Government agency obligations | 56,161 | 727 | 1.73 | | 54,911 | 716 | 1.74 | |
| State and political subdivisions – tax-exempt | 3,784 | 83 | 2.92 | | 4,897 | 99 | 2.70 | |
| Other securities | 33,592 | 309 | 1.23 | | 38,059 | 366 | 1.28 | |
| Trading securities | 2,548 | 45 | 2.37 | | 3,011 | 57 | 2.61 | |
| Total securities | 120,863 | 1,442 | 1.59 | | 127,438 | 1,524 | 1.60 | |
| Total interest-earning assets | $308,560 | $2,686 (a) | 1.16 | % | $314,152 | $2,536 (a) | 1.08 | % |
| Allowance for loan losses | (162 ) | | | | (188 ) | | | |
| Cash and due from banks | 4,070 | | | | 6,376 | | | |
| Other assets | 49,624 | | | | 50,816 | | | |
| Assets of consolidated investment management funds | 1,198 | | | | 2,244 | | | |
| Total assets | $363,290 | | | | $373,400 | | | |
| Liabilities | | | | | | | | |
| Interest-bearing liabilities: | | | | | | | | |
| Interest-bearing deposits: | | | | | | | | |
| Money market rate accounts | $7,337 | $3 | 0.06 | % | $7,186 | $5 | 0.09 | % |
| Savings | 1,203 | 3 | 0.36 | | 1,344 | 3 | 0.28 | |
| Demand deposits | 1,782 | 5 | 0.40 | | 3,138 | 5 | 0.22 | |
| Time deposits | 44,832 | 19 | 0.06 | | 44,533 | 11 | 0.03 | |
| Foreign offices | 105,574 | (9 ) | (0.01 ) | | 110,499 | 8 | 0.01 | |
| Total interest-bearing deposits | 160,728 | 21 | 0.02 | | 166,700 | 32 | 0.03 | |
| Federal funds purchased and securities sold under repurchase agreements | 15,471 | 28 | 0.24 | | 15,139 | (5 ) | (0.04 ) | |
| Trading liabilities | 650 | 5 | 1.05 | | 633 | 7 | 1.41 | |
| Other borrowed funds | 827 | 5 | 0.90 | | 841 | 7 | 1.12 | |
| Commercial paper | 1,657 | 5 | 0.37 | | 2,071 | 2 | 0.10 | |
| Payables to customers and broker-dealers | 16,870 | 9 | 0.07 | | 11,225 | 5 | 0.06 | |
| Long-term debt | 22,779 | 267 | 1.55 | | 20,635 | 178 | 1.14 | |
| Total interest-bearing liabilities | $218,982 | $340 | 0.21 | % | $217,244 | $226 | 0.14 | % |
| Total noninterest-bearing deposits | 82,861 | | | | 86,493 | | | |
| Other liabilities | 21,993 | | | | 30,004 | | | |

| | | | | |
|---|---|---|---|---|
| Liabilities and obligations of consolidated investment management funds | 250 | | 900 | |
| Total liabilities | 324,086 | | 334,641 | |
| Temporary equity | | | | |
| Redeemable noncontrolling interests | 183 | | 240 | |
| Permanent equity | | | | |
| Total BNY Mellon shareholders' equity | 38,414 | | 37,676 | |
| Noncontrolling interests | 607 | | 843 | |
| Total permanent equity | 39,021 | | 38,519 | |
| Total liabilities, temporary equity and permanent equity | $363,290 | | $373,400 | |
| Net interest margin (FTE) | | 1.02 % | | 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) The tax equivalent adjustment was $39 million in the first nine months of 2016 and $44 million in the first nine months of 2015, and is based on the applicable tax rate (35%).

Noninterest expense

| Noninterest expense | | | | 3Q16 vs. | | | | YTD16 vs. |
|---|---|---|---|---|---|---|---|---|
| (dollars in millions) | 3Q16 | 2Q16 | 3Q15 | 2Q16 | 3Q15 | YTD16 | YTD15 | YTD15 |
| Staff | $1,467 | $1,412 | $1,437 | 4 % | 2 % | $4,338 | $4,356 | — % |
| Professional, legal and other purchased services | 292 | 290 | 301 | 1 | (3 ) | 860 | 902 | (5 ) |
| Software | 156 | 160 | 154 | (3 ) | 1 | 470 | 470 | — |
| Net occupancy | 143 | 152 | 152 | (6 ) | (6 ) | 437 | 452 | (3 ) |
| Distribution and servicing | 105 | 102 | 95 | 3 | 11 | 307 | 289 | 6 |
| Sub-custodian | 59 | 70 | 65 | (16 ) | (9 ) | 188 | 210 | (10 ) |
| Furniture and equipment | 59 | 63 | 72 | (6 ) | (18 ) | 187 | 212 | (12 ) |
| Business development | 52 | 65 | 59 | (20 ) | (12 ) | 174 | 192 | (9 ) |
| Other | 231 | 240 | 268 | (4 ) | (14 ) | 712 | 760 | (6 ) |
| Amortization of intangible assets | 61 | 59 | 66 | 3 | (8 ) | 177 | 197 | (10 ) |
| M&I, litigation and restructuring charges | 18 | 7 | 11 | N/M | N/M | 42 | 67 | N/M |
| Total noninterest expense – GAAP | $2,643 | $2,620 | $2,680 | 1 % | (1 )% | $7,892 | $8,107 | (3 )% |
| Staff expense as a percentage of total revenue | 37 % | 37 % | 38 % | | | 38 % | 38 % | |
| Full-time employees at period end | 52,300 | 52,200 | 51,300 | — | 2% | 52,300 | 51,300 | 2 % |
| Memo: | | | | | | | | |
| Total noninterest expense excluding amortization of intangible assets and M&I, litigation and restructuring charges – Non-GAAP | $2,564 | $2,554 | $2,603 | — % | (1 )% | $7,673 | $7,843 | (2 )% |

N/M - Not meaningful.

Total noninterest expense decreased 1% compared with the third quarter of 2015 and increased 1% (unannualized) compared with the second quarter of 2016. The decrease compared with the third quarter of 2015 primarily reflects lower expenses in most categories, primarily driven by the favorable impact of a stronger U.S. dollar, lower other, furniture and equipment, legal, net occupancy and business development expenses, partially offset by higher staff and distribution and servicing expenses. The increase compared with the second quarter of 2016 primarily reflects higher staff expense and M&I, litigation and restructuring charges, partially offset by lower expenses in most other expense categories including business development, sub-custodian, net occupancy, other, software and furniture and equipment expenses. Excluding amortization of intangible assets and M&I, litigation and restructuring charges, noninterest expense (Non-GAAP) decreased 1% compared with the third quarter of 2015 and increased slightly compared with the second quarter of 2016.

We continue to invest in our risk management, regulatory compliance and other control functions in light of increasing regulatory requirements. As a result, we expect an increase in our expense run rate relating to these functions.

Staff expense

Given our mix of fee-based businesses, which are staffed with high-quality professionals, staff expense comprised 56% of total noninterest expense in the third quarter of 2016 and 54% in both the third quarter of 2015 and second quarter of 2016.

Staff expense increased 2% compared with the third quarter of 2015 and 4% (unannualized) compared with the second quarter of 2016. Both increases primarily reflect higher incentive and severance expenses and the annual employee merit increase. The increase compared with the third quarter of 2015 was partially offset by lower temporary services expense.

