# UNITED STATES SECURITIES AND EXCHANGE COMMISSION 

Washington, D.C. 20549

FORM 10-Q

## QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES

 EXCHANGE ACT OF 1934For the quarterly period ended June 30, 2016

OR

## TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES

 EXCHANGE ACT OF 1934Commission File Number 1-11758

## MorganStanley

(Exact Name of Registrant as specified in its charter)

| Delaware | 1585 Broadway | 36-3145972 |  |
| :---: | :---: | :---: | :---: |
| (State or other jurisdiction of <br> incorporation or organization) | New York, NY 10036 <br> (Address of principal executive <br> offices, including zip code) | (I.R.S. Employer Identification No.) 761-4000 |  |$\quad$| (Registrant's telephone number, |
| :---: |
| including area code) |

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 $\boxtimes$ No $\square$

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 $\boxtimes$ 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. (Check one):

Large Accelerated Filer $\boxtimes$
Non-Accelerated Filer $\square$

Accelerated Filer
Smaller reporting company
$\square$
(Do not check if a 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 $\square$ No $\boxtimes$

As of July 29, 2016, there were $1,911,808,935$ shares of the Registrant's Common Stock, par value $\$ 0.01$ per share, outstanding.

## MorganStanley

## QUARTERLY REPORT ON FORM 10-Q

For the quarter ended June 30, 2016
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## Available Information.

We file annual, quarterly and current reports, proxy statements and other information with the U.S. Securities and Exchange Commission (the "SEC"). You may read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street, NE, Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 for information on the public reference room. The SEC maintains an internet site that contains annual, quarterly and current reports, proxy and information statements and other information that issuers (including us) file electronically with the SEC. Our electronic SEC filings are available to the public at the SEC's internet site, www.sec.gov.

Our internet site is www.morganstanley.com. You can access our Investor Relations webpage at www.morganstanley.com/ about-us-ir. We make available free of charge, on or through our Investor Relations webpage, our proxy statements, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We also make available, through our Investor Relations webpage, via a link to the SEC's internet site, statements of beneficial ownership of our equity securities filed by our directors, officers, $10 \%$ or greater shareholders and others under Section 16 of the Exchange Act.

You can access information about our corporate governance at www.morganstanley.com/about-us-governance. Our Corporate Governance webpage includes:

- Amended and Restated Certificate of Incorporation;
- Amended and Restated Bylaws;
- Charters for its Audit Committee, Compensation, Management Development and Succession Committee, Nominating and Governance Committee, Operations and Technology Committee, and Risk Committee;
- Corporate Governance Policies;
- Policy Regarding Communication with the Board of Directors;
- Policy Regarding Director Candidates Recommended by Shareholders;
- Policy Regarding Corporate Political Activities;
- Policy Regarding Shareholder Rights Plan;
- Equity Ownership Commitment;
- Code of Ethics and Business Conduct;
- Code of Conduct; and
- Integrity Hotline Information.

Morgan Stanley's Code of Ethics and Business Conduct applies to all directors, officers and employees, including our Chief Executive Officer, Chief Financial Officer and Deputy Chief Financial Officer. We will post any amendments to the Code of Ethics and Business Conduct and any waivers that are required to be disclosed by the rules of either the SEC or the New York Stock Exchange LLC ("NYSE") on our internet site. You can request a copy of these documents, excluding exhibits, at no cost, by contacting Investor Relations, 1585 Broadway, New York, NY 10036 (212-761-4000). The information on our internet site is not incorporated by reference into this report.

## Part I-Financial Information

## Item 1. Financial Statements

## MORGAN STANLEY

## Consolidated Statements of Income (in millions, except per share data) (unaudited)

|  |  | Three Months Ended June 30, |  |  | Six Months Ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
| Revenues: |  |  |  |  |  |  |  |  |
| Investment banking | \$ | 1,224 | \$ | 1,614 | \$ | 2,331 | \$ | 2,971 |
| Trading |  | 2,746 |  | 2,973 |  | 4,811 |  | 6,623 |
| Investments |  | 126 |  | 261 |  | 92 |  | 527 |
| Commissions and fees |  | 1,020 |  | 1,158 |  | 2,075 |  | 2,344 |
| Asset management, distribution and administration fees |  | 2,637 |  | 2,742 |  | 5,257 |  | 5,423 |
| Other |  | 243 |  | 297 |  | 323 |  | 468 |
| Total non-interest revenues |  | 7,996 |  | 9,045 |  | 14,889 |  | 18,356 |
| Interest income |  | 1,667 |  | 1,386 |  | 3,414 |  | 2,870 |
| Interest expense |  | 754 |  | 688 |  | 1,602 |  | 1,576 |
| Net interest |  | 913 |  | 698 |  | 1,812 |  | 1,294 |
| Net revenues |  | 8,909 |  | 9,743 |  | 16,701 |  | 19,650 |
| Non-interest expenses: |  |  |  |  |  |  |  |  |
| Compensation and benefits |  | 4,015 |  | 4,405 |  | 7,698 |  | 8,929 |
| Occupancy and equipment |  | 329 |  | 351 |  | 658 |  | 693 |
| Brokerage, clearing and exchange fees |  | 484 |  | 487 |  | 949 |  | 950 |
| Information processing and communications |  | 429 |  | 438 |  | 871 |  | 853 |
| Marketing and business development |  | 154 |  | 179 |  | 288 |  | 329 |
| Professional services |  | 547 |  | 598 |  | 1,061 |  | 1,084 |
| Other |  | 468 |  | 558 |  | 955 |  | 1,230 |
| Total non-interest expenses |  | 6,426 |  | 7,016 |  | 12,480 |  | 14,068 |
| Income from continuing operations before income taxes |  | 2,483 |  | 2,727 |  | 4,221 |  | 5,582 |
| Provision for income taxes |  | 833 |  | 894 |  | 1,411 |  | 1,281 |
| Income from continuing operations |  | 1,650 |  | 1,833 |  | 2,810 |  | 4,301 |
| Income (loss) from discontinued operations, net of income taxes |  | (4) |  | (2) |  | (7) |  | (7) |
| Net income | \$ | 1,646 | \$ | 1,831 | \$ | 2,803 | \$ | 4,294 |
| Net income applicable to noncontrolling interests |  | 64 |  | 24 |  | 87 |  | 93 |
| Net income applicable to Morgan Stanley | \$ | 1,582 | \$ | 1,807 | \$ | 2,716 | \$ | 4,201 |
| Preferred stock dividends and other |  | 157 |  | 142 |  | 235 |  | 222 |
| Earnings applicable to Morgan Stanley common shareholders | \$ | 1,425 | \$ | 1,665 | \$ | 2,481 | \$ | 3,979 |
| Earnings per basic common share: |  |  |  |  |  |  |  |  |
| Income from continuing operations | \$ | 0.77 | \$ | 0.87 | \$ | 1.33 | \$ | 2.07 |
| Income (loss) from discontinued operations |  | (0.01) |  | - |  | (0.01) |  | - |
| Earnings per basic common share | \$ | 0.76 | \$ | 0.87 | \$ | 1.32 | \$ | 2.07 |
| Earnings per diluted common share: |  |  |  |  |  |  |  |  |
| Income from continuing operations | \$ | 0.75 | \$ | 0.85 | \$ | 1.30 | \$ | 2.03 |
| Income (loss) from discontinued operations |  | - |  | - |  | - |  | - |
| Earnings per diluted common share | \$ | 0.75 | \$ | 0.85 | \$ | 1.30 | \$ | 2.03 |
| Dividends declared per common share | \$ | 0.15 | \$ | 0.15 | \$ | 0.30 | \$ | 0.25 |
| Average common shares outstanding: |  |  |  |  |  |  |  |  |
| Basic |  | 1,866 |  | 1,919 |  | 1,875 |  | 1,922 |
| Diluted |  | 1,899 |  | 1,960 |  | 1,907 |  | 1,962 |

See Notes to Consolidated Financial Statements.

## MORGAN STANLEY

## Consolidated Statements of Comprehensive Income <br> (dollars in millions) (unaudited)

|  | Three Months Ended June 30, |  |  |  | Six Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
| Net income | . $\$$ | 1,646 | \$ | 1,831 | \$ | 2,803 | \$ | 4,294 |
| Other comprehensive income (loss), net of tax: |  |  |  |  |  |  |  |  |
| Foreign currency translation adjustments(1) | . \$ | 131 | \$ | 34 | \$ | 317 | \$ | (188) |
| Change in net unrealized gains (losses) on available for sale securities(2) |  | 143 |  | (228) |  | 538 |  | (28) |
| Pension, postretirement and other |  | (5) |  | (3) |  | (4) |  | (1) |
| Change in net debt valuation adjustments(3) |  | 145 |  | - |  | 348 |  | - |
| Total other comprehensive income (loss) | . | 414 | \$ | (197) | \$ | 1,199 | \$ | (217) |
| Comprehensive income | \$ | 2,060 | \$ | 1,634 | \$ | 4,002 | \$ | 4,077 |
| Net income applicable to noncontrolling interests |  | 64 |  | 24 |  | 87 |  | 93 |
| Other comprehensive income (loss) applicable to noncontrol interests |  | 81 |  | (16) |  | 136 |  | (18) |
| Comprehensive income applicable to Morgan Stanley | . | 1,915 | \$ | 1,626 | \$ | 3,779 | \$ | 4,002 |

[^0]
## MORGAN STANLEY <br> Consolidated Balance Sheets (dollars in millions, except share data) (unaudited)

|  | $\underset{2016}{\text { At June }} \mathbf{3 0}$ |  | $\underset{2015}{\text { At December 31, }}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |
| Cash and due from banks | \$ | 27,597 | \$ | 19,827 |
| Interest bearing deposits with banks |  | 28,536 |  | 34,256 |
| Trading assets, at fair value (\$141,543 and \$127,627 were pledged to various parties) |  | 256,794 |  | 239,505 |
| Investment securities (includes \$67,726 and \$66,759 at fair value) |  | 80,144 |  | 71,983 |
| Securities purchased under agreements to resell (includes \$555 and \$806 at fair value) |  | 97,589 |  | 87,657 |
| Securities borrowed. |  | 131,281 |  | 142,416 |
| Customer and other receivables |  | 52,827 |  | 45,407 |
| Loans: |  |  |  |  |
| Held for investment (net of allowances of \$323 and \$225) |  | 77,283 |  | 72,559 |
| Held for sale |  | 15,882 |  | 13,200 |
| Goodwill |  | 6,581 |  | 6,584 |
| Intangible assets (net of accumulated amortization of \$2,279 and \$2,130) (includes \$3 and \$5 at fair value) |  | 2,833 |  | 2,984 |
| Other assets |  | 51,526 |  | 51,087 |
| Total assets | \$ | 828,873 | \$ | 787,465 |
| Liabilities |  |  |  |  |
| Deposits (includes \$95 and \$125 at fair value) | \$ | 152,693 | \$ | 156,034 |
| Short-term borrowings (includes \$511 and \$1,648 at fair value) |  | 880 |  | 2,173 |
| Trading liabilities, at fair value |  | 140,662 |  | 128,455 |
| Securities sold under agreements to repurchase (includes \$699 and \$683 at fair value) |  | 50,328 |  | 36,692 |
| Securities loaned |  | 17,241 |  | 19,358 |
| Other secured financings (includes \$2,921 and \$2,854 at fair value) |  | 9,901 |  | 9,464 |
| Customer and other payables |  | 201,189 |  | 186,626 |
| Other liabilities and accrued expenses |  | 14,112 |  | 18,711 |
| Long-term borrowings (includes $\$ \mathbf{3 7 , 8 0 4}$ and $\$ 33,045$ at fair value) |  | 163,492 |  | 153,768 |
| Total liabilities |  | 750,498 |  | 711,281 |
| Commitments and contingent liabilities (see Note 11) |  |  |  |  |
| Equity |  |  |  |  |
| Morgan Stanley shareholders' equity: |  |  |  |  |
| Preferred stock (see Note 14) ..... |  | 7,520 |  | 7,520 |
| Common stock, $\$ 0.01$ par value: |  |  |  |  |
| Shares authorized: $\mathbf{3 , 5 0 0 , 0 0 0}, 000 ;$ Shares issued: $\mathbf{2 , 0 3 8 , 8 9 3}, \mathbf{9 7 9}$; Shares outstanding: 1,917,509,492 and 1,920,024,027 |  | 20 |  | 20 |
| Additional paid-in capital |  | 22,697 |  | 24,153 |
| Retained earnings |  | 51,410 |  | 49,204 |
| Employee stock trusts |  | 2,873 |  | 2,409 |
| Accumulated other comprehensive income (loss) |  | (905) |  | $(1,656)$ |
| Common stock held in treasury, at cost, \$0.01 par value ( $\mathbf{1 2 1 , 3 8 4 , 4 8 7}$ and 118,869,952 shares) |  | $(3,626)$ |  | $(4,059)$ |
| Common stock issued to employee stock trusts |  | $(2,873)$ |  | $(2,409)$ |
| Total Morgan Stanley shareholders' equity |  | 77,116 |  | 75,182 |
| Noncontrolling interests |  | 1,259 |  | 1,002 |
| Total equity |  | 78,375 |  | 76,184 |
| Total liabilities and equity . | \$ | 828,873 | \$ | 787,465 |