Non-staff expense

Non-staff expense includes certain expenses that vary with the levels of business activity and levels of 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 third quarter of 2016, a decrease of 5% compared with the third quarter of 2015 and 3% (unannualized) compared with the second quarter of 2016. The decrease compared with the third quarter of 2015 primarily reflects lower expenses in most categories, primarily driven by lower other, furniture and equipment, legal, net occupancy and business development expenses, partially offset by higher distribution and servicing expenses. The decrease compared with the second quarter of 2016 primarily reflects lower expenses in most non-staff expense categories including business development, sub-custodian, net occupancy, other, software and furniture and equipment expenses, partially offset by higher M&I, litigation and restructuring charges. Non-staff expense, excluding amortization of intangible assets and M&I, litigation and restructuring charges (Non-GAAP), totaled $1.1 billion in the third quarter of 2016, a decrease of 6% compared with the third quarter of 2015 and 4% (unannualized) compared with the second quarter of 2016.

We continue to benefit from the business improvement process, including the continued impact from vendor renegotiations, and the execution of additional real estate actions that will allow us to optimize our physical footprint and improve how our employees work.

For additional information on restructuring charges, see Note 9 of the Notes to Consolidated Financial Statements.

Year-to-date 2016 compared with year-to-date 2015

Noninterest expense totaled $7.9 billion in the first nine months of 2016, a decrease of $215 million, or 3%, compared with $8.1 billion in the first nine months of 2015. The decrease primarily reflects lower expenses in nearly all categories. The lower expenses, primarily incentives, other, temporary services, legal, furniture and equipment, business development and net occupancy, reflect, in part, the favorable impact of a stronger U.S. dollar and the continued benefit of the business improvement process. The decrease was primarily offset by higher severance and distribution and servicing expense.

Income taxes

BNY Mellon recorded an income tax provision of $324 million (24.6% effective tax rate) in the third quarter of 2016. The income tax provision was $282 million (25.4% effective tax rate) in the third quarter

of 2015 and $290 million (24.9% effective tax rate) in the second quarter of 2016. The effective tax rates primarily benefited from foreign operations, tax-exempt income and tax credits.

We expect the effective tax rate to be approximately 25-26% in 2016.

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.

Beginning in the first quarter of 2016, we revised the net interest revenue for our business to reflect adjustments to our transfer pricing methodology to better reflect the value of certain deposits. Also beginning in the first quarter of 2016, we refined the expense allocation process for indirect expenses to simplify the expenses recorded in the Other segment to include only expenses not directly attributable to the Investment Management and Investment Services operations. These changes did not impact the consolidated results.

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 paid in the quarter. Also in the third quarter, volume-related fees may decline due to reduced client activity. In the fourth quarter, we typically incur higher business development and marketing expenses. In our Investment Management business, performance fees are typically higher in the fourth quarter, as the fourth quarter represents the end of the measurement period for many of the performance fee-eligible relationships.

The results of our businesses may also be impacted by the translation of financial results denominated in foreign currencies to the U.S. dollar. We are

primarily impacted by activities denominated in the British pound, euro and the Indian rupee. 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 | | | | | | 3Q16 vs. | | | | YTD16 vs. |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | 2Q16 | 3Q15 | YTD16 | YTD15 | YTD15 |
| S&P 500 Index (a) | 2168 | 2099 | 2060 | 2044 | 1920 | 3 % | 13 % | 2168 | 1920 | 13 % |
| S&P 500 Index – daily average | 2162 | 2075 | 1951 | 2052 | 2027 | 4 | 7 | 2065 | 2064 | — |
| FTSE 100 Index (a) | 6899 | 6504 | 6175 | 6242 | 6062 | 6 | 14 | 6899 | 6062 | 14 |
| FTSE 100 Index – daily average | 6765 | 6204 | 5988 | 6271 | 6399 | 9 | 6 | 6326 | 6698 | (6) |
| MSCI EAFE (a) | 1702 | 1608 | 1652 | 1716 | 1644 | 6 | 4 | 1702 | 1644 | 4 |
| MSCI EAFE – daily average | 1677 | 1648 | 1593 | 1732 | 1785 | 2 | (6) | 1640 | 1836 | (11) |
| Barclays Capital Global Aggregate Bond[SM] Index (a)(b) | 386 | 382 | 368 | 342 | 346 | 1 | 12 | 386 | 346 | 12 |
| NYSE and NASDAQ share volume (in billions) | 186 | 203 | 218 | 198 | 206 | (8) | (10) | 608 | 578 | 5 |
| JPMorgan G7 Volatility Index – daily average (c) | 10.19 | 11.12 | 10.60 | 9.49 | 9.93 | (8) | 3 | 10.63 | 10.13 | 5 |
| Average Fed Funds effective rate | 0.39 % | 0.37 % | 0.36 % | 0.16 % | 0.13 % | 2 bps | 26 bps | 0.37 % | 0.12 % | 25 bps |
| Foreign exchange rates vs. U.S. dollar: | | | | | | | | | | |
| British pound (a) | $1.30 | $1.34 | $1.44 | $1.48 | $1.52 | (3)% | (14)% | $1.30 | $1.52 | (14) % |
| British pound – average rate | 1.31 | 1.43 | 1.43 | 1.52 | 1.55 | (8) | (15) | 1.39 | 1.53 | (9) |
| Euro (a) | 1.12 | 1.11 | 1.14 | 1.09 | 1.12 | 1 | — | 1.12 | 1.12 | — |
| Euro – average rate | 1.12 | 1.13 | 1.10 | 1.10 | 1.11 | (1) | 1 | 1.12 | 1.11 | 1 |

(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 Sept. 30, 2016, 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.

Fee waivers are highly sensitive to changes in the Fed Funds effective rate. Assuming no change in client

behavior, we expect to recover approximately 70% of the pre-tax income related to fee waivers with a 50 basis point increase in the Fed Funds effective rate, inclusive of the 25 basis point increase in December 2015.

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.

Investment Management business

| (dollar amounts in millions) | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | 3Q16 vs. 2Q16 | 3Q16 vs. 3Q15 | YTD16 | YTD15 | YTD16 vs. YTD15 |
|---|---|---|---|---|---|---|---|---|---|---|
| Revenue: | | | | | | | | | | |
| Investment management fees: | | | | | | | | | | |
| Mutual funds | $309 | $304 | $300 | $294 | $301 | 2 % | 3 % | $913 | $914 | — % |
| Institutional clients | 362 | 344 | 334 | 350 | 347 | 5 | 4 | 1,040 | 1,075 | (3 ) |
| Wealth management | 166 | 160 | 152 | 155 | 156 | 4 | 6 | 478 | 475 | 1 |
| Investment management fees (a) | 837 | 808 | 786 | 799 | 804 | 4 | 4 | 2,431 | 2,464 | (1 ) |
| Performance fees | 8 | 9 | 11 | 55 | 7 | N/M | 14 | 28 | 42 | (33 ) |
| Investment management and performance fees | 845 | 817 | 797 | 854 | 811 | 3 | 4 | 2,459 | 2,506 | (2 ) |
| Distribution and servicing | 49 | 49 | 46 | 39 | 37 | — | 32 | 144 | 113 | 27 |
| Other (a) | (18 ) | (10 ) | (31 ) | 22 | (5 ) | N/M | N/M | (59 ) | 53 | N/M |
| Total fee and other revenue (a) | 876 | 856 | 812 | 915 | 843 | 2 | 4 | 2,544 | 2,672 | (5 ) |
| Net interest revenue | 82 | 82 | 83 | 84 | 83 | — | (1 ) | 247 | 235 | 5 |
| Total revenue | 958 | 938 | 895 | 999 | 926 | 2 | 3 | 2,791 | 2,907 | (4 ) |
| Provision for credit losses | — | 1 | (1 ) | (4 ) | 1 | N/M | N/M | — | 3 | N/M |
| Noninterest expense (ex. amortization of intangible assets) | 680 | 684 | 660 | 689 | 665 | (1 ) | 2 | 2,024 | 2,073 | (2 ) |
| Amortization of intangible assets | 22 | 19 | 19 | 24 | 24 | 16 | (8 ) | 60 | 73 | (18 ) |
| Total noninterest expense | 702 | 703 | 679 | 713 | 689 | — | 2 | 2,084 | 2,146 | (3 ) |
| Income before taxes | $256 | $234 | $217 | $290 | $236 | 9 % | 8 % | $707 | $758 | (7 )% |
| Income before taxes (ex. | $278 | $253 | $236 | $314 | $260 | 10 % | 7 % | $767 | $831 | (8 )% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| amortization of intangible assets) – Non-GAAP | | | | | | | | | | |
| Pre-tax operating margin | 27 % | 25 % | 24 % | 29 % | 25 % | | | 25 % | 26 % | |
| Adjusted pre-tax operating margin – Non-GAAP (b) | 33 % | 31 % | 30 % | 36 % | 34 % | | | 32 % | 34 % | |
| Average balances: | | | | | | | | | | |
| Average loans | $15,308 | $14,795 | $14,275 | $13,447 | $12,779 | 3 % | 20 % | $14,795 | $12,241 | 21 % |
| Average deposits | $15,600 | $15,518 | $15,971 | $15,497 | $15,282 | 1 % | 2 % | $15,696 | $15,046 | 4 % |

(a) Total fee and other revenue includes the impact of the consolidated investment management funds, net of noncontrolling interests. See page 51 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.

(b) Excludes the net negative impact of money market fee waivers, amortization of intangible assets and provision for credit losses and is net of distribution and servicing expense. See “Supplemental information – Explanation of GAAP and Non-GAAP financial measures” beginning on page 48 for the reconciliation of this Non-GAAP measure.

N/M - Not meaningful.

| AUM trends (a) | | | | | | 3Q16 vs. | |
|---|---|---|---|---|---|---|---|
| (dollar amounts in billions) | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | 2Q16 | 3Q15 |
| AUM at period end, by product type: | | | | | | | |
| Equity | $228 | $225 | $222 | $224 | $224 | 1 % | 2 % |
| Fixed income | 221 | 218 | 219 | 216 | 216 | 1 | 2 |
| Index | 315 | 305 | 319 | 329 | 325 | 3 | (3 ) |
| Liability-driven investments (b) | 609 | 573 | 542 | 514 | 520 | 6 | 17 |
| Alternative investments | 70 | 68 | 66 | 63 | 62 | 3 | 13 |
| Cash | 272 | 275 | 271 | 279 | 278 | (1 ) | (2 ) |
| Total AUM | $1,715 | $1,664 | $1,639 | $1,625 | $1,625 | 3 % | 6 % |
| | | | | | | | |
| AUM at period end, by client type: | | | | | | | |
| Institutional | $1,234 | $1,182 | $1,155 | $1,127 | $1,129 | 4 % | 9 % |
| Mutual funds | 396 | 398 | 405 | 420 | 419 | (1 ) | (5 ) |
| Private client | 85 | 84 | 79 | 78 | 77 | 1 | 10 |
| Total AUM | $1,715 | $1,664 | $1,639 | $1,625 | $1,625 | 3 % | 6 % |
| | | | | | | | |
| Changes in AUM: | | | | | | | |
| Beginning balance of AUM | $1,664 | $1,639 | $1,625 | $1,625 | $1,700 | | |
| Net inflows (outflows): | | | | | | | |
| Long-term strategies: | | | | | | | |
| Equity | (3 ) | (2 ) | (3 ) | (9 ) | (4 ) | | |
| Fixed income | — | (2 ) | — | 1 | (3 ) | | |
| Liability-driven investments (b) | 4 | 15 | 14 | 11 | 11 | | |
| Alternative investments | 2 | 1 | 1 | 2 | 1 | | |
| Total long-term active strategies inflows | 3 | 12 | 12 | 5 | 5 | | |
| Index | (2 ) | (17 ) | (11 ) | (16 ) | (10 ) | | |
| Total long-term strategies inflows (outflows) | 1 | (5 ) | 1 | (11 ) | (5 ) | | |
| Short term strategies: | | | | | | | |
| Cash | (1 ) | 4 | (9 ) | 2 | (10 ) | | |
| Total net (outflows) | — | (1 ) | (8 ) | (9 ) | (15 ) | | |
| Net market impact/other | 80 | 71 | 41 | 24 | (35 ) | | |
| Net currency impact | (29 ) | (47 ) | (19 ) | (15 ) | (25 ) | | |
| Acquisition | — | 2 | — | — | — | | |
| Ending balance of AUM | $1,715 | $1,664 | $1,639 | $1,625 | $1,625 | 3 % | 6 % |

(a) Excludes securities lending cash management assets and assets managed in the Investment Services business and the Other segment.
(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 23 and 24 of our 2015 Annual Report for additional information on our Investment Management business.

Review of financial results

Investment management fees are dependent on the overall level and mix of AUM and the management fees expressed in basis points (one-hundredth of one percent) charged for managing those assets. Assets under management were

$1.72 trillion at Sept. 30, 2016 compared with $1.63 trillion at Sept. 30, 2015, an increase of 6%. The increase primarily reflects higher market values, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound).

Net long-term inflows of $1 billion in the third quarter of 2016 were a combination of $3 billion of inflows into actively managed strategies and $2 billion of outflows from index strategies. Net short-term outflows were $1 billion in the third quarter of 2016.

Total revenue was $958 million, an increase of 3% compared with the third quarter of 2015 and 2% (unannualized) compared with the second quarter of 2016. Both increases primarily reflect higher market values and seed capital gains, partially offset by losses on hedging activities and investments. The increase compared with the third quarter of 2015 also reflects higher distribution and servicing fees, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound).

Revenue generated in the Investment Management business included 40% from non-U.S. sources in the third quarter of 2016, compared with 42% in the third quarter of 2015 and 40% in the second quarter of 2016.

Investment management fees in the Investment Management business were $837 million, an increase of 4% compared with the third quarter of 2015 and 4% (unannualized) compared with the second quarter of 2016. The increase compared with the third quarter of 2015 primarily reflects higher market values and money market fees, partially offset by the unfavorable impact of a stronger U.S. dollar (principally versus the British pound) and net outflows of assets under management in prior periods. The increase compared with the second quarter of 2016 primarily reflects higher market values.

Performance fees were $8 million compared with $7 million in the third quarter of 2015 and $9 million in the second quarter of 2016.

Distribution and servicing fees were $49 million compared with $37 million in the third quarter of 2015 and $49 million in the second quarter of 2016. The increase compared with the third quarter of 2015 primarily reflects higher money market fees.

Other revenue was a loss of $18 million compared with a loss of $5 million in the third quarter of 2015 and a loss of $10 million in the second quarter of 2016. Both decreases primarily reflect losses on hedging activity and investments, partially offset by higher seed capital gains. The decrease compared with the third quarter of 2015 also reflects payments to Investment Services related to higher money market fees.

Net interest revenue was $82 million compared with $83 million in the third quarter of 2015 and $82 million in the second quarter of 2016. The decrease compared with the third quarter of 2015 primarily reflects the impact of changes in the internal crediting rates beginning in the first quarter of 2016, partially offset by record average loans and higher average deposits. Average loans increased 20% compared with the third quarter of 2015 and 3% compared with

the second quarter of 2016, while average deposits
increased 2% compared with the third quarter of 2015 and 1% compared with the second quarter of 2016. The increases in average loans were driven by our program to extend banking solutions to high net worth clients.