## MORGAN STANLEY

## Consolidated Statements of Changes in Total Equity Six Months Ended June 30, 2016 and 2015 <br> (dollars in millions) <br> (unaudited)

|  | PreferredStock |  | $\begin{aligned} & \text { Common } \\ & \text { Stock } \end{aligned}$ |  | Additional Paid-in Capital |  | Retained Earnings |  | Employee Stock Trusts |  | Accumulated <br> Other <br> Comprehensive <br> Income (Loss) |  | Common Stock Held in Treasury at Cost |  | Common Stock Issued to Employee Stock Trusts |  | Noncontrolling Interests |  | Total Equity |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BALANCE AT DECEMBER 31, 2015 | \$ | 7,520 | \$ | 20 | \$ | 24,153 | \$ | 49,204 | \$ | 2,409 | \$ | $(1,656)$ | \$ | $(4,059)$ |  | $(2,409)$ |  | 1,002 | \$ | 76,184 |
| Cumulative adjustment for accounting change related to DVA(1) |  | - |  | - |  | - |  | 312 |  | - |  | (312) |  | - |  | - |  | - |  | - |
| Net adjustment for accounting change related to consolidation(2) |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 106 |  | 106 |
| Net income applicable to Morgan Stanley |  | - |  | - |  | - |  | 2,716 |  | - |  | - |  | - |  | - |  | - |  | 2,716 |
| Net income applicable to noncontrolling interests |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 87 |  | 87 |
| Dividends |  | - |  | - |  | - |  | (822) |  | - |  | - |  | - |  | - |  | - |  | (822) |
| Shares issued under employee plans and related tax effects |  | - |  | - |  | $(1,456)$ |  | - |  | 464 |  | - |  | 2,062 |  | (464) |  | - |  | 606 |
| Repurchases of common stock and employee tax withholdings |  | - |  | - |  | - |  | - |  | - |  | - |  | $(1,629)$ |  | - |  | - |  | $(1,629)$ |
| Net change in Accumulated other comprehensive income (loss) |  | - |  | - |  | - |  | - |  | - |  | 1,063 |  | - |  | - |  | 136 |  | 1,199 |
| Other net decreases |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (72) |  | (72) |
| BALANCE AT JUNE 30, 2016 | \$ | 7,520 | \$ | 20 | \$ | 22,697 | \$ | 51,410 | \$ | 2,873 | \$ | (905) | \$ | $(3,626)$ | \$ | $(2,873)$ | \$ | 1,259 | \$ | 78,375 |
| BALANCE AT DECEMBER 31, 2014 | \$ | 6,020 | \$ | 20 | \$ | 24,249 | \$ | 44,625 | \$ | 2,127 | \$ | $(1,248)$ | \$ | $(2,766)$ | \$ | $(2,127)$ | \$ | 1,204 | \$ | 72,104 |
| Net income applicable to Morgan Stanley |  | - |  | - |  | - |  | 4,201 |  | - |  | - |  | - |  | - |  | - |  | 4,201 |
| Net income applicable to noncontrolling interests |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 93 |  | 93 |
| Dividends |  | - |  | - |  | - |  | (720) |  | - |  | - |  | - |  | - |  | - |  | (720) |
| Shares issued under employee plans and related tax effects |  | - |  | - |  | (577) |  | - |  | 314 |  | - |  | 1,423 |  | (314) |  | - |  | 846 |
| Repurchases of common stock and employee tax withholdings |  | - |  | - |  | - |  | - |  | - |  | - |  | $(1,473)$ |  | - |  | - |  | $(1,473)$ |
| Net change in Accumulated other comprehensive income (loss) |  | - |  | - |  | - |  | - |  | - |  | (199) |  | - |  | - |  | (18) |  | (217) |
| Issuance of preferred stock |  | 1,500 |  | - |  | (7) |  | - |  | - |  | - |  | - |  | - |  | - |  | 1,493 |
| Deconsolidation of certain legal entities associated with a real estate fund |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (191) |  | (191) |
| Other net decreases |  | - |  | - |  | (10) |  | - |  | - |  | - |  | - |  | - |  | (59) |  | (69) |
| BALANCE AT JUNE 30, 2015 | \$ | 7,520 | \$ | 20 | \$ | 23,655 | \$ | 48,106 | \$ | 2,441 | \$ | $(1,447)$ | \$ | $(2,816)$ | \$ | $(2,441)$ | \$ | 1,029 | \$ | 76,067 |

(1) In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, a cumulative catch up adjustment was recorded as of January 1, 2016 to move the cumulative DVA amount, net of noncontrolling interest and tax, related to outstanding liabilities under the fair value option election from Retained earnings into Accumulated other comprehensive income (loss) ("AOCI"). See Notes 2 and 14 for further information.
(2) In accordance with the accounting update Amendments to the Consolidation Analysis, a net adjustment was recorded as of January 1,2016 to consolidate or deconsolidate certain entities under the new guidance. See Note 2 for further information.

## MORGAN STANLEY

## Consolidated Statements of Cash Flows <br> (dollars in millions) <br> (unaudited)

|  | Six Months Ended June 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| CASH FLOWS FROM OPERATING ACTIVITIES |  |  |  |  |
| Net income | \$ | 2,803 | \$ | 4,294 |
| Adjustments to reconcile net income to net cash provided by (used for) operating activities: |  |  |  |  |
| Income from equity method investments |  | (1) |  | (83) |
| Compensation payable in common stock and options |  | 492 |  | 611 |
| Depreciation and amortization |  | 879 |  | 654 |
| Net gain on sale of available for sale securities |  | (82) |  | (55) |
| Impairment charges. |  | 67 |  | 83 |
| Provision for credit losses on lending activities |  | 131 |  | 38 |
| Other operating adjustments |  | 218 |  | 37 |
| Changes in assets and liabilities: |  |  |  |  |
| Trading assets, net of Trading liabilities |  | (333) |  | 25,115 |
| Securities borrowed |  | 11,135 |  | $(7,261)$ |
| Securities loaned |  | $(2,117)$ |  | $(2,068)$ |
| Customer and other receivables and other assets |  | $(10,537)$ |  | (601) |
| Customer and other payables and other liabilities |  | 9,907 |  | $(1,482)$ |
| Securities purchased under agreements to resell |  | $(9,932)$ |  | $(23,472)$ |
| Securities sold under agreements to repurchase |  | 13,636 |  | $(4,263)$ |
| Net cash provided by (used for) operating activities |  | 16,266 |  | $(8,453)$ |
| CASH FLOWS FROM INVESTING ACTIVITIES |  |  |  |  |
| Proceeds from (payments for): |  |  |  |  |
| Other assets-Premises, equipment and software, net |  | (645) |  | (620) |
| Changes in loans, net |  | $(4,724)$ |  | $(9,082)$ |
| Investment securities: |  |  |  |  |
| Purchases |  | $(30,700)$ |  | $(26,832)$ |
| Proceeds from sales |  | 20,274 |  | 26,501 |
| Proceeds from paydowns and maturities |  | 3,507 |  | 2,796 |
| Other investing activities |  | (126) |  | (97) |
| Net cash used for investing activities |  | $(12,414)$ |  | $(7,334)$ |
| CASH FLOWS FROM FINANCING ACTIVITIES |  |  |  |  |
| Net proceeds from (payments for): |  |  |  |  |
| Short-term borrowings |  | $(1,293)$ |  | 861 |
| Noncontrolling interests |  | (43) |  | (60) |
| Other secured financings |  | (69) |  | (280) |
| Deposits |  | $(3,341)$ |  | 5,659 |
| Proceeds from: |  |  |  |  |
| Excess tax benefits associated with stock-based awards |  | 42 |  | 176 |
| Derivatives financing activities |  | - |  | 312 |
| Issuance of preferred stock, net of issuance costs |  | - |  | 1,493 |
| Issuance of long-term borrowings |  | 20,628 |  | 22,909 |
| Payments for: |  |  |  |  |
| Long-term borrowings |  | $(15,900)$ |  | $(12,963)$ |
| Derivatives financing activities |  | (120) |  | (257) |
| Repurchases of common stock and employee tax withholdings |  | $(1,629)$ |  | $(1,473)$ |
| Cash dividends |  | (791) |  | (673) |
| Net cash provided by (used for) financing activities |  | $(2,516)$ |  | 15,704 |
| Effect of exchange rate changes on cash and cash equivalents |  | 714 |  | (542) |
| Net increase (decrease) in cash and cash equivalents |  | 2,050 |  | (625) |
| Cash and cash equivalents, at beginning of period |  | 54,083 |  | 46,984 |
| Cash and cash equivalents, at end of period | \$ | 56,133 | \$ | 46,359 |
| Cash and cash equivalents include: |  |  |  |  |
| Cash and due from banks . | \$ | 27,597 | \$ | 19,145 |
| Interest bearing deposits with banks |  | 28,536 |  | 27,214 |
| Cash and cash equivalents, at end of period | \$ | 56,133 | \$ | 46,359 |

## SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION

Cash payments for interest were $\mathbf{\$ 1 , 0 8 2}$ million and $\$ 1,027$ million.
Cash payments for income taxes, net of refunds, were $\mathbf{\$ 3 4 0}$ million and $\$ 342$ million.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

## 1. Introduction and Basis of Presentation

## The Firm

Morgan Stanley, a financial holding company, is a global financial services firm that maintains significant market positions in each of its business segments-Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms "Morgan Stanley" or the "Firm" mean Morgan Stanley (the "Parent") together with its consolidated subsidiaries.

For a description of the clients and principal products and services of each of the Firm's business segments, see Note 1 to the consolidated financial statements in the Firm's Annual Report on Form 10-K for the year ended December 31, 2015 (the " 2015 Form 10-K").

## Basis of Financial Information

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"), which require the Firm to make estimates and assumptions regarding the valuations of certain financial instruments, the valuation of goodwill and intangible assets, compensation, deferred tax assets, the outcome of legal and tax matters, allowance for credit losses and other matters that affect its consolidated financial statements and related disclosures. The Firm believes that the estimates utilized in the preparation of its consolidated financial statements are prudent and reasonable. Actual results could differ materially from these estimates. Intercompany balances and transactions have been eliminated.

The accompanying consolidated financial statements should be read in conjunction with the Firm's consolidated financial statements and notes thereto included in the 2015 Form 10-K. Certain footnote disclosures included in the 2015 Form 10-K have been condensed or omitted from the consolidated financial statements as they are not required for interim reporting under U.S. GAAP. The consolidated financial statements reflect all adjustments of a normal, recurring nature that are, in the opinion of management, necessary for the fair presentation of the results for the
interim period. The results of operations for interim periods are not necessarily indicative of results for the entire year.

## Consolidation

The consolidated financial statements include the accounts of the Firm, its wholly owned subsidiaries and other entities in which the Firm has a controlling financial interest, including certain variable interest entities ("VIE") (see Note 12). For consolidated subsidiaries that are less than wholly owned, the third-party holdings of equity interests are referred to as noncontrolling interests. The net income attributable to noncontrolling interests for such subsidiaries is presented as Net income (loss) applicable to noncontrolling interests in the consolidated statements of income. The portion of shareholders' equity of such subsidiaries that is attributable to noncontrolling interests for such subsidiaries is presented as noncontrolling interests, a component of total equity, in the consolidated balance sheets.

For a discussion of the Firm's VIEs and its significant regulated U.S. and international subsidiaries, see Notes 1 and 2 to the consolidated financial statements in the 2015 Form 10-K. See also Note 2 herein.

## Consolidated Statements of Cash Flows Presentation

The adoption of the accounting update, Amendments to the Consolidation Analysis (see Note 2) on January 1, 2016, resulted in a net noncash increase in total assets of \$126 million. In the prior year quarter, the Firm deconsolidated approximately $\$ 191$ million in net assets previously attributable to nonredeemable noncontrolling interests that were related to a real estate fund sponsored by the Firm. The deconsolidation resulted in a non-cash reduction of assets of $\$ 169$ million.