Noninterest expense, excluding amortization of intangible assets, was $680 million, an increase of 2% compared with the third quarter of 2015 and a decrease of 1% (unannualized) compared with the second quarter of 2016. The increase compared with the third quarter of 2015 was primarily driven by higher distribution and servicing expense as a result of lower money market fee waivers and higher incentive and severance expenses, partially offset by the impact of a stronger U.S. dollar. The decrease compared with the second quarter of 2016 primarily reflects lower other expenses, partially offset by higher incentive and severance expenses.

Year-to-date 2016 compared with year-to-date 2015

Income before taxes totaled $707 million in the first nine months of 2016 compared with $758 million in the first nine months of 2015. Income before taxes excluding amortization of intangible assets (Non-GAAP) was $767 million compared with $831 million in the first nine months of 2015. Fee and other revenue decreased $128 million compared with the first nine months of 2015, primarily reflecting net outflows in prior periods, the unfavorable impact of a stronger U.S. dollar and losses on hedging activity, partially offset by higher money market fees. Net interest revenue increased $12 million compared with the first nine months of 2015, primarily due to higher average loans and deposits, partially offset by the impact of changes in the internal crediting rates beginning in the first quarter of 2016. Noninterest expense, excluding amortization of intangible assets, decreased $49 million compared with the first nine months of 2015, primarily reflecting lower incentive expense and the favorable impact of the stronger U.S. dollar, partially offset by higher distribution and servicing expense as a result of lower money market fee waivers.

Investment Services business

| (dollars in millions, unless otherwise noted) | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | 3Q16 vs. 2Q16 | 3Q16 vs. 3Q15 | YTD16 | YTD15 | YTD16 vs. YTD15 |
|---|---|---|---|---|---|---|---|---|---|---|
| Revenue: | | | | | | | | | | |
| Investment services fees: | | | | | | | | | | |
| Asset servicing | $1,039 | $1,043 | $1,016 | $1,009 | $1,034 | — % | — % | $3,098 | $3,089 | — % |
| Clearing services | 347 | 350 | 348 | 337 | 345 | (1 ) | 1 | 1,045 | 1,033 | 1 |
| Issuer services | 336 | 233 | 244 | 199 | 312 | 44 | 8 | 813 | 777 | 5 |
| Treasury services | 136 | 137 | 129 | 135 | 135 | (1 ) | 1 | 402 | 411 | (2 ) |
| Total investment services fees | 1,858 | 1,763 | 1,737 | 1,680 | 1,826 | 5 | 2 | 5,358 | 5,310 | 1 |
| Foreign exchange and other trading revenue | 177 | 161 | 168 | 150 | 179 | 10 | (1 ) | 506 | 572 | (12) |
| Other (a) | 148 | 130 | 125 | 127 | 129 | 14 | 15 | 403 | 338 | 19 |
| Total fee and other revenue | 2,183 | 2,054 | 2,030 | 1,957 | 2,134 | 6 | 2 | 6,267 | 6,220 | 1 |
| Net interest revenue | 715 | 690 | 679 | 664 | 662 | 4 | 8 | 2,084 | 1,958 | 6 |
| Total revenue | 2,898 | 2,744 | 2,709 | 2,621 | 2,796 | 6 | 4 | 8,351 | 8,178 | 2 |
| Provision for credit losses | 1 | (7 ) | 14 | 8 | 7 | N/M | N/M | 8 | 20 | N/M |
| Noninterest expense (ex. amortization of intangible assets) | 1,812 | 1,819 | 1,770 | 1,791 | 1,853 | — | (2 ) | 5,401 | 5,549 | (3 ) |
| Amortization of intangible assets | 39 | 40 | 38 | 40 | 41 | (3 ) | (5 ) | 117 | 122 | (4 ) |
| Total noninterest expense | 1,851 | 1,859 | 1,808 | 1,831 | 1,894 | — | (2 ) | 5,518 | 5,671 | (3 ) |
| Income before taxes | $1,046 | $892 | $887 | $782 | $895 | 17 % | 17 % | $2,825 | $2,487 | 14 % |
| Income before taxes (ex. amortization of intangible assets) – Non-GAAP | $1,085 | $932 | $925 | $822 | $936 | 16 % | 16 % | $2,942 | $2,609 | 13 % |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pre-tax operating margin | 36 % | 33 % | 33 % | 30 % | 32 % | | | 34 % | 30 % | |
| Pre-tax operating margin (ex. provision for credit losses and amortization of intangible assets) - Non-GAAP | 37 % | 34 % | 35 % | 32 % | 34 % | | | 35 % | 32 % | |
| Investment services fees as a percentage of noninterest expense (ex. amortization of intangible assets) | 103 % | 97 % | 98 % | 94 % | 99 % | | | 99 % | 96 % | |
| Securities lending revenue | $42 | $42 | $42 | $39 | $33 | — % | 27 % | $126 | $114 | 11 % |
| Metrics: | | | | | | | | | | |
| Average loans | $44,329 | $43,786 | $45,004 | $45,844 | $46,222 | 1 % | (4 )% | $44,373 | $45,709 | (3 )% |
| Average deposits | $220,316 | $221,998 | $215,707 | $229,241 | $232,250 | (1 )% | (5 )% | $219,344 | $235,381 | (7 )% |
| AUC/A at period end (in trillions) (b) | $30.5 | $29.5 | $29.1 | $28.9 | $28.5 | 3 % | 7 % | $30.5 | $28.5 | 7 % |
| Market value of securities on loan at period end (in billions) (c) | $288 | $278 | $300 | $277 | $288 | 4 % | — % | $288 | $288 | — % |
| Asset servicing: | | | | | | | | | | |
| Estimated new business wins (AUC/A) (in billions) | $150 | $167 | $40 | $49 | $84 | | | | | |
| Depositary Receipts: | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Number of sponsored programs | 1,094 | 1,112 | 1,131 | 1,145 | 1,176 | (2 )% | (7 )% |
| Clearing services: | | | | | | | |
| Average active clearing accounts (U.S. platform) (in thousands) | 5,942 | 5,946 | 5,947 | 5,959 | 6,107 | — % | (3 )% |
| Average long-term mutual fund assets (U.S. platform) | $443,112 | $431,150 | $415,025 | $437,260 | $447,287 | 3 % | (1 )% |
| Average investor margin loans (U.S. platform) | $10,834 | $10,633 | $11,063 | $11,575 | $11,806 | 2 % | (8 )% |
| Broker-Dealer: | | | | | | | |
| Average tri-party repo balances (in billions) | $2,212 | $2,108 | $2,104 | $2,153 | $2,142 | 5 % | 3 % |

(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 Sept. 30, 2016, $1.1 trillion at June 30, 2016 and March 31, 2016 and $1.0 trillion at Dec. 31, 2015 and Sept. 30, 2015.

(c) Represents the total amount of securities on loan managed by the Investment Services business. Excludes securities for which BNY Mellon acts as agent on behalf of CIBC Mellon clients, which totaled $64 billion at Sept. 30, 2016, $56 billion at June 30, 2016 and March 31, 2016, $55 billion at Dec. 31, 2015 and $61 billion at Sept. 30, 2015.

N/M - Not meaningful.

Business description

Our Investment Services business provides global custody and related services, government clearing, global collateral services, corporate trust and depositary receipt and clearing services, as well as global payment/working capital solutions to global financial institutional clients.

Our comprehensive suite of financial solutions includes: global custody, global fund services, securities lending, investment manager outsourcing, performance and risk analytics, alternative investment services, securities clearance, collateral management, corporate trust, American and global depositary receipt programs, cash management solutions, payment services, liquidity services and other linked revenues, principally foreign exchange, global clearing and execution, managed account services and global prime brokerage solutions. Our clients include corporations, public funds and government agencies, foundations and endowments; global financial institutions including banks, broker-dealers, asset managers, insurance companies and central banks; financial intermediaries and independent registered investment advisors; hedge fund managers; and funds that we manage through our Investment Management business. We help our clients service their financial assets through a network of offices and service delivery centers in 35 countries across six continents.

The results of this business are driven by a number of factors, which include: the level of transaction activity; the range of services provided, which may include custody, accounting, fund administration, daily valuations, performance measurement and risk analytics, securities lending, and investment manager back-office outsourcing; the number of accounts; and the market value of assets under custody and/or administration. Market interest rates impact both securities lending revenue and the earnings on client balances. Business expenses are driven by staff, technology investment, equipment and space required to support the services provided by the business and the cost of execution, clearance and custody of securities.

We are one of the leading global securities servicing providers with $30.5 trillion of AUC/A at Sept. 30, 2016. We are one of the largest custodians for U.S. corporate and public pension plans and we service 50% of the top-50 endowments. We are a leading

custodian in the UK, servicing around a fifth of UK pensions that require a custodian, and with approximately 20% of such assets for the sector in our custody. Globalization tends to drive cross-border investment and capital flows, which increases the opportunity to provide solutions to our clients. The changing regulatory environment is also driving client demand for new solutions and services.

BNY Mellon is a leader in both global and U.S. Government securities clearance. We settle securities transactions in over 100 markets and handle most of the transactions cleared through the Federal Reserve Bank of New York for 19 of the 23 primary dealers. We are a leader in servicing tri-party collateral with approximately $2.2 trillion serviced globally. We currently service approximately $1.4 trillion, or approximately 86%, of the $1.6 trillion tri-party repo market in the U.S.

Global Collateral Services serves broker-dealers and institutional investors facing expanding collateral management needs as a result of current and emerging regulatory and market requirements. Global Collateral Services brings together BNY Mellon's global capabilities in segregating, optimizing, financing and transforming collateral on behalf of clients, including its market leading broker-dealer collateral management, securities lending, collateral financing, liquidity and derivatives services teams.

In securities lending, we are one of the largest lenders of U.S. Treasury securities and depositary receipts and service a lending pool of approximately $3.0 trillion in 33 markets.

We served as depositary for 1,094 sponsored American and global depositary receipt programs at Sept. 30, 2016, acting in partnership with leading companies from 63 countries - an estimated 57% global market share.

Pershing and its affiliates provide business solutions to approximately 1,500 financial organizations globally by delivering dependable operational support, robust trading services, flexible technology and an expansive array of investment solutions, practice management support and service excellence.

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 totaled $30.5 trillion, an increase from $28.5 trillion at Sept. 30, 2015. The increase was primarily driven by higher market values, partially offset by the unfavorable impact of a stronger U.S. dollar. AUC/A consisted of 34% equity securities and 66% fixed income securities at both Sept. 30, 2016 and Sept. 30, 2015.

Investment services fees were $1.9 billion, an increase of 2% compared with the third quarter of 2015 and 5% (unannualized) compared with the second quarter of 2016 reflecting the following factors:

- Asset servicing fees (global custody, broker-dealer services and Global Collateral Services) were $1.039 billion compared with $1.034 billion in the third quarter of 2015 and $1.043 billion in the second quarter of 2016. The increase compared with the third quarter of 2015 primarily reflects higher money market fees and securities lending revenue, partially offset by the unfavorable impact of a stronger U.S. dollar and downsizing of the UK transfer agency business.
- Clearing services fees were $347 million compared with $345 million in the third quarter of 2015 and $350 million in the second quarter of 2016. The increase compared with the third quarter of 2015 was primarily driven by higher money market fees, partially offset by the impact of previously disclosed lost business.
- Issuer services fees (Corporate Trust and Depositary Receipts) were $336 million compared with $312 million in the third quarter of 2015 and $233 million in the second quarter of 2016. The increase compared with the third quarter of 2015 primarily reflects increased activity in Depositary Receipts and higher money market fees in Corporate Trust. The increase compared with the second quarter of 2016 primarily reflects seasonally higher fees in Depositary Receipts.
- Treasury services fees were $136 million compared with $135 million in the third quarter of 2015 and $137 million in the second quarter of 2016.

Foreign exchange and other trading revenue totaled $177 million compared with $179 million in the third quarter of 2015 and $161 million in the second quarter of 2016. The decrease compared with the third quarter of 2015 primarily reflects lower volumes and volatility. The decrease compared with the third quarter of 2015 also reflects the continued trend of clients migrating to lower margin products. The increase compared with the second quarter of 2016 primarily reflects higher Depositary Receipt-related foreign exchange activity, partially offset by lower volatility.

Other revenue was $148 million compared with $129 million in the third quarter of 2015 and $130 million in the second quarter of 2016. Both comparisons reflect increased payments from Investment Management related to higher money market fees, and termination fees related to lost business in our clearing services business. The increase compared with the third quarter of 2015 was partially offset by certain fees paid to introducing brokers and lower financing-related fees. The increase compared with the second quarter of 2016 also reflects higher financing-related fees.

Net interest revenue was $715 million compared with $662 million in the third quarter of 2015 and $690 million in the second quarter of 2016. The increase compared with the third quarter of 2015 primarily reflects the impact of the first quarter of 2016 changes in the internal crediting rates for deposits. The increase compared with the second quarter of 2016 primarily reflects higher asset yields and lower interest on deposits.

Noninterest expense, excluding amortization of intangible assets, was $1.81 billion compared with $1.85 billion in the third quarter of 2015 and $1.82 billion in the second quarter of 2016. The decrease compared with the third quarter of 2015 primarily reflects lower other and legal expenses. Both

decreases also reflect lower sub-custodian and business development expenses, partially offset by higher incentive expenses and the annual employee merit increase.

Year-to-date 2016 compared with year-to-date 2015

Income before taxes totaled $2.8 billion in the first nine months of 2016 compared with $2.5 billion in the first nine months of 2015. Income before taxes excluding amortization of intangible assets (Non-GAAP) increased $333 million. Fee and other revenue increased $47 million, or 1%, compared with the first nine months of 2015 primarily reflecting higher investment services fees and other revenue, partially offset by lower foreign exchange and other trading revenue. The $126 million increase in net interest revenue primarily reflects the impact of changes in the internal crediting rates for deposits. Noninterest expense, excluding intangible amortization, decreased $148 million primarily due to lower litigation, professional, legal and other purchased services and sub-custodian expenses.

Other segment

| (dollars in millions) | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 | YTD16 | YTD15 |
|---|---|---|---|---|---|---|---|
| Revenue: | | | | | | | |
| Fee and other revenue | $100 | $95 | $129 | $89 | $59 | $324 | $247 |
| Net interest (expense) revenue | (23) | (5) | 4 | 12 | 14 | (24) | 73 |
| Total revenue | 77 | 90 | 133 | 101 | 73 | 300 | 320 |
| Provision for credit losses | (20) | (3) | (3) | 159 | (7) | (26) | (26) |
| Noninterest expense (ex. amortization of intangible assets and M&I and restructuring charges (recoveries)) | 88 | 53 | 141 | 150 | 97 | 282 | 284 |
| Amortization of intangible assets | — | — | — | — | 1 | — | 2 |
| M&I and restructuring charges (recoveries) | — | 3 | (1) | (4) | (2) | 2 | 2 |
| Total noninterest expense | 88 | 56 | 140 | 146 | 96 | 284 | 288 |
| Income (loss) before taxes | $9 | $37 | $(4) | $(204) | $(16) | $42 | $58 |
| Income (loss) before taxes (ex. amortization of intangible assets and M&I and restructuring charges (recoveries)) – Non-GAAP | $9 | $40 | $(5) | $(208) | $(17) | $44 | $62 |
| | | | | | | | |
| Average loans and leases | $1,941 | $1,703 | $1,917 | $2,673 | $2,656 | $1,853 | $2,287 |

See page 20 of our first quarter 2016 Form 10-Q for a description of the Other segment.