## Global Oil Merchanting Business

As a result of entering into a definitive agreement to sell the global oil merchanting unit of the commodities division to Castleton Commodities International LLC, on May 11, 2015, the Firm recognized an impairment charge of \$59 million in Other revenues during the prior quarter and prior year period, to reduce the carrying amount of the unit to its estimated fair value less costs to sell. The Firm closed the transaction on November 1, 2015. The transaction did not meet the criteria for discontinued operations and did not have a material impact on the Firm's financial results.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 2. Significant Accounting Policies

For a detailed discussion about the Firm's significant accounting policies, see Note 2 to the consolidated financial statements in the 2015 Form 10-K.

During the current year period, other than the following, there were no significant updates made to the Firm's significant accounting policies.

## Accounting Standards Adopted

The Firm adopted the following accounting updates as of January 1, 2016.

- Recognition and Measurement of Financial Assets and Financial Liabilities. In January 2016, the Financial Accounting Standards Board (the "FASB") issued an accounting update that changes the requirements for the recognition and measurement of certain financial assets and financial liabilities. The Firm early adopted the provision in this guidance relating to liabilities measured at fair value pursuant to a fair value option election that requires presenting unrealized DVA in Other comprehensive income (loss) ("OCI"), a change from the previous requirement to present DVA in net income. Realized DVA amounts will be recycled from AOCI to Trading revenues. DVA amounts from periods prior to adoption remain in Trading revenues as previously reported. A cumulative catch up adjustment, net of noncontrolling interests and tax, of $\$ 312$ million was recorded as of January 1, 2016 to move the cumulative DVA loss amount from Retained earnings into AOCI.

Other provisions of this rule may not be early adopted and will be effective January 1, 2018, and are not expected to have a material impact on the consolidated financial statements.

- Amendments to the Consolidation Analysis. In February 2015, the FASB issued an accounting update that provides a new consolidation model for certain entities, such as investment funds and limited partnerships. The adoption on January 1, 2016, increased total assets by $\$ 131$ million, reflecting consolidations of $\$ 206$ million net of deconsolidations of $\$ 75$ million. The consolidations resulted primarily from certain funds in Investment Management where the Firm acts as a general partner.
- Simplifying the Presentation of Debt Issuance Costs. In April 2015, the FASB issued an accounting update that requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying amount of the debt liability, consistent with debt discounts, instead of as an asset as was previously required. This guidance became effective for the Firm beginning January 1, 2016 and did not have a material impact in the consolidated financial statements.

The Firm adopted the following accounting updates as of January 1, 2016, which did not have an impact in the consolidated financial statements.

- Simplifying the Accounting for Measurement-Period Adjustments.
- Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity.
- Measuring the Financial Assets and Financial Liabilities of a Consolidated Collateralized Financing Entity.
- Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period.


## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 3. Fair Values

## Fair Value Measurements

For a description of the valuation techniques applied to the Firm's major categories of assets and liabilities measured at fair value on a recurring basis, see Note 3 to the consolidated financial statements in the 2015 Form 10-K. During the current quarter and current year period, there were no significant updates made to the Firm's valuation techniques.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

|  | Level 1 |  | Level 2 |  | Level 3 |  | Counterparty and Cash Collateral Netting |  | $\begin{gathered} \text { Balance at June 30, } \\ 2016 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | in million |  |  |  |  |
| Assets at Fair Value |  |  |  |  |  |  |  |  |  |  |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury securities | \$ | 24,565 | \$ | - | \$ | - | \$ | - | \$ | 24,565 |
| U.S. agency securities |  | 795 |  | 22,085 |  | 20 |  | - |  | 22,900 |
| Total U.S. government and agency securities |  | 25,360 |  | 22,085 |  | 20 |  | - |  | 47,465 |
| Other sovereign government obligations |  | 20,942 |  | 6,607 |  | 2 |  | - |  | 27,551 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |
| State and municipal securities |  | - |  | 1,943 |  | 10 |  | - |  | 1,953 |
| Residential mortgage-backed securities |  | - |  | 586 |  | 216 |  | - |  | 802 |
| Commercial mortgage-backed securities |  | - |  | 961 |  | 51 |  | - |  | 1,012 |
| Asset-backed securities |  | - |  | 142 |  | 88 |  | - |  | 230 |
| Corporate bonds |  | - |  | 11,751 |  | 276 |  | - |  | 12,027 |
| Collateralized debt and loan obligations |  | - |  | 443 |  | 109 |  | - |  | 552 |
| Loans and lending commitments(1) |  | - |  | 3,879 |  | 5,418 |  | - |  | 9,297 |
| Other debt |  | - |  | 827 |  | 528 |  | - |  | 1,355 |
| Total corporate and other debt |  | - |  | 20,532 |  | 6,696 |  | - |  | 27,228 |
| Corporate equities(2) |  | 100,018 |  | 367 |  | 572 |  | - |  | 100,957 |
| Securities received as collateral |  | 10,121 |  | 7 |  | - |  | - |  | 10,128 |
| Derivative and other contracts: |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | 791 |  | 462,243 |  | 540 |  | - |  | 463,574 |
| Credit contracts |  | - |  | 16,157 |  | 304 |  | - |  | 16,461 |
| Foreign exchange contracts |  | 140 |  | 76,264 |  | 101 |  | - |  | 76,505 |
| Equity contracts |  | 1,368 |  | 40,524 |  | 637 |  | - |  | 42,529 |
| Commodity contracts |  | 2,847 |  | 8,605 |  | 4,057 |  | - |  | 15,509 |
| Other |  | - |  | 16 |  | - |  | - |  | 16 |
| Netting(3) |  | $(4,184)$ |  | $(505,871)$ |  | $(2,537)$ |  | $(63,844)$ |  | $(576,436)$ |
| Total derivative and other contracts |  | 962 |  | 97,938 |  | 3,102 |  | $(63,844)$ |  | 38,158 |
| Investments(4): |  |  |  |  |  |  |  |  |  |  |
| Principal investments |  | 21 |  | 19 |  | 769 |  | - |  | 809 |
| Other |  | 295 |  | 559 |  | 205 |  | - |  | 1,059 |
| Total investments |  | 316 |  | 578 |  | 974 |  | - |  | 1,868 |
| Physical commodities |  | - |  | 193 |  | - |  | - |  | 193 |
| Total trading assets(4) |  | 157,719 |  | 148,307 |  | 11,366 |  | $(63,844)$ |  | 253,548 |
| AFS securities |  | 31,062 |  | 36,664 |  | - |  | - |  | 67,726 |
| Securities purchased under agreements to resell |  | - |  | 555 |  | - |  | - |  | 555 |
| Intangible assets . |  | - |  | 3 |  | - |  | - |  | 3 |
| Total assets measured at fair value | \$ | 188,781 | \$ | 185,529 | \$ | 11,366 | \$ | $(63,844)$ | \$ | 321,832 |

## MORGAN STANLEY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Level 1 |  | Level 2 |  | Level 3 |  | Counterparty and Cash Collateral Netting |  | Balance at June 30,2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | in million |  |  |  |  |
| Liabilities at Fair Value |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ | - | \$ | 65 | \$ | 30 | \$ | - | \$ | 95 |
| Short-term borrowings |  | - |  | 511 |  | - |  | - |  | 511 |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury securities |  | 12,983 |  | - |  | - |  | - |  | 12,983 |
| U.S. agency securities . |  | 358 |  | 111 |  | - |  | - |  | 469 |
| Total U.S. government and agency securities |  | 13,341 |  | 111 |  | - |  | - |  | 13,452 |
| Other sovereign government obligations |  | 15,885 |  | 2,668 |  | - |  | - |  | 18,553 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |
| State and municipal securities |  | - |  | 3 |  | - |  | - |  | 3 |
| Asset-backed securities |  | - |  | 449 |  | - |  | - |  | 449 |
| Corporate bonds |  | - |  | 5,578 |  | 6 |  | - |  | 5,584 |
| Other debt |  | - |  | 15 |  | 3 |  | - |  | 18 |
| Total corporate and other debt |  | - |  | 6,045 |  | 9 |  | - |  | 6,054 |
| Obligation to return securities received as |  |  |  |  |  |  |  |  |  | 46,542 |
|  |  |  |  |  |  |  |  |  |  | 18,738 |
| Derivative and other contracts: |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | 969 |  | 436,022 |  | 775 |  | - |  | 437,766 |
| Credit contracts |  | - |  | 16,403 |  | 1,418 |  | - |  | 17,821 |
| Foreign exchange contracts |  | 82 |  | 78,441 |  | 102 |  | - |  | 78,625 |
| Equity contracts |  | 1,262 |  | 43,177 |  | 2,110 |  | - |  | 46,549 |
| Commodity contracts |  | 2,368 |  | 7,652 |  | 2,759 |  | - |  | 12,779 |
| Other |  | - |  | 91 |  | 11 |  | - |  | 102 |
| Netting(3) |  | $(4,184)$ |  | $(505,871)$ |  | $(2,537)$ |  | $(43,727)$ |  | $(556,319)$ |
| Total derivative and other contracts |  | 497 |  | 75,915 |  | 4,638 |  | $(43,727)$ |  | 37,323 |
| Total trading liabilities |  | 94,894 |  | 84,822 |  | 4,673 |  | $(43,727)$ |  | 140,662 |
| Securities sold under agreements to repurchase |  | - |  | 549 |  | 150 |  | - |  | 699 |
| Other secured financings |  | - |  | 2,480 |  | 441 |  | - |  | 2,921 |
| Long-term borrowings |  | 44 |  | 35,831 |  | 1,929 |  | - |  | 37,804 |
| Total liabilities measured at fair value | \$ | 94,938 | \$ | 124,258 | \$ | 7,223 | \$ | $(43,727)$ | \$ | 182,692 |

## MORGAN STANLEY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Level 1 |  | Level 2 |  | Level 3 |  | Counterparty and Cash Collateral Netting |  | Balance at December 31, 2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | n million |  |  |  |  |
| Assets at Fair Value |  |  |  |  |  |  |  |  |  |  |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury securities . | \$ | 17,658 | \$ | 17,886 | \$ | - | \$ | - | \$ | 17,658 |
| U.S. agency securities |  | 797 |  | 17,886 |  | - |  | - |  | 18,683 |
| Total U.S. government and agency securities |  | 18,455 |  | 17,886 |  | - |  | - |  | 36,341 |
| Other sovereign government obligations ........ |  | 13,559 |  | 7,400 |  | 4 |  | - |  | 20,963 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |
| State and municipal securities |  | - |  | 1,651 |  | 19 |  | - |  | 1,670 |
| Residential mortgage-backed securities |  | - |  | 1,456 |  | 341 |  | - |  | 1,797 |
| Commercial mortgage-backed securities |  | - |  | 1,520 |  | 72 |  | - |  | 1,592 |
| Asset-backed securities . . . . . . . . . . . . |  | - |  | 494 |  | 25 |  | - |  | 519 |
| Corporate bonds |  | - |  | 9,959 |  | 267 |  | - |  | 10,226 |
| Collateralized debt and loan obligations |  | - |  | 284 |  | 430 |  | - |  | 714 |
| Loans and lending commitments(1) . |  | - |  | 4,682 |  | 5,936 |  | - |  | 10,618 |
| Other debt . . . . . . . . . . . . . . . . . |  | - |  | 2,263 |  | 448 |  | - |  | 2,711 |
| Total corporate and other debt |  |  |  | 22,309 |  | 7,538 |  | - |  | 29,847 |
| Corporate equities(2) . . . . . . . |  | 106,296 |  | 379 |  | 433 |  | - |  | 107,108 |
| Securities received as collateral |  | 11,221 |  | 3 |  | 1 |  | - |  | 11,225 |
| Derivative and other contracts: |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | 406 |  | 323,586 |  | 2,052 |  | - |  | 326,044 |
| Credit contracts |  | - |  | 22,258 |  | 661 |  | - |  | 22,919 |
| Foreign exchange contracts |  | 55 |  | 64,608 |  | 292 |  | - |  | 64,955 |
| Equity contracts |  | 653 |  | 38,552 |  | 1,084 |  | - |  | 40,289 |
| Commodity contracts |  | 3,140 |  | 10,654 |  | 3,358 |  | - |  | 17,152 |
| Other . . . . . . . . . . . |  | - |  | 219 |  | - |  | (55,562) |  | 219 |
| Netting(3) |  | $(3,840)$ |  | $(380,443)$ |  | $(3,120)$ |  | $(55,562)$ |  | $(442,965)$ |
| Total derivative and other contracts |  | 414 |  | 79,434 |  | 4,327 |  | $(55,562)$ |  | 28,613 |
| Investments(4): |  |  |  |  |  |  |  |  |  |  |
| Principal investments |  | 20 |  | 44 |  | 486 |  | - |  | 550 |
| Other |  | 163 |  | 310 |  | 221 |  | - |  | 694 |
| Total investments |  | 183 |  | 354 |  | 707 |  | - |  | 1,244 |
| Physical commodities |  | - |  | 321 |  | - |  | - |  | 321 |
| Total trading assets(4) |  | 150,128 |  | 128,086 |  | 13,010 |  | $(55,562)$ |  | 235,662 |
| AFS securities |  | 34,351 |  | 32,408 |  | - |  | - |  | 66,759 |
| Securities purchased under agreements to resell |  | - |  | 806 |  | - |  | - |  | 806 |
| Intangible assets |  | - |  | - |  | 5 |  | - |  | 5 |
| Total assets measured at fair value | \$ | 184,479 | \$ | 161,300 | \$ | 13,015 | \$ | $(55,562)$ | \$ | 303,232 |
| Liabilities at Fair Value |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ | - | \$ | 106 | \$ | 19 | \$ | - | \$ | 125 |
| Short-term borrowings |  | - |  | 1,647 |  | 1 |  | - |  | 1,648 |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury securities |  | 12,932 |  | - |  | - |  | - |  | 12,932 |
| U.S. agency securities |  | 854 |  | 127 |  | - |  | - |  | 981 |
| Total U.S. government and agency securities |  | 13,786 |  | 127 |  | - |  | - |  | 13,913 |
| Other sovereign government obligations ... |  | 10,970 |  | 2,558 |  | - |  | - |  | 13,528 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |
| Commercial mortgage-backed securities |  | - |  | 2 |  | - |  | - |  | 2 |
| Corporate bonds |  | - |  | 5,035 |  | - |  | - |  | 5,035 |
| Lending commitments |  | - |  | 3 |  | - |  | - |  | 3 |
| Other debt |  | - |  | 5 |  | 4 |  | - |  | 9 |
| Total corporate and other debt |  | - |  | 5,045 |  | 4 |  | - |  | 5,049 |
| Corporate equities(2) |  | 47,123 |  | 35 |  | 17 |  | - |  | 47,175 |
| Obligation to return securities received as collateral |  | 19,312 |  | 3 |  | 1 |  | - |  | 19,316 |
| Derivative and other contracts: |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | 466 |  | 305,151 |  | 1,792 |  | - |  | 307,409 |
| Credit contracts |  | - |  | 22,160 |  | 1,505 |  | - |  | 23,665 |
| Foreign exchange contracts |  | 22 |  | 65,177 |  | 151 |  | - |  | 65,350 |
| Equity contracts |  | 570 |  | 42,447 |  | 3,115 |  | - |  | 46,132 |
| Commodity contracts |  | 3,012 |  | 9,431 |  | 2,308 |  | - |  | 14,751 |
| Other |  | - |  | 43 |  | - |  | 73 |  | 43 |
| Netting(3) |  | $(3,840)$ |  | $(380,443)$ |  | $(3,120)$ |  | $(40,473)$ |  | $(427,876)$ |
| Total derivative and other contracts |  | 230 |  | 63,966 |  | 5,751 |  | $(40,473)$ |  | 29,474 |
| Total trading liabilities |  | 91,421 |  | 71,734 |  | 5,773 |  | $(40,473)$ |  | 128,455 |
| Securities sold under agreements to repurchase |  | - |  | 532 |  | 151 |  | - |  | 683 |
| Other secured financings |  | - |  | 2,393 |  | 461 |  | - |  | 2,854 |
| Long-term borrowings |  | - |  | 31,058 |  | 1,987 |  | - |  | 33,045 |
| Total liabilities measured at fair value | \$ | 91,421 | \$ | 107,470 | \$ | 8,392 | \$ | $(40,473)$ | \$ | 166,810 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

AFS—Available for sale
(1) At June 30, 2016, Loans and lending commitments held at fair value consisted of $\$ 7,114$ million of corporate loans, $\$ 1,721$ million of residential real estate loans and $\$ 462$ million of wholesale real estate loans. At December 31, 2015, Loans and lending commitments held at fair value consisted of $\$ 7,286$ million of corporate loans, $\$ 1,885$ million of residential real estate loans and $\$ 1,447$ million of wholesale real estate loans.
(2) For trading purposes, the Firm holds or sells short equity securities issued by entities in diverse industries and of varying sizes.
(3) For positions with the same counterparty that cross over the levels of the fair value hierarchy, both counterparty netting and cash collateral netting are included in the column titled "Counterparty and Cash Collateral Netting." For contracts with the same counterparty, counterparty netting among positions classified within the same level is included within that shared level. For further information on derivative instruments and hedging activities, see Note 4.
(4) Amounts exclude certain investments that are measured at fair value using the net asset value ("NAV") per share, which are not classified in the fair value hierarchy. At June 30, 2016 and December 31, 2015, the fair value of these investments was $\$ 3,246$ million and $\$ 3,843$ million, respectively. For additional disclosure about such investments, see "Fair Value of Investments Measured at Net Asset Value" herein.

## Changes in Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following tables present additional information about Level 3 assets and liabilities measured at fair value on a recurring basis for all periods presented. Level 3 instruments may be hedged with instruments classified in Level 1 and Level 2. As a result, the realized and unrealized gains (losses) for assets and liabilities within the Level 3 category presented in the following tables do not reflect the related realized and unrealized gains (losses) on hedging instruments that have been classified by the Firm within the Level 1 and/or Level 2 categories.

Additionally, both observable and unobservable inputs may be used to determine the fair value of positions that the Firm has classified within the Level 3 category. As a result, the unrealized gains (losses) during the period for assets and liabilities within the Level 3 category presented in the following tables herein may include changes in fair value during the period that were attributable to both observable and unobservable inputs.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

$\underline{\text { Roll-forward of Level } 3 \text { Assets and Liabilities Measured at Fair Value on a Recurring Basis }}$


## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)



## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)



## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Beginning Balance at December 31, 2014 |  | TotalRealizedandUnrealizedGains(Losses) |  | Purchases <br> (1) |  | Sales |  | Issuances |  | Settlements |  | Net <br> Transfers |  | $\begin{gathered} \text { Ending } \\ \text { Balance at } \\ \text { June 30, 2015 } \end{gathered}$ |  | Unrealized Gains (Losses) for Level 3 Assets/ Liabilities Outstanding at June 30, 2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  | s in mi |  |  |  |  |  |  |  |  |
| Assets at Fair Value |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Trading assets: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. agency securities | \$ | - | \$ | - | \$ | 3 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 3 | \$ | - |
| Other sovereign government obligations |  | 41 |  | 1 |  | 6 |  | (32) |  | - |  | - |  | (4) |  | 12 |  | 1 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| State and municipal securities |  | - |  | 1 |  | 4 |  | - |  | - |  | - |  | 2 |  | 7 |  | 1 |
| Residential mortgage-backed securities . |  | 175 |  | 21 |  | 163 |  | (51) |  | - |  | - |  | 70 |  | 378 |  | 12 |
| Commercial mortgage-backed securities |  | 96 |  | (6) |  | 16 |  | (22) |  | - |  | - |  | - |  | 84 |  | (9) |
| Asset-backed securities ........... |  | 76 |  | (4) |  | 11 |  | (29) |  | - |  | - |  | (35) |  | 19 |  | 2 |
| Corporate bonds |  | 386 |  | 10 |  | 213 |  | (126) |  | - |  | (1) |  | (3) |  | 479 |  | 9 |
| Collateralized debt and loan obligations |  | 1,152 |  | 145 |  | 404 |  | (682) |  | - |  | (331) |  | (28) |  | 660 |  | (6) |
| Loans and lending commitments |  | 5,874 |  | 35 |  | 2,082 |  | (209) |  | - |  | $(2,078)$ |  | (192) |  | 5,512 |  | 30 |
| Other debt . . . . |  | 285 |  | (8) |  | 12 |  | - |  | - |  | (1) |  | 276 |  | 564 |  | 6 |
| Total corporate and other debt |  | 8,044 |  | 194 |  | 2,905 |  | $(1,119)$ |  | - |  | $(2,411)$ |  | 90 |  | 7,703 |  | 45 |
| Corporate equities |  | 272 |  | 64 |  | 260 |  | (147) |  | - |  | - |  | 37 |  | 486 |  | 49 |
| Securities received as collateral |  | - |  | - |  | 3 |  | - |  | - |  | - |  | - |  | 3 |  | - |
| Net derivative and other contracts(2): |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | (173) |  | 188 |  | 9 |  | - |  | (20) |  | 124 |  | (364) |  | (236) |  | 197 |
| Credit contracts |  | (743) |  | (276) |  | 17 |  | - |  | (54) |  | 31 |  | 36 |  | (989) |  | (284) |
| Foreign exchange contracts |  | 151 |  | 121 |  | - |  | - |  | (1) |  | 144 |  | 31 |  | 446 |  | 120 |
| Equity contracts |  | $(2,165)$ |  | (73) |  | 69 |  | - |  | (225) |  | 156 |  | 136 |  | $(2,102)$ |  | (160) |
| Commodity contracts |  | 1,146 |  | 299 |  | 3 |  | - |  | (112) |  | (72) |  | (59) |  | 1,205 |  | 234 |
| Total net derivative and other contracts |  | $(1,784)$ |  | 259 |  | 98 |  | - |  | (412) |  | 383 |  | (220) |  | $(1,676)$ |  | 107 |
| Investments: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Principal investments |  | 835 |  | (4) |  | 15 |  | (46) |  | - |  | (205) |  | (14) |  | 581 |  | (26) |
| Other |  | 323 |  | (16) |  | 2 |  | (6) |  | - |  | - |  | (3) |  | 300 |  | (12) |
| Total investments |  | 1,158 |  | (20) |  | 17 |  | (52) |  | - |  | (205) |  | (17) |  | 881 |  | (38) |
| Intangible assets |  | 6 |  | 1 |  | - |  | - |  | - |  | (1) |  | - |  | 6 |  | 1 |
| Liabilities at Fair Value |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Trading liabilities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Corporate bonds | \$ | 78 | \$ | (2) | \$ | (12) | \$ | 14 | \$ | - | \$ | - | \$ | (67) | \$ | 15 | \$ | (2) |
| Lending commitments |  | 5 |  | 5 |  | - |  | - |  | - |  | - |  | - |  | - |  | 5 |
| Other debt |  | 38 |  | - |  | - |  | 6 |  | - |  | (39) |  | (1) |  | 4 |  | - |
| Total corporate and other debt |  | 121 |  | 3 |  | (12) |  | 20 |  | - |  | (39) |  | (68) |  | 19 |  | 3 |
| Corporate equities |  | 45 |  | 19 |  | (75) |  | 25 |  | - |  | - |  | 136 |  | 112 |  | 20 |
| Obligation to return securities received as collateral |  | - |  | - |  | - |  | 3 |  | - |  | - |  | - |  | 3 |  | - |
| Securities sold under agreements to repurchase |  | 153 |  | (1) |  | - |  | - |  | - |  | - |  | - |  | 154 |  | (1) |
| Other secured financings |  | 149 |  | (6) |  | - |  | - |  | 37 |  | (24) |  | - |  | 168 |  | 2 |
| Long-term borrowings |  | 1,934 |  | 65 |  | - |  | - |  | 612 |  | (300) |  | 40 |  | 2,221 |  | 59 |

[^1]
## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Significant Unobservable Inputs Used in Recurring Level 3 Fair Value Measurements

The following disclosures provide information on the valuation techniques, significant unobservable inputs, and their ranges and averages for each major category of assets and liabilities measured at fair value on a recurring basis with a significant Level 3 balance. The level of aggregation and breadth of products cause the range of inputs to be wide and not evenly distributed across the inventory. Further, the range of unobservable inputs may differ across firms in the financial services industry because of diversity in the types of products included in each firm's inventory. The following disclosures also include qualitative information on the sensitivity of the fair value measurements to changes in the significant unobservable inputs.