Review of financial results

Total fee and other revenue increased $41 million compared with the third quarter of 2015 and $5 million compared with the second quarter of 2016. Both increases primarily reflect higher asset-related

gains. The increase compared with the third quarter of 2015 also reflects the positive net impact of foreign currency hedging activities and higher fixed income trading.

Net interest revenue decreased $37 million compared with the third quarter of 2015 and $18 million compared with the second quarter of 2016. Both decreases were driven by the results of the leasing portfolio inclusive of changes to internal transfer pricing in the first quarter of 2016.

The provision for credit losses was a credit of $20 million in the third quarter of 2016 primarily reflecting a net recovery of $13 million recorded in the financial institutions portfolio. The recovery reflects the receipt of trust assets from the bankruptcy proceedings of Sentinel in excess of the carrying value.

Noninterest expense, excluding amortization of intangible assets, M&I and restructuring charges (recoveries), decreased $9 million compared with the third quarter of 2015 and increased $35 million compared with the second quarter of 2016. The decrease compared with the third quarter of 2015 primarily reflects lower furniture and equipment and net occupancy expenses, partially offset by higher other expense. The increase compared with the second quarter of 2016 was primarily driven by the annual employee merit increase and higher professional, legal and other purchased services.

Year-to-date 2016 compared with year-to-date 2015

Income before taxes in the Other segment was $42 million in the first nine months of 2016 compared with $58 million in the first nine months of 2015. Total revenue decreased $20 million primarily reflecting lower net interest revenue, partially offset by the positive net impact of foreign currency hedging activities and higher fixed income trading revenue. Noninterest expense, excluding amortization of intangible assets, M&I and restructuring charges, decreased $2 million primarily reflecting lower equipment expense and professional, legal and other purchased services partially offset by higher staff expense.

Critical accounting estimates

Our significant accounting policies are described in Note 1 of the Notes to Consolidated Financial Statements in our 2015 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 | 2015 Annual Report, pages 33 - 35. |
| Fair value of financial instruments and derivatives | 2015 Annual Report, pages 35 - 37. |
| OTTI | 2015 Annual Report, page 37. |
| Goodwill and other intangibles | 2015 Annual Report, pages 37 - 38 and Note 5 beginning on page 74. |
| Pension accounting | 2015 Annual Report, pages 38 - 40. |

Consolidated balance sheet review

At Sept. 30, 2016, total assets were $374 billion compared with $394 billion at Dec. 31, 2015. The decrease in total assets was primarily driven by lower customer deposits. Deposits totaled $261 billion at Sept. 30, 2016 and $280 billion at Dec. 31, 2015. At Sept. 30, 2016, total interest-bearing deposits were 49% of total interest-earning assets, compared with 54% at Dec. 31, 2015.

Total assets averaged $351 billion in the third quarter of 2016 compared with $373 billion in the third quarter of 2015 and $374 billion in the second quarter of 2016. The year-over-year and sequential decreases in average total assets were primarily driven by lower levels of deposits and federal funds purchased and securities sold under repurchase agreements.

Total deposits averaged $237 billion in the third quarter of 2016 compared with $255 billion in the third quarter of 2015 and $249 billion in the second quarter of 2016. The year-over-year decrease in average total deposits primarily reflects a decrease in deposits located in foreign offices and noninterest-bearing deposits, partially offset by higher time deposits. The sequential decrease primarily reflects a decrease in deposits located in foreign offices, noninterest-bearing deposits and time deposits.

At Sept. 30, 2016, we had $49 billion of liquid funds (which include interest-bearing deposits with banks and federal funds sold and securities purchased under resale agreements) and $86 billion of cash (including $80 billion of overnight deposits with the Federal Reserve and other central banks) for a total of $135 billion of available funds. This compares with available funds of $159 billion at Dec. 31, 2015. The decrease in available funds primarily reflects the decrease of overnight deposits with the Federal Reserve and other central banks.

Total available funds as a percentage of total assets was 36% at Sept. 30, 2016 compared with 40% at Dec. 31, 2015. Of the $49 billion in liquid funds held at Sept. 30, 2016, $14 billion was placed in interest-bearing deposits with large, highly-rated global financial institutions with a weighted-average life to maturity of approximately 43 days. Of the $14 billion, $4 billion was placed with banks in the Eurozone.

Investment securities were $119.0 billion, or 32% of total assets, at Sept. 30, 2016, compared with $119.2 billion, or 30% of total assets, at Dec. 31, 2015. The decrease primarily reflects decreases in Agency RMBS, sovereign debt/sovereign guaranteed securities, other asset-backed securities, state and political subdivisions, other RMBS and commercial MBS, partially offset by increases in Agency commercial MBS and U.S. Treasury securities.

Loans were $66.0 billion, or 18% of total assets, at Sept. 30, 2016, compared with $63.7 billion, or 16% of total assets, at Dec. 31, 2015. The increase primarily reflects higher overdrafts, wealth management loans and mortgages and commercial real estate loans, partially offset by lower margin loans and loans to financial institutions.

Long-term debt totaled $24.4 billion at Sept. 30, 2016 and $21.5 billion at Dec. 31, 2015. The increase reflects the issuance of $5.0 billion of senior debt, including $2.0 billion in the third quarter of 2016, and an increase in the fair value of hedged long-term debt, partially offset by the maturity of $2.45 billion of long-term debt, including $1.0 billion in the third quarter of 2016.

The Bank of New York Mellon Corporation total shareholders' equity increased to $39.7 billion from $38.0 billion at Dec. 31, 2015. The increase primarily reflects earnings retention, issuance of preferred stock, approximately $383 million resulting from stock awards, the exercise of stock options and stock issued for employee benefit plans, and an increase in the unrealized gain on our investment securities portfolio. The increase was partially offset by share repurchases and foreign currency translation adjustments.

Country risk exposure

We have exposure to certain countries and territories that have had a heightened focus due to recent events.

Where appropriate, we offset the credit risk associated with the exposure in these countries with collateral that has been pledged, which primarily consists of cash or marketable securities, or by transferring the risk to a third-party guarantor in another country or territory. 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 2015 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 total net exposure to Italy and Spain of $3.8 billion at Sept. 30, 2016 including $1.5 billion to Italy and $2.3 billion to Spain. The total net exposure was $3.6 billion at Dec. 31, 2015, including $1.6 billion to Italy and $2.0 billion to Spain. Exposure to Italy and Spain at both periods primarily consisted of investment grade sovereign debt and European Floating Rate notes. At both Sept. 30, 2016 and Dec. 31, 2015, investment securities exposure totaled $1.4 billion in Italy and $2.0 billion in Spain. At both Sept. 30, 2016 and Dec. 31, 2015, BNY Mellon had exposure of less than $1 million to Portugal and 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 Sept. 30, 2016 and Dec. 31, 2015, we had total net exposure to Brazil of $1.7 billion and $2.2 billion, respectively. This included $1.6 billion and $2.1 billion, respectively, in loans, which are primarily short-term trade finance loans extended to large financial institutions. At Sept. 30, 2016, we held $71 million of noninvestment grade sovereign debt and at Dec. 31, 2015, we held $95 million of investment 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 to the top-ten largest financial institutions in the country. As of Sept. 30, 2016, our exposure totaled $727 million, consisting primarily of syndicated credit facilities and trade finance loans. At Sept. 30, 2016 and Dec. 31, 2015, our exposure to Russia was $66 million and $63 million, respectively. Related to Puerto Rico, BNY Mellon had margin loan

exposure that was collateralized with a concentration of Puerto Rican securities. The margin loan exposure was approximately $35 million and $50 million, at Sept. 30, 2016 and Dec. 31, 2015.