Recurring Level 3 Fair Value Measurements Valuation Techniques and Sensitivity of Unobservable Inputs


## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Balance at June 30, 2016 | Valuation Technique(s)/ Significant Unobservable Input(s) Sensitivity of the Fair Value to Changes in the Unobservable Inputs | Range(1) | Averages(2) |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Other debt | 528 | Comparable pricing: |  |  |
|  |  | Comparable loan price / (A) | 3 to 84 points | 66 points |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable bond price / (A) | 7 points | 7 points |
|  |  | Option model: |  |  |
|  |  | At the money volatility / (C) | 16\% to 53\% | 53\% |
|  |  | Margin loan model(3): |  |  |
|  |  | Discount rate / (C) | $1 \%$ to $2 \%$ | 2\% |
|  |  | Discounted cash flow: |  |  |
|  |  | Discount rate / (C) | 10\% to $13 \%$ | 12\% |
| Corporate equities | 572 | Comparable pricing: |  |  |
|  |  | Comparable equity price / (A) | 100\% | 100\% |
| Net derivative and other contracts(4): |  |  |  |  |
| Interest rate contracts | (235) | Option model(3): |  |  |
|  |  | Interest rate - Foreign exchange correlation / (A)(D) | 25\% to $55 \%$ | 42\% / 42\% (5) |
|  |  | Interest rate volatility skew / (A)(D) | $34 \%$ to $143 \%$ | 78\% / 77\% (5) |
|  |  | Interest rate quanto correlation / (A)(D) | $-8 \%$ to $35 \%$ | 2\% / -7\% (5) |
|  |  | Interest rate curve correlation / (C)(D) | 19\% to $95 \%$ | 71\% / 76\% (5) |
|  |  | Inflation volatility / (A)(D) | 0\% to 1\% | 1\%/1\% (5) |
|  |  | Interest rate - Inflation correlation / (A)(D) | $-24 \%$ to $-44 \%$ | $-34 \% /-33 \%$ (5) |
|  |  | Interest rate curve / (C)(D) | $0 \%$ to $1 \%$ | 1\%/1\% (5) |
|  |  | Foreign exchange volatility skew / (C)(D) | $0 \%$ to $11 \%$ | 4\% / 6\% (5) |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable bond price / (C) | 95 to 100 points | 96 points |
| Credit contracts | $(1,114)$ | Comparable pricing: |  |  |
|  |  | Cash synthetic basis / (C)(D) | 5 to 12 points | 10 points |
|  |  | Comparable bond price / (C)(D) | 0 to 85 points | 26 points |
|  |  | Correlation model(3): |  |  |
|  |  | Credit correlation / (B) | 29\% to $92 \%$ | 49\% |
| Foreign exchange contracts(6) | (1) | Option model: |  |  |
|  |  | Interest rate - Foreign exchange correlation / (A)(D) | 25\% to 55\% | 42\% / 42\% (5) |
|  |  | Interest rate volatility skew / (A)(D) | $34 \%$ to $143 \%$ | 78\% / 77\% (5) |
|  |  | Interest rate curve / (A)(D) | 0\% | 0\% / 0\% (5) |
|  |  | Interest rate curve correlation / (C)(D) | 19\% to $94 \%$ | 73\% / 81\% (5) |
| Equity contracts(6) | $(1,473)$ | Option model: |  |  |
|  |  | At the money volatility / (A)(D) | 6\% to $81 \%$ | 35\% |
|  |  | Volatility skew / (A)(D) | -4\% to 0\% | -1\% |
|  |  | Equity - Equity correlation / (A)(D) | 40\% to 98\% | 79\% |
|  |  | Equity - Foreign exchange correlation / (C)(D) | $-70 \%$ to $-31 \%$ | -42\% |
|  |  | Equity - Interest rate correlation / (C)(D) | -7\% to 50\% | 19\% / 12\% (5) |
| Commodity contracts | 1,298 | Option model: |  |  |
|  |  | Forward power price / (C)(D) | \$2 to \$95 per megawatt hour | $\$ 34 \text { per }$ megawatt hour |
|  |  | Commodity volatility / (C)(D) | 6\% to 90\% | 18\% |
|  |  | Cross commodity correlation / (C)(D) | 5\% to 99\% | 93\% |

## MORGAN STANLEY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Balance at June 30, 2016 | Valuation Technique(s) / <br> Significant Unobservable Input(s) / Sensitivity of the Fair Value to Changes in the Unobservable Inputs | Range(1) | Averages(2) |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Investments: |  |  |  |  |
| Principal investments | 769 | Discounted cash flow: |  |  |
|  |  | Implied weighted average cost of capital / (C)(D) | 13\% to $16 \%$ | 15\% |
|  |  | Exit multiple / (A)(D) | 8 to 23 times | 9 times |
|  |  | Market approach(3): |  |  |
|  |  | EBITDA multiple / (A)(D) | 6 to 25 times | 12 times |
|  |  | Forward capacity price / (A)(D) | \$4 to \$9 | \$7 |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable equity price / (A) | 43\% to 100\% | 82\% |
| Other | 205 | Discounted cash flow: |  |  |
|  |  | Implied weighted average cost of capital / (C)(D) | 9\% | 9\% |
|  |  | Exit multiple / (A)(D) | 13 times | 13 times |
|  |  | Market approach: |  |  |
|  |  | EBITDA multiple / (A)(D) | 6 to 13 times | 12 times |
|  |  | Comparable pricing(3): |  |  |
|  |  | Comparable equity price / (A) | 100\% | 100\% |
| Liabilities at Fair Value |  |  |  |  |
| Securities sold under agreements to repurchase | 150 | Discounted cash flow: |  |  |
|  |  | Funding spread / (A) | 117 to 123 bps | 120 bps |
| Other secured financings | 441 | Option model: |  |  |
|  |  | Volatility skew / (C) | -1\% | -1\% |
|  |  | Discounted cash flow(3): |  |  |
|  |  | Discount rate / (C) | 4\% | 4\% |
|  |  | Discounted cash flow: |  |  |
|  |  | Funding spread / (A) | 101 to 126 bps | 114 bps |
| Long-term borrowings | 1,929 | Option model(3): |  |  |
|  |  | At the money volatility / (C)(D) | 6\% to 48\% | 29\% |
|  |  | Volatility skew / (C)(D) | -2\% to 0\% | -1\% |
|  |  | Equity - Equity correlation / (C)(D) | 50\% to 98\% | 75\% |
|  |  | Equity - Foreign exchange correlation / (C)(D) | -50\% to $11 \%$ | -25\% |
|  |  | Option model: |  |  |
|  |  | Interest rate - credit spread correlation / (A)(D) | -52\% to 3\% | $-24 \% /-23 \%(5)$ |
|  |  | Interest rate - Foreign exchange correlation / |  |  |
|  |  | $(\mathrm{A})(\mathrm{D})$ | 53\% | 53\% / 53\% (5) |
|  |  | Interest rate - equity correlation / (A)(D) | $7 \%$ to $44 \%$ | 26\% / 26\% (5) |
|  |  | Interest rate curve correlation / (C)(D) | 40\% to $87 \%$ | 73\% / 78\% (5) |
|  |  | Correlation model: |  |  |
|  |  | Credit correlation / (B) | $33 \%$ to $61 \%$ | 44\% |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable equity price / (A) | 100\% | 100\% |

## MORGAN STANLEY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Balance at December 31, 2015 | Valuation Technique(s) / <br> Significant Unobservable Input(s) / Sensitivity of the Fair Value to Changes in the Unobservable Inputs | Range(1) | Averages(2) |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Assets at Fair Value |  |  |  |  |
| Trading assets: |  |  |  |  |
| Corporate and other debt: |  |  |  |  |
| Residential mortgage-backed securities | \$ 341 | Comparable pricing: |  |  |
|  |  | Comparable bond price / (A) | 0 to 75 points | 32 points |
| Commercial mortgage-backed securities | 72 | Comparable pricing: |  |  |
|  |  | Comparable bond price / (A) | 0 to 9 points | 2 points |
| Corporate bonds | 267 | Comparable pricing(3): |  |  |
|  |  | Comparable bond price / (A) | 3 to 119 points | 90 points |
|  |  | Comparable pricing: |  |  |
|  |  | EBITDA multiple / (A) | 7 to 9 times | 8 times |
|  |  | Structured bond model: |  |  |
|  |  | Discount rate / (C) | 15\% | 15\% |
| Collateralized debt and loan obligations | 430 | Comparable pricing(3): |  |  |
|  |  | Comparable bond price / (A) | 47 to 103 points | 67 points |
|  |  | Correlation model: |  |  |
|  |  | Credit correlation / (B) | 39\% to 60\% | 49\% |
| Loans and lending commitments | 5,936 | Corporate loan model: |  |  |
|  |  | Credit spread / (C) | 250 to 866 bps | 531 bps |
|  |  | Margin loan model(3): |  |  |
|  |  | Credit spread / (C)(D) | 62 to 499 bps | 145 bps |
|  |  | Volatility skew / (C)(D) | $14 \%$ to $70 \%$ | 33\% |
|  |  | Discount rate / (C)(D) | 1\% to 4\% | 2\% |
|  |  | Option model: |  |  |
|  |  | Volatility skew / (C) | -1\% | -1\% |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable loan price / (A) | 35 to 100 points | 88 points |
|  |  | Discounted cash flow: |  |  |
|  |  | Implied weighted average cost of capital / (C)(D) | 6\% to 8\% | 7\% |
|  |  | Capitalization rate / (C)(D) | 4\% to $10 \%$ | 4\% |
| Other debt | 448 | Comparable pricing: |  |  |
|  |  | Comparable loan price / (A) | 4 to 84 points | 59 points |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable bond price / (A) | 8 points | 8 points |
|  |  | Option model: |  |  |
|  |  | At the money volatility / (C) | $16 \%$ to $53 \%$ | 53\% |
|  |  | Margin loan model(3): |  |  |
|  |  | Discount rate / (C) | 1\% | 1\% |
| Corporate equities | 433 | Comparable pricing: |  |  |
|  |  | Comparable price / (A) | 50\% to $80 \%$ | 72\% |
|  |  | Comparable pricing(3): |  |  |
|  |  | Comparable equity price / (A) | 100\% | 100\% |
|  |  | Market approach: |  |  |
|  |  | EBITDA multiple / (A) | 9 times | 9 times |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Balance at December 31, 2015 | Valuation Technique(s) / <br> Significant Unobservable Input(s) / Sensitivity of the Fair Value to Changes in the Unobservable Inputs | Range(1) | Averages(2) |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Net derivative and other contracts(4): |  |  |  |  |
| Interest rate contracts | 260 | Option model: |  |  |
|  |  | Interest rate volatility concentration liquidity multiple / (C)(D) | 0 to 3 times | 2 times |
|  |  | Interest rate - Foreign exchange correlation / (C)(D) | $25 \%$ to $62 \%$ | 43\% / 43\% (5) |
|  |  | Interest rate volatility skew / (A)(D) | $29 \%$ to $82 \%$ | 43\% / 40\% (5) |
|  |  | Interest rate quanto correlation / (A)(D) | -8\% to 36\% | 5\% / -6\%(5) |
|  |  | Interest rate curve correlation / (C)(D) | $24 \%$ to $95 \%$ | 60\% / 69\% (5) |
|  |  | Inflation volatility / (A)(D) | 58\% | 58\% / 58\% (5) |
|  |  | Interest rate - Inflation correlation / (A)(D) | -41\% to -39\% | -41\% / -41\%(5) |
| Credit contracts | (844) | Comparable pricing: |  |  |
|  |  | Cash synthetic basis / (C)(D) | 5 to 12 points | 9 points |
|  |  | Comparable bond price / (C)(D) | 0 to 75 points | 24 points |
|  |  | Correlation model(3): |  |  |
|  |  | Credit correlation / (B) | $39 \%$ to $97 \%$ | 57\% |
| Foreign exchange contracts(6) | 141 | Option model: |  |  |
|  |  | Interest rate - Foreign exchange correlation / (C)(D) | 25\% to 62\% | 43\% / 43\% (5) |
|  |  | Interest rate volatility skew / (A)(D) | $29 \%$ to $82 \%$ | 43\% / 40\% (5) |
|  |  | Interest rate curve / (A)(D) | 0\% | 0\% / 0\% (5) |
| Equity contracts(6) | $(2,031)$ | Option model: |  |  |
|  |  | At the money volatility / (A)(D) | 16\% to 65\% | 32\% |
|  |  | Volatility skew / (A)(D) | -3\% to 0\% | -1\% |
|  |  | Equity - Equity correlation / (C)(D) | 40\% to 99\% | 71\% |
|  |  | Equity - Foreign exchange correlation / (A)(D) | $-60 \%$ to $-11 \%$ | -39\% |
|  |  | Equity - Interest rate correlation / (C)(D) | $-29 \%$ to $50 \%$ | 16\% / 8\%(5) |
| Commodity contracts | 1,050 | Option model: |  |  |
|  |  | Forward power price / (C)(D) | \$3 to \$91 per | \$32 per |
|  |  |  | megawatt hour | megawatt hour |
|  |  | Commodity volatility / (A)(D) | 10\% to $92 \%$ | 18\% |
|  |  | Cross commodity correlation / (C)(D) | $43 \%$ to $99 \%$ | 93\% |
| Investments: |  |  |  |  |
| Principal investments | 486 | Discounted cash flow: |  |  |
|  |  | Implied weighted average cost of capital / (C)(D) | 16\% | 16\% |
|  |  | Exit multiple / (A)(D) | 8 to 14 times | 9 times |
|  |  | Capitalization rate / (C)(D) | 5\% to 9\% | 6\% |
|  |  | Equity discount rate / (C)(D) | 20\% to $35 \%$ | 26\% |
|  |  | Market approach(3): |  |  |
|  |  | EBITDA multiple / (A)(D) | 8 to 20 times | 11 times |
|  |  | Forward capacity price / (A)(D) | \$5 to \$9 | \$7 |
|  |  | Comparable pricing: |  |  |
|  |  | Comparable equity price / (A) | $43 \%$ to $100 \%$ | 81\% |
| Other | 221 | Discounted cash flow: |  |  |
|  |  | Implied weighted average cost of capital / (C)(D) | 10\% | 10\% |
|  |  | Exit multiple / (A)(D) | 13 times | 13 times |
|  |  | Market approach: |  |  |
|  |  | EBITDA multiple / (A) | 7 to 14 times | 12 times |
|  |  | Comparable pricing(3): |  |  |
|  |  | Comparable equity price / (A) | 100\% | 100\% |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)