Investment securities

In the discussion of our investment securities portfolio, we have included certain credit ratings information because the information indicates 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.

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

| Investment securities portfolio | June 30, 2016 | 3Q16 change in unrealized gain (loss) | Sept. 30, 2016 | | Fair value as a % of amortized cost (a) | Unrealized gain (loss) | Ratings | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (dollars in millions) | Fair value | | Amortized cost | Fair value | | | AAA/ AA- | A+/ A- | BBB+/ BBB- | BB+ and lower | Not rated |
| Agency RMBS | $49,506 | $(70) | $48,498 | $48,987 | 101 % | $489 | 100 % | — % | — % | — % | — % |
| U.S. Treasury | 23,893 | (154) | 25,112 | 25,135 | 100 | 23 | 100 | — | — | — | — |
| Sovereign debt/sovereign guaranteed (b) | 15,605 | 12 | 15,690 | 15,998 | 102 | 308 | 74 | 5 | 21 | — | — |
| Non-agency RMBS (c) | 1,529 | 5 | 1,166 | 1,463 | 80 | 297 | — | 1 | 1 | 90 | 8 |
| Non-agency RMBS | 797 | 8 | 741 | 757 | 94 | 16 | 8 | 4 | 16 | 71 | 1 |
| European floating rate notes (d) | 1,104 | 15 | 869 | 851 | 98 | (18) | 71 | 22 | 7 | — | — |
| Commercial MBS | 6,316 | 8 | 7,236 | 7,310 | 101 | 74 | 98 | 2 | — | — | — |
| State and political subdivisions | 3,765 | (24) | 3,494 | 3,578 | 102 | 84 | 80 | 17 | — | — | 3 |
| Foreign covered bonds (e) | 2,376 | (4) | 2,395 | 2,433 | 102 | 38 | 100 | — | — | — | — |
| Corporate bonds | 1,610 | (3) | 1,585 | 1,638 | 103 | 53 | 16 | 68 | 16 | — | — |
| CLOs | 2,482 | 16 | 2,530 | 2,534 | 100 | 4 | 100 | — | — | — | — |
| U.S. Government agencies | 1,889 | 3 | 1,820 | 1,808 | 99 | (12) | 100 | — | — | — | — |
| Consumer ABS | 2,454 | 7 | 2,202 | 2,203 | 100 | 1 | 98 | — | 2 | — | — |
| Other (f) | 4,002 | (23) | 3,931 | 3,961 | 101 | 30 | 60 | — | 38 | — | 2 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total investment securities | $117,328 (g) | $(204) | $117,269 | $118,656 (g) | 101 % | $1,387 (g)(h) | 91 % | 2 % | 5 % | 2 % | — % | | |

(a) Amortized cost before impairments.

(b) Primarily consists of exposure to UK, France, Germany, Spain and Italy.

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

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

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

(f) Includes commercial paper with a fair value of $1.7 billion and $1.5 billion and money market funds with a fair value of $865 million and $931 million at June 30, 2016 and Sept. 30, 2016, respectively.

(g) Includes net unrealized losses on derivatives hedging securities available-for-sale of $1,023 million at June 30, 2016 and $1,001 million at Sept. 30, 2016.

(h) Unrealized gains of $728 million at Sept. 30, 2016 related to available-for-sale securities.

The fair value of our total investment securities portfolio was $118.7 billion at Sept. 30, 2016 compared with $118.8 billion at Dec. 31, 2015. The decrease primarily reflects a decrease in sovereign

debt/sovereign guaranteed and consumer ABS, partially offset by an increase in commercial MBS.

At Sept. 30, 2016, the total investment securities portfolio had a net unrealized pre-tax gain of $1.4 billion compared with $357 million at Dec. 31, 2015, including the impact of related hedges. The increase in 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 $517

million at Sept. 30, 2016, compared with $329 million at Dec. 31, 2015.

At Sept. 30, 2016, 91% of the securities in our portfolio were rated AAA/AA- compared with 90% at Dec. 31, 2015.

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

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

Net premium amortization and discount accretion of investment securities (a)

| (dollars in millions) | 3Q16 | 2Q16 | 1Q16 | 4Q15 | 3Q15 |
|---|---|---|---|---|---|
| Amortizable purchase premium (net of discount) relating to investment securities: | | | | | |
| Balance at period end | $2,267 | $2,251 | $2,233 | $2,319 | $2,433 |
| Estimated average life remaining at period end (in years) | 4.5 | 4.4 | 4.5 | 4.7 | 4.6 |
| Amortization | $163 | $169 | $163 | $161 | $176 |
| Accretable discount related to the prior restructuring of the investment securities portfolio: | | | | | |
| Balance at period end | $331 | $342 | $325 | $355 | $401 |
| Estimated average life remaining at period end (in years) | 5.9 | 5.9 | 6.0 | 6.1 | 6.0 |
| Accretion | $24 | $26 | $27 | $29 | $33 |

(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) | 3Q16 | 2Q16 | 3Q15 | YTD16 | YTD15 |
|---|---|---|---|---|---|
| Agency RMBS | $ 9 | $ 5 | $ 7 | $ 22 | $ 8 |
| Foreign covered bonds | — | — | 1 | 10 | 2 |
| U.S. Treasury | (1) | 4 | 8 | 4 | 42 |
| Non-agency RMBS | (1) | 4 | (1) | 1 | (3) |
| Other | 17 | 8 | 7 | 28 | 13 |
| Total net securities gains | $ 24 | $ 21 | $ 22 | $ 65 | $ 62 |

On a quarterly basis, we perform our impairment analysis using several factors, including projected loss severities and default rates. In the third quarter of 2016, this analysis resulted in other-than-temporary credit losses of $1 million primarily in our non-agency RMBS portfolio. At Sept. 30, 2016, if we were to increase or decrease each of our projected loss severities 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 3 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 Sept. 30, 2016. The unrealized loss on these securities was $18 million at Sept. 30, 2016, compared with $24 million at Dec. 31, 2015.

European floating rate notes at Sept. 30, 2016 (a)

| (in millions) | RMBS | Other | Total fair value |
|---|---|---|---|
| United Kingdom | $ 460 | $ 59 | $ 519 |
| Netherlands | 270 | — | 270 |
| Ireland | 62 | — | 62 |
| Total fair value | $ 792 | $ 59 | $ 851 |

(a) 71% 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 | Sept. 30, 2016 | | | Dec. 31, 2015 | | |
|---|---|---|---|---|---|---|
| (in billions) | Loans | Unfunded commitments | Total exposure | Loans | Unfunded commitments | Total exposure |
| Non-margin loans: | | | | | | |
| Financial institutions | $14.7 | $ 36.1 | $ 50.8 | $15.9 | $ 36.0 | $ 51.9 |
| Commercial | 2.7 | 16.7 | 19.4 | 2.3 | 18.2 | 20.5 |
| Subtotal institutional | 17.4 | 52.8 | 70.2 | 18.2 | 54.2 | 72.4 |
| Wealth management loans and mortgages | 15.1 | 1.3 | 16.4 | 13.3 | 1.6 | 14.9 |
| Commercial real estate | 4.7 | 3.3 | 8.0 | 3.9 | 3.3 | 7.2 |
| Lease financings | 1.8 | — | 1.8 | 1.9 | — | 1.9 |
| Other residential mortgages | 0.9 | — | 0.9 | 1.1 | — | 1.1 |
| Overdrafts | 7.3 | — | 7.3 | 4.5 | — | 4.5 |
| Other | 1.2 | — | 1.2 | 1.2 | — | 1.2 |
| Subtotal non-margin loans | 48.4 | 57.4 | 105.8 | 44.1 | 59.1 | 103.2 |
| Margin loans | 17.6 | 0.1 | 17.7 | 19.6 | 0.6 | 20.2 |
| Total | $66.0 | $ 57.5 | $ 123.5 | $63.7 | $ 59.7 | $ 123.4 |

At Sept. 30, 2016, total exposures were $123.5 billion, a slight increase compared with Dec. 31, 2015. Increases in overdrafts and the wealth management loans and mortgages portfolio were offset by decreases in margin loans and exposure in the financial institutions and commercial portfolios.