bps-Basis points
EBITDA-Earnings before interest, taxes, depreciation and amortization
(1) The range of significant unobservable inputs is represented in points, percentages, basis points, times or megawatt hours. Points are a percentage of par; for example, 79 points would be $79 \%$ of par. A basis point equals $1 / 100$ th of $1 \%$; for example, 898 bps would equal $8.98 \%$.
(2) Amounts represent weighted averages except where simple averages and the median of the inputs are provided (see footnote 5 below). Weighted averages are calculated by weighting each input by the fair value of the respective financial instruments except for collateralized debt and loan obligations, principal investments, other debt, corporate bonds, long-term borrowings and derivative instruments where some or all inputs are weighted by risk.
(3) This is the predominant valuation technique for this major asset or liability class.
(4) Credit valuation adjustments ("CVA") and funding valuation adjustments ("FVA") are included in the balance but excluded from the Valuation Technique(s) and Significant Unobservable Input(s) in the previous table. CVA is a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.
(5) The data structure of the significant unobservable inputs used in valuing interest rate contracts, foreign exchange contracts, certain equity contracts and certain long-term borrowings may be in a multi-dimensional form, such as a curve or surface, with risk distributed across the structure. Therefore, a simple average and median, together with the range of data inputs, may be more appropriate measurements than a single point weighted average.
(6) Includes derivative contracts with multiple risks (i.e., hybrid products).

Sensitivity of the fair value to changes in the unobservable inputs:
(A) Significant increase (decrease) in the unobservable input in isolation would result in a significantly higher (lower) fair value measurement.
(B) Significant changes in credit correlation may result in a significantly higher or lower fair value measurement. Increasing (decreasing) correlation drives a redistribution of risk within the capital structure such that junior tranches become less (more) risky and senior tranches become more (less) risky.
(C) Significant increase (decrease) in the unobservable input in isolation would result in a significantly lower (higher) fair value measurement.
(D) There are no predictable relationships between the significant unobservable inputs.

For a description of the Firm's significant unobservable inputs for all major categories of assets and liabilities, see Note 3 to the consolidated financial statements in the 2015 Form $10-\mathrm{K}$. The following provides a description of an update to significant unobservable inputs included in the 2015 Form 10-K.

- Asset Coverage-the ratio of a borrower's underlying pledged assets less applicable costs relative to their outstanding debt (while considering the loan's principal and the seniority and security of the loan commitment).

During the current quarter and current year period, there were no other significant updates made to the Firm's significant unobservable inputs.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Fair Value of Investments Measured at Net Asset Value

For a description of the Firm's investments in private equity funds, real estate funds and hedge funds measured at fair value based on NAV, see Note 3 to the consolidated financial statements in the 2015 Form 10-K.

Investments in Certain Funds Measured at NAV per Share

|  | At June 30, 2016 |  |  |  | At December 31, 2015 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Value |  | Commitment |  | Fair Value |  | Commitment |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Private equity funds | \$ | 1,698 | \$ | 395 | \$ | 1,917 | \$ | 538 |
| Real estate funds |  | 1,228 |  | 111 |  | 1,337 |  | 128 |
| Hedge funds |  | 320 |  | 4 |  | 589 |  | 4 |
| Total | \$ | 3,246 | \$ | 510 | \$ | 3,843 | \$ | 670 |

Fair Value of Non-Redeemable Funds by Projected Distribution

|  | At June 30, 2016 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Private Equity Funds |  | Real Estate Funds |  |
|  | (dollars in millions) |  |  |  |
| Less than 5 years | \$ | 128 | \$ | 94 |
| 5-10 years |  | 911 |  | 669 |
| Over 10 years |  | 659 |  | 465 |
| Total | \$ | 1,698 | \$ | 1,228 |

## Restrictions

Investments in hedge funds may be subject to initial period lock-up restrictions or gates. A hedge fund lock-up provision restricts an investor from making a withdrawal from the fund. The purpose of a gate is to restrict the level of redemptions that an investor in a particular hedge fund can demand on any redemption date.

Redemption Frequency as Percentage of Hedge Fund Fair Value

|  | At June 30, 2016 |
| :---: | :---: |
| Hedge Funds(1) |  |
| Quarterly | 55\% |
| Every Six Months | 20\% |
| Greater than Six Months | 19\% |

(1) The redemption notice period was primarily three months or greater.

Hedge fund investments representing approximately $6 \%$ of the fair value cannot be redeemed currently because the investments include certain initial period lock-up restrictions. The remaining restriction period for these investments was primarily over three years at June 30, 2016. Hedge fund investments representing approximately $26 \%$ of the fair value cannot be redeemed as of June 30, 2016 because an exit restriction has been imposed by the hedge fund manager primarily for indefinite periods.

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Fair Value Option

The Firm elected the fair value option for certain eligible instruments that are risk managed on a fair value basis to mitigate income statement volatility caused by measurement basis differences between the elected instruments and their associated risk management transactions or to eliminate complexities of applying certain accounting models.

## Impact on Earnings of Transactions Under the Fair Value Option Election

In addition to the amounts in the following table, as discussed in Note 2 to the consolidated financial statements in the 2015 Form 10-K, instruments within Trading assets or Trading liabilities are measured at fair value. The amounts in this table are included within Net revenues and do not reflect gains or losses on related hedging instruments, if any.


[^2]
## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

Gains (Losses) due to Changes in Instrument-Specific Credit Risk

(1) In accordance with the early adoption of a provision of the accounting update, Recognition and Measurement of Financial Assets and Financial Liabilities, for the current quarter and current year period DVA gains (losses) are recorded in OCI when unrealized and in Trading revenues when realized. In the prior year quarter and prior year period, the realized and unrealized DVA gains (losses) are recorded in Trading revenues. The cumulative impact of changes in the Firm's DVA and the pre-tax amount recognized in AOCI is a gain of $\$ 87$ million at June 30, 2016. See Notes 2 and 14 for further information.
(2) Loans and other debt instrument-specific credit gains (losses) were determined by excluding the non-credit components of gains and losses, such as those due to changes in interest rates.
(3) Gains (losses) on lending commitments were generally determined based on the differential between estimated expected client yields and contractual yields at each respective period-end.

## Net Difference of Contractual Principal Amount Over Fair Value

|  |  | $\underset{\substack{\text { At } \\ \text { June } \\ 2016}}{ }$ |  | $\underset{\substack{\text { At } \\ \text { cember 31, } \\ 2015}}{ }$ |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Loans and other debt(1) | \$ | 15,046 | \$ | 14,095 |
| Loans 90 or more days past due and/or on nonaccrual |  |  |  |  |
| status(1) . . . . . . . . . . . . . . . |  | 12,867 |  | 11,651 |
| Short-term and long-term borrowings(2) |  | 311 |  | 508 |

(1) The majority of the difference between principal and fair value amounts for loans and other debt emanates from the distressed debt trading business, which purchases distressed debt at amounts well below par.
(2) Short-term and long-term borrowings do not include structured notes where the repayment of the initial principal amount fluctuates based on changes in the reference price or index.

Short-Term and Long-Term Borrowings Measured at Fair Value on a Recurring Basis


Fair Value of Loans in Nonaccrual Status

|  | $\underset{\substack{\text { At } \\ \text { June } 30, 2016}}{ }$ | $\underset{\substack{\text { At } \\ \text { December 3015 }}}{\stackrel{2}{20},}$ |
| :---: | :---: | :---: |
|  | (dollars in millions) |  |
| Aggregate fair value of loans in nonaccrual status(1) . . . . . . | \$ 1,717 | \$ 1,853 |

(1) Includes all loans 90 or more days past due in the amount of $\$ 514$ million and $\$ 885$ million at June 30, 2016 and December 31, 2015, respectively.

The previous tables exclude non-recourse debt from consolidated VIEs, liabilities related to failed sales of financial assets, pledged commodities and other liabilities that have specified assets attributable to them.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

Certain assets and liabilities were measured at fair value on a non-recurring basis and are not included in the previous tables.
$\underline{\text { Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis }}$


(1) Carrying values relate only to those assets that had fair value adjustments during the current quarter and prior year quarter.
(2) Changes in the fair value of Loans and losses related to Other assets-Other investments are recorded within Other revenues in the consolidated statements of income. Losses related to Other assets-Premises, equipment and software costs are recorded within Other expenses if not held for sale and within Other revenues if held for sale. Changes in the fair value of lending commitments reported in Other liabilities and accrued expenses that are designated as held for sale are recorded within Other revenues, whereas, changes in the fair value related to held for investment lending commitments are recorded within Other expenses.
(3) Non-recurring changes in the fair value of loans and lending commitments held for investment were calculated using the value of the underlying collateral. Loans and lending commitments held for sale were calculated using recently executed transactions; market price quotations; valuation models that incorporate market observable inputs where possible, such as comparable loan or debt prices and credit default swap spread levels adjusted for any basis difference between cash and derivative instruments; or default recovery analysis where such transactions and quotations are unobservable.
(4) Losses related to Other assets-Other investments were determined primarily using discounted cash flow models and methodologies that incorporate multiples of certain comparable companies.
(5) Losses related to Other assets-Premises, equipment and software costs were determined primarily using a default recovery analysis.