Our financial institutions and commercial portfolios comprise our largest concentrated risk. These portfolios comprised 57% of our total lending exposure at Sept. 30, 2016 and 59% at Dec. 31, 2015. 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) | Sept. 30, 2016 | | | | | Dec. 31, 2015 | | |
|---|---|---|---|---|---|---|---|---|
| | Loans | Unfunded commitments | Total exposure | % Inv. grade | % due <1 yr. | Loans | Unfunded commitments | Total exposure |
| Securities industry | $3.8 | $ 20.9 | $ 24.7 | 99 % | 99 % | $3.1 | $ 20.6 | $ 23.7 |
| Banks | 7.8 | 2.0 | 9.8 | 70 | 86 | 9.4 | 2.1 | 11.5 |
| Asset managers | 1.5 | 6.2 | 7.7 | 99 | 82 | 2.0 | 5.6 | 7.6 |
| Insurance | 0.1 | 4.3 | 4.4 | 99 | 29 | 0.2 | 4.5 | 4.7 |
| Government | 0.1 | 1.1 | 1.2 | 93 | 47 | 0.1 | 1.9 | 2.0 |
| Other | 1.4 | 1.6 | 3.0 | 99 | 30 | 1.1 | 1.3 | 2.4 |
| Total | $14.7 | $ 36.1 | $ 50.8 | 93 % | 83 % | $15.9 | $ 36.0 | $ 51.9 |

The financial institutions portfolio exposure was $50.8 billion at Sept. 30, 2016, compared with $51.9 billion at Dec. 31, 2015. The decrease primarily reflects lower loans in the banks portfolio and lower unfunded commitments in the government portfolio, partially offset by an increase in exposure in the securities industry portfolio.

Financial institution exposures are high-quality, with 93% of the exposures meeting the investment grade equivalent criteria of our internal credit rating classification at Sept. 30, 2016. 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, 83% expire within one year and 60% expire within 90 days. In addition, 79% 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.

Our bank exposure primarily relates to our global trade finance. These exposures are short-term in nature with 86% due in less than one year. The investment grade percentage of our bank exposure was 70% at Sept. 30, 2016, compared with 86% at Dec. 31, 2015. The decrease in the investment grade percentage reflects the impact of the downgrade in

the sovereign rating of Brazil to noninvestment grade. Our exposure in Brazil includes $1.6 billion in loans, which are primarily short-term trade finance loans extended to large financial institutions.

The asset manager portfolio exposures are high-quality with 99% of the exposures meeting our investment grade equivalent ratings criteria as of Sept. 30, 2016. 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 | Sept. 30, 2016 | | | | | Dec. 31, 2015 | | |
|---|---|---|---|---|---|---|---|---|
| (dollar amounts in billions) | Loans | Unfunded commitments | Total exposure | % Inv. grade | % due <1 yr. | Loans | Unfunded commitments | Total exposure |
| Manufacturing | $1.1 | $ 6.0 | $ 7.1 | 93 % | 12 % | $0.6 | $ 6.3 | $ 6.9 |
| Services and other | 0.7 | 4.7 | 5.4 | 94 | 20 | 0.8 | 5.5 | 6.3 |
| Energy and utilities | 0.6 | 4.7 | 5.3 | 94 | 9 | 0.6 | 4.9 | 5.5 |
| Media and telecom | 0.3 | 1.3 | 1.6 | 94 | 1 | 0.3 | 1.5 | 1.8 |
| Total | $2.7 | $ 16.7 | $ 19.4 | 94 % | 12 % | $2.3 | $ 18.2 | $ 20.5 |

The commercial portfolio exposure decreased to $19.4 billion at Sept. 30, 2016, from $20.5 billion at Dec. 31, 2015, primarily reflecting decreases in all portfolios except for the manufacturing 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 78% investment grade at Sept. 30, 2016, compared with 94% at Dec. 31, 2015.

The following table summarizes the percentage of the financial institutions and commercial portfolio exposures that are investment grade.

Percentage of the portfolios that are investment grade

| | Sept. 30, 2016 | June 30, 2016 | March 31, 2016 | Dec. 31, 2015 | Sept. 30, 2015 |
|---|---|---|---|---|---|
| Financial institutions | 93 % | 92 % | 93 % | 96 % | 96 % |
| Commercial | 94 % | 94 % | 93 % | 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 94% of our commercial portfolio rated as investment grade at Sept. 30, 2016.

Wealth management loans and mortgages

Our wealth management exposure was $16.4 billion at Sept. 30, 2016, compared with $14.9 billion at Dec. 31, 2015. 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 61% at origination. In the wealth management portfolio, less than 1% of the mortgages were past due at Sept. 30, 2016.

At Sept. 30, 2016, the wealth management mortgage portfolio consisted of the following geographic concentrations: California - 24%; New York - 20%; Massachusetts - 12%; Florida - 7%; and other - 37%.

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 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 $8.0 billion at Sept. 30, 2016, compared with $7.2 billion at Dec. 31, 2015.

At Sept. 30, 2016, 61% of our commercial real estate portfolio was secured. The secured portfolio is diverse by project type, with 46% secured by residential buildings, 36% secured by office buildings, 12% secured by retail properties and 6% secured by other categories. Approximately 98% of the unsecured portfolio consists of real estate investment trusts ("REITs") and real estate operating companies, which are both predominantly investment grade.

At Sept. 30, 2016, our commercial real estate portfolio consists of the following concentrations: New York metro - 43%; REITs and real estate operating companies - 38%; and other - 19%.

Lease financings

The leasing portfolio exposure totaled $1.8 billion at Sept. 30, 2016, compared with $1.9 billion at Dec. 31, 2015. At Sept. 30, 2016, approximately 93% of the leasing portfolio exposure was investment grade, or investment grade equivalent.

At Sept. 30, 2016, the lease financing portfolio consisted of exposures backed by well-diversified assets, primarily large-ticket transportation equipment.

Other residential mortgages

The other residential mortgages portfolio primarily consists of 1-4 family residential mortgage loans and totaled $0.9 billion at Sept. 30, 2016 and $1.1 billion Dec. 31, 2015. Included in this portfolio at Sept. 30,

2016 are $236 million of mortgage loans purchased in 2005, 2006 and the first quarter of 2007 that are predominantly prime mortgage loans, with a small portion of Alt-A loans. As of Sept. 30, 2016, the purchased loans in this portfolio had a weighted-average loan-to-value ratio of 76% at origination and 13% 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 included $7.2 billion at Sept. 30, 2016 and $7.8 billion at Dec. 31, 2015 of loans related to a term loan program that offers fully collateralized loans to broker-dealers.

Asset quality and allowance for credit losses