Included in the losses within the previous table for the current quarter and current year period, there was a loss of approximately $\$ 35$ million (related to Other assets-Other investments) in connection with the sale of solar invest-
ments and impairments of the remaining unsold solar investments accounted for under the equity method. The fair value of these investments was determined based on the sales price.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Financial Instruments Not Measured at Fair Value

For a further discussion of financial instruments not measured at fair value, see Note 3 to the consolidated financial statements in the 2015 Form 10-K. The carrying values of the remaining assets and liabilities not measured at fair value in the following tables approximate fair value due to their short-term nature. The following tables exclude certain financial instruments such as equity method investments and all non-financial assets and liabilities such as the value of the long-term relationships with the Firm's deposit customers.

|  |  | At June 30, 2016 |  |  | Fair Value by Level |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Carrying Value | Fair Value |  | Level 1 |  | Level 2 |  | Level 3 |  |
|  |  | (dollars in millions) |  |  |  |  |  |  |  |  |
| Financial Assets: |  |  |  |  |  |  |  |  |  |  |
| Cash and due from banks | \$ | 27,597 | \$ | 27,597 | \$ | 27,597 | \$ | \$ | \$ | - |
| Interest bearing deposits with banks |  | 28,536 |  | 28,536 |  | 28,536 |  | - |  | - |
| Investment securities-HTM securities |  | 12,418 |  | 12,567 |  | 3,758 |  | 8,809 |  | - |
| Securities purchased under agreements to resell |  | 97,034 |  | 97,042 |  | - |  | 95,140 |  | 1,902 |
| Securities borrowed |  | 131,281 |  | 131,282 |  | - |  | 131,156 |  | 126 |
| Customer and other receivables(1) |  | 48,910 |  | 48,815 |  | - |  | 44,033 |  | 4,782 |
| Loans(2) . . . . . . . . . . . . |  | 93,165 |  | 94,151 |  | - |  | 25,289 |  | 68,862 |
| Other assets-Cash deposited with clearing orga federal and other regulations or requirements |  | 32,771 |  | 32,771 |  | 32,771 |  | - |  | - |
| Financial Liabilities: |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ | 152,598 | \$ | 152,788 | \$ | - |  | \$ 152,788 | \$ | - |
| Short-term borrowings |  | 369 |  | 369 |  | - |  | 369 |  | - |
| Securities sold under agreements to repurchase |  | 49,629 |  | 49,692 |  | - |  | 48,033 |  | 1,659 |
| Securities loaned |  | 17,241 |  | 17,262 |  | - |  | 17,262 |  | - |
| Other secured financings |  | 6,980 |  | 6,991 |  | - |  | 5,596 |  | 1,395 |
| Customer and other payables(1) |  | 197,978 |  | 197,978 |  | - |  | 197,978 |  | - |
| Long-term borrowings |  | 125,688 |  | 127,189 |  | - |  | 127,189 |  | - |
|  |  | At Dece | er | 31, 2015 |  |  | V | Value by Le |  |  |
|  |  | $\begin{aligned} & \text { Carrying } \\ & \text { Value } \end{aligned}$ |  | Fair Value |  | Level 1 |  | Level 2 |  | vel 3 |
|  |  |  |  |  | rs | n million |  |  |  |  |
| Financial Assets: |  |  |  |  |  |  |  |  |  |  |
| Cash and due from banks | \$ | 19,827 | \$ | 19,827 | \$ | 19,827 | \$ | \$ - | \$ | - |
| Interest bearing deposits with banks |  | 34,256 |  | 34,256 |  | 34,256 |  | - |  | - |
| Investment securities-HTM securities |  | 5,224 |  | 5,188 |  | 998 |  | 4,190 |  | - |
| Securities purchased under agreements to resell |  | 86,851 |  | 86,837 |  | - |  | 86,186 |  | 651 |
| Securities borrowed |  | 142,416 |  | 142,414 |  | - |  | 142,266 |  | 148 |
| Customer and other receivables(1) |  | 41,676 |  | 41,576 |  | - |  | 36,752 |  | 4,824 |
| Loans(2) |  | 85,759 |  | 86,423 |  | - |  | 19,241 |  | 67,182 |
| Other assets-Cash deposited with clearing orga federal and other regulations or requirements |  | 31,469 |  | 31,469 |  | 31,469 |  | - |  | - |
| Financial Liabilities: |  |  |  |  |  |  |  |  |  |  |
| Deposits | \$ | 155,909 | \$ | 156,163 | \$ | - |  | \$ 156,163 | \$ | - |
| Short-term borrowings |  | 525 |  | 525 |  | - |  | 525 |  | - |
| Securities sold under agreements to repurchase |  | 36,009 |  | 36,060 |  | - |  | 34,150 |  | 1,910 |
| Securities loaned |  | 19,358 |  | 19,382 |  | - |  | 19,192 |  | 190 |
| Other secured financings |  | 6,610 |  | 6,610 |  | - |  | 5,333 |  | 1,277 |
| Customer and other payables(1) |  | 183,895 |  | 183,895 |  | - |  | 183,895 |  | - |
| Long-term borrowings |  | 120,723 |  | 123,219 |  | - |  | 123,219 |  | - |

[^3]
## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

At June 30, 2016 and December 31, 2015, notional amounts of approximately $\$ 93.8$ billion and $\$ 99.5$ billion, respectively, of the Firm's lending commitments were held for investment and held for sale, which are not included in the previous table. The estimated fair value of such lending commitments was a liability of $\$ 1,841$ million and $\$ 2,172$
million, respectively, at June 30, 2016 and December 31, 2015. Had these commitments been accounted for at fair value, $\$ 1,610$ million would have been categorized in Level 2 and $\$ 231$ million in Level 3 at June 30, 2016, and $\$ 1,791$ million would have been categorized in Level 2 and $\$ 381$ million in Level 3 at December 31, 2015.

## 4. Derivative Instruments and Hedging Activities

For a discussion of the Firm's derivative instruments and hedging activities, see Note 4 to the consolidated financial statements in the 2015 Form 10-K.

Fair Value, Notional and Offsetting of Derivative Assets and Liabilities


## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Derivative Liabilities at June 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Value |  |  |  |  |  |  | Notional |  |  |  |
|  | Bilateral OTC |  | Cleared OTC |  | Exchange <br> Traded |  | Total | Bilateral OTC | Cleared OTC | Exchange Traded | Total |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |  |
| Derivatives designated as accounting hedges: <br> Interest rate contracts | \$ |  | \$ - | \$ | \$ - | \$ | - | \$ - | \$ 32 | \$ | \$ 32 |
| Foreign exchange contracts | \$ 492 |  | \$ 23 | \$ | \$ | \$ | 515 | \$ 8,348 | \$ 689 | \$ | \$ 9,037 |
| Total derivatives designated as accounting hedges . | 492 |  | 23 |  | - |  | 515 | 8,348 | 721 | - | 9,069 |
| Derivatives not designated as accounting hedges(1): |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts | 265,270 |  | 172,084 |  | 412 |  | 437,766 | 3,654,941 | 6,558,339 | 760,822 | 10,974,102 |
| Credit contracts | 14,888 |  | 2,933 |  | - |  | 17,821 | 489,656 | 115,979 | - | 605,635 |
| Foreign exchange contracts | 77,614 |  | 414 |  | 82 |  | 78,110 | 1,837,572 | 15,817 | 10,511 | 1,863,900 |
| Equity contracts | 25,633 |  | - |  | 20,916 |  | 46,549 | 342,625 | - | 261,986 | 604,611 |
| Commodity contracts | 9,390 |  | - |  | 3,389 |  | 12,779 | 68,095 | - | 64,896 | 132,991 |
| Other | 102 |  | - |  | - |  | 102 | 4,817 | - | - | 4,817 |
| Total derivatives not designated as accounting hedges | 392,897 |  | 175,431 |  | 24,799 |  | 593,127 | 6,397,706 | 6,690,135 | 1,098,215 | 14,186,056 |
| Total gross derivatives(2) | \$ 393,389 |  | \$ 175,454 |  | \$ 24,799 | \$ | 593,642 | \$ 6,406,054 | \$ 6,690,856 | \$ 1,098,215 | \$ 14,195,125 |
| Amounts offset: |  |  |  |  |  |  |  |  |  |  |  |
| Counterparty netting | $(321,553)$ |  | $(173,222)$ |  | $(21,214)$ |  | $(515,989)$ |  |  |  |  |
| Cash collateral netting | $(38,378)$ |  | $(1,952)$ |  | - |  | $(40,330)$ |  |  |  |  |
| Total derivative liabilities at fair value included in Trading liabilities | \$ 33,458 | \$ | \$ 280 |  | 3,585 | \$ | 37,323 |  |  |  |  |
| Amounts not offset(3): |  |  |  |  |  |  |  |  |  |  |  |
| Financial instruments collateral | $(11,509)$ |  | - |  | (514) |  | $(12,023)$ |  |  |  |  |
| Other cash collateral | (10) |  | (41) |  | - |  | (51) |  |  |  |  |
| Net exposure | \$ 21,939 |  | \$ 239 |  | \$ 3,071 | \$ | 25,249 |  |  |  |  |


|  | Derivative Assets at December 31, 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Value |  |  |  |  |  |  |  | Notional |  |  |  |  |  |
|  |  | ilateral OTC |  | $\begin{gathered} \text { Cleared } \\ \text { OTC } \end{gathered}$ |  | xchange Traded | Total |  | Bilateral OTC | ClearedOTC |  | Exchange Traded | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Derivatives designated as accounting hedges: Interest rate contracts | \$ | 2,825 | \$ | 1,442 | \$ | - | \$ | 4,267 | \$ 36,999 | \$ | 35,362 | \$ - | \$ | 72,361 |
| Foreign exchange contracts |  | 166 |  | 1 |  | - |  | 167 | 5,996 |  | 167 | - - |  | 6,163 |
| Total derivatives designated as accounting hedges |  | 2,991 |  | 1,443 |  | - |  | 4,434 | 42,995 |  | 35,529 | - |  | 78,524 |
| Derivatives not designated as accounting hedges(4): |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | 220,289 |  | 101,276 |  | 212 |  | 321,777 | 4,348,002 |  | 748,525 | 1,218,645 |  | 1,315,172 |
| Credit contracts |  | 19,310 |  | 3,609 |  | - |  | 22,919 | 585,731 |  | 139,301 | - |  | 725,032 |
| Foreign exchange contracts |  | 64,438 |  | 295 |  | 55 |  | 64,788 | 1,907,290 |  | 13,402 | 7,715 |  | 1,928,407 |
| Equity contracts |  | 20,212 |  | - |  | 20,077 |  | 40,289 | 316,770 |  | - | 229,859 |  | 546,629 |
| Commodity contracts |  | 13,114 |  | - |  | 4,038 |  | 17,152 | 67,449 |  | - | 82,313 |  | 149,762 |
| Other |  | 219 |  | - |  | - |  | 219 | 5,684 |  | - | - |  | 5,684 |
| Total derivatives not designated as accounting hedges |  | 337,582 |  | 105,180 |  | 24,382 |  | 467,144 | 7,230,926 |  | ,901,228 | 1,538,532 |  | 4,670,686 |
| Total gross derivatives(2) | \$ | 340,573 |  | 106,623 |  | 24,382 |  | 471,578 | \$ 7,273,921 |  | ,936,757 | \$ 1,538,532 |  | 4,749,210 |
| Amounts offset: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Counterparty netting |  | $(265,707)$ |  | $(104,294)$ |  | $(21,592)$ |  | $(391,593)$ |  |  |  |  |  |  |
| Cash collateral netting |  | $(50,335)$ |  | $(1,037)$ |  | - |  | $(51,372)$ |  |  |  |  |  |  |
| Total derivative assets at fair value included in Trading assets | \$ | 24,531 | \$ | 1,292 |  | 2,790 | \$ | $\underline{28,613}$ |  |  |  |  |  |  |
| Amounts not offset(3): |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Financial instruments collateral |  | $(9,190)$ |  | - |  | - |  | $(9,190)$ |  |  |  |  |  |  |
| Other cash collateral |  | (9) |  | - |  | - |  | (9) |  |  |  |  |  |  |
| Net exposure | \$ | 15,332 | \$ | 1,292 |  | 2,790 | \$ | 19,414 |  |  |  |  |  |  |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Derivative Liabilities at December 31, 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Value |  |  |  |  |  |  |  | Notional |  |  |  |  |  |
|  |  | Bilateral OTC |  | Cleared OTC |  | xchange Traded |  | Total | Bilateral OTC |  | $\begin{gathered} \hline \text { Cleared } \\ \text { OTC } \end{gathered}$ | Exchange Traded |  | Total |
|  | (dolars in millions) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Derivatives designated as accounting hedges: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts | \$ | 20 | \$ | 250 | \$ | - | \$ | 270 | \$ 3,560 | \$ | 9,869 | \$ | \$ | 13,429 |
| Foreign exchange contracts |  | 56 |  | 6 |  | - |  | 62 | 4,604 |  | 455 | - |  | 5,059 |
| Total derivatives designated as accounting hedges |  | 76 |  | 256 |  | - |  | 332 | 8,164 |  | 10,324 | - |  | 18,488 |
| Derivatives not designated as accounting hedges(4): |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest rate contracts |  | 203,004 |  | 103,852 |  | 283 |  | 307,139 | 4,030,039 |  | 5,682,322 | 1,077,710 |  | 0,790,071 |
| Credit contracts . |  | 19,942 |  | 3,723 |  | - |  | 23,665 | 562,027 |  | 131,388 | - - |  | 693,415 |
| Foreign exchange contracts |  | 65,034 |  | 232 |  | 22 |  | 65,288 | 1,868,015 |  | 13,322 | 2,655 |  | 1,883,992 |
| Equity contracts |  | 25,708 |  | - |  | 20,424 |  | 46,132 | 332,734 |  | - | 229,266 |  | 562,000 |
| Commodity contracts |  | 10,864 |  | - |  | 3,887 |  | 14,751 | 59,169 |  | - | 62,974 |  | 122,143 |
| Other |  | 43 |  | - |  | - |  | 43 | 4,114 |  | - | - |  | 4,114 |
| Total derivatives not designated as accounting hedges |  | 324,595 |  | 107,807 |  | 24,616 |  | 457,018 | 6,856,098 |  | 5,827,032 | 1,372,605 |  | 4,055,735 |
| Total gross derivatives(2) | \$ | 324,671 | \$ | 108,063 | \$ | 24,616 | \$ | 457,350 | \$6,864,262 |  | 5,837,356 | \$1,372,605 |  | 4,074,223 |
| Amounts offset: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Counterparty netting |  | $(265,707)$ |  | $(104,294)$ |  | $(21,592)$ |  | $(391,593)$ |  |  |  |  |  |  |
| Cash collateral netting |  | $(33,332)$ |  | $(2,951)$ |  | - |  | $(36,283)$ |  |  |  |  |  |  |
| Total derivative liabilities at fair value included in Trading liabilities | \$ | 25,632 | \$ | 818 | \$ | 3,024 | \$ | 29,474 |  |  |  |  |  |  |
| Amounts not offset(3): |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Financial instruments collateral |  | $(5,384)$ |  | - |  | (405) |  | $(5,789)$ |  |  |  |  |  |  |
| Other cash collateral |  | (5) |  | - |  | - |  | (5) |  |  |  |  |  |  |
| Net exposure | \$ | 20,243 | \$ | 818 | \$ | 2,619 | \$ | 23,680 |  |  |  |  |  |  |

OTC-Over-the-counter
(1) Notional amounts include gross notionals related to open long and short futures contracts of $\$ 1,300.0$ billion and $\$ 372.8$ billion, respectively. The unsettled fair value on these futures contracts (excluded from this table) of $\$ 1,631$ million and $\$ 153$ million is included in Customer and other receivables and Customer and other payables, respectively, in the consolidated balance sheets
(2) Amounts include transactions which are either not subject to master netting agreements or collateral agreements or are subject to such agreements but the Firm has not determined the agreements to be legally enforceable as follows: $\$ 4.8$ billion of derivative assets and $\$ 6.3$ billion of derivative liabilities at June 30, 2016, and $\$ 4.2$ billion of derivative assets and $\$ 5.2$ billion of derivative liabilities at December 31, 2015.
(3) Amounts relate to master netting agreements and collateral agreements that have been determined by the Firm to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.
(4) Notional amounts include gross notionals related to open long and short futures contracts of $\$ 1,009.5$ billion and $\$ 653.0$ billion, respectively. The unsettled fair value on these futures contracts (excluded from this table) of $\$ 1,145$ million and $\$ 437$ million is included in Customer and other receivables and Customer and other payables, respectively, in the consolidated balance sheets.

For information related to offsetting of certain collateralized transactions, see Note 6.

Gains (Losses) on Fair Value Hedges

| $\underline{\text { Product Type }}$ | Gains (Losses) Recognized in Interest Expense |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Three Months Ended June 30, |  |  | Six Months Ended June 30, |  |  |  |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |
|  | (dollars in millions) |  |  |  |  |  |  |
| Derivatives | \$ 969 | \$ | $(1,899)$ | \$ | 3,119 | \$ | $(1,141)$ |
| Borrowings | (993) |  | 1,861 |  | $(3,282)$ |  | 1,018 |
| Total | \$ (24) | \$ | (38) | \$ | (163) | \$ | (123) |

Gains (Losses) on Derivatives Designated as Net Investment Hedges

| Product Type | Gains (Losses) Recognized in OCI (effective portion) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Three Months Ended June 30, |  | Six Months Ended June 30, |  |  |
|  | 2016 | 2015 | 2016 |  | 2015 |
|  |  | (dollars in | millions) |  |  |
| Foreign exchange contracts(1) . . | \$ (112) | \$ (81) | \$ (336) | \$ | 181 |

(1) Losses of $\$ 19$ million and $\$ 39$ million related to the forward points on the hedging instruments were excluded from hedge effectiveness testing and recognized in Interest income during the current quarter and current year period, respectively. Losses of $\$ 36$ million and $\$ 80$ million related to the forward points on the hedging instruments were excluded from hedge effectiveness testing and recognized in Interest income during the prior year quarter and prior year period, respectively.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Gains (Losses) on Trading Instruments

The following table summarizes gains and losses included in Trading revenues in the consolidated statements of income from trading activities. These activities include revenues related to derivative and non-derivative financial instruments. The Firm generally utilizes financial instruments across a variety of product types in connection with their market-making and related risk management strategies. Accordingly, the trading revenues presented in the following table are not representative of the manner in which the Firm manages its business activities and are prepared in a manner similar to the presentation of trading revenues for regulatory reporting purposes.

| $\underline{\text { Product Type }}$ | Gains (Losses) Recognized in Trading Revenues |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Three Months Ended June 30, |  |  |  | Six Months EndedJune 30, |  |  |  |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Interest rate contracts | \$ | 320 | \$ | 355 | \$ | 626 | \$ | 925 |
| Foreign exchange contracts |  | 362 |  | 170 |  | 599 |  | 515 |
| Equity security and index contracts(1) |  | 1,615 |  | 1,746 |  | 2,945 |  | 3,341 |
| Commodity and other contracts(2) |  | 20 |  | 140 |  | (124) |  | 816 |
| Credit contracts |  | 429 |  | 380 |  | 765 |  | 719 |
| Subtotal | \$ | 2,746 | \$ | 2,791 | \$ | 4,811 | \$ | 6,316 |
| Debt valuation adjustments(3) |  | - |  | 182 |  | - |  | 307 |
| Total trading revenue | \$ | 2,746 | \$ | 2,973 | \$ | 4,811 | \$ | 6,623 |

(1) Dividend income is included within equity security and index contracts.
(2) Other contracts represent contracts not reported as interest rate, foreign exchange, equity security and index or credit contracts.
(3) In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, unrealized DVA gains (losses) in the current quarter and current year period are recorded within OCI in the consolidated statements of comprehensive income. In the prior year quarter and prior year period, the DVA gains (losses) were recorded within Trading revenues in the consolidated statements of income. See Notes 2 and 14 for further information.

## OTC Derivative Products-Trading Assets

## $\underline{\text { Counterparty Credit Rating and Remaining Maturity of OTC Derivative Assets }}$

| $\underline{\text { Credit Rating(2) }}$ | Fair Value at June 30, 2016(1) |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Contractual Years to Maturity |  |  |  |  |  |  | $\begin{gathered} \text { Cross-Maturity } \\ \text { and Cash } \\ \text { Collateral } \\ \text { Netting(3) } \\ \hline \end{gathered}$ |  | Net Exposure Post-cash Collateral |  | Net Exposure Postcollateral(4) |  |
|  | Less than 1 |  | 1-3 |  | 3-5 |  | Over 5 |  |  |  |  |  |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |  |  |  |
| AAA | \$ 137 | \$ | 396 | \$ | 1,312 | \$ | 4,360 | \$ | $(4,953)$ | \$ | 1,252 | \$ | 1,175 |
| AA | 3,156 |  | 1,502 |  | 1,814 |  | 12,226 |  | $(12,717)$ |  | 5,981 |  | 3,771 |
| A | 11,078 |  | 7,607 |  | 5,336 |  | 28,058 |  | $(38,694)$ |  | 13,385 |  | 7,784 |
| BBB | 5,794 |  | 4,489 |  | 2,622 |  | 15,861 |  | $(19,993)$ |  | 8,773 |  | 6,808 |
| Non-investment grade | 3,923 |  | 2,505 |  | 996 |  | 5,370 |  | $(7,514)$ |  | 5,280 |  | 3,122 |
| Total | \$ 24,088 | \$ | 16,499 | \$ | 12,080 | \$ | 65,875 |  | $(83,871)$ | \$ | 34,671 | \$ | 22,660 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

| $\underline{\text { Credit Rating(2) }}$ | Fair Value at December 31, 2015(1) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Contractual Years to Maturity |  |  |  |  |  |  |  | $\begin{aligned} & \hline \text { Cross-Maturity } \\ & \text { and Cash } \\ & \text { Collateral } \\ & \text { Netting }(3) \\ & \hline \end{aligned}$ |  | Net Exposure Post-cash Collateral |  | NetExpost-Post collateral(4) |  |
|  | Less than 1 |  | 1-3 |  | 3-5 |  | Over 5 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | rs in milli |  |  |  |  |  |  |
| AAA | \$ | 203 | \$ | 453 | \$ | 827 | \$ | 3,665 | \$ | $(4,319)$ | \$ | 829 | \$ | 715 |
| AA |  | 2,689 |  | 2,000 |  | 1,876 |  | 9,223 |  | $(10,981)$ |  | 4,807 |  | 2,361 |
| A |  | 9,748 |  | 8,191 |  | 4,774 |  | 20,918 |  | $(34,916)$ |  | 8,715 |  | 5,448 |
| BBB |  | 3,614 |  | 4,863 |  | 1,948 |  | 11,801 |  | $(15,086)$ |  | 7,140 |  | 4,934 |
| Non-investment grade |  | 3,982 |  | 2,333 |  | 1,157 |  | 3,567 |  | $(6,716)$ |  | 4,323 |  | 3,166 |
| Total | \$ | 20,236 | \$ | 17,840 | \$ | 10,582 | \$ | 49,174 | \$ | $(72,018)$ | \$ | 25,814 | \$ | 16,624 |

(1) Fair values shown represent the Firm's net exposure to counterparties related to its OTC derivative products.
(2) Obligor credit ratings are determined by the Credit Risk Management Department.
(3) Amounts represent the netting of receivable balances with payable balances for the same counterparty across maturity categories. Receivable and payable balances with the same counterparty in the same maturity category are netted within such maturity category, where appropriate. Cash collateral received is netted on a counterparty basis, provided legal right of offset exists.
(4) Fair value is shown, net of collateral received (primarily cash and U.S. government and agency securities).

## Credit Risk-Related Contingencies

In connection with certain OTC trading agreements, the Firm may be required to provide additional collateral or immediately settle any outstanding liability balances with certain counterparties in the event of a credit rating downgrade of the Firm.

## Net Derivative Liabilities and Collateral Posted

The following table presents the aggregate fair value of certain derivative contracts that contain credit risk-related contingent features that are in a net liability position for which the Firm has posted collateral in the normal course of business.

|  |  | At June 30, 2016 |
| :--- | :--- | ---: |
|  | (dollars in millions) |  |
| Net derivative liabilities $\ldots \ldots \ldots$. | 28,999 |  |
| Collateral posted $\ldots \ldots \ldots \ldots$ | 24,217 |  |

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by either or both of Moody's Investors Service, Inc. ("Moody's") and Standard \& Poor's Ratings Services ("S\&P"). The following table shows the future potential collateral amounts and
termination payments that could be called or required by counterparties or exchange and clearing organizations in the event of one-notch or two-notch downgrade scenarios based on the relevant contractual downgrade triggers.

Incremental Collateral or Termination Payments upon Potential Future Ratings Downgrade


[^4] the risk of counterparty downgrades.

## Credit Derivatives and Other Credit Contracts

The Firm enters into credit derivatives, principally through credit default swaps, under which it receives or provides protection against the risk of default on a set of debt obligations issued by a specified reference entity or entities. A majority of the Firm's counterparties are banks, brokerdealers and insurance and other financial institutions.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

$\underline{\text { Notional and Fair Value of Protection Sold and Protection Purchased through Credit Default Swaps }}$

$\underline{\text { Credit Ratings of Reference Obligation and Maturities of Credit Protection Sold }}$

|  | At June 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum Potential Payout/Notional |  |  |  |  |  |  |  |  | Fair Value (Asset)/ Liability(1) |  |
|  | Years to Maturity |  |  |  |  |  |  |  |  |  |  |
|  | Less than 1 |  | 1-3 |  | 3-5 |  | Over 5 |  | Total |  |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |  |
| Single name credit default swaps(2): |  |  |  |  |  |  |  |  |  |  |  |
| Investment grade | \$ 92,734 | \$ | 94,348 | \$ | 48,928 | \$ | 11,097 | \$ | 247,107 | \$ | $(1,079)$ |
| Non-investment grade | 42,370 |  | 38,348 |  | 18,381 |  | 1,418 |  | 100,517 |  | 1,542 |
| Total | \$ 135,104 | \$ | 132,696 | \$ | 67,309 | \$ | 12,515 | \$ | 347,624 | \$ | 463 |
| Index and basket credit default swaps(2): |  |  |  |  |  |  |  |  |  |  |  |
| Investment grade | \$ 24,110 | \$ | 39,948 | \$ | 42,887 | \$ | 4,060 | \$ | 111,005 | \$ | $(1,222)$ |
| Non-investment grade | 51,914 |  | 28,315 |  | 13,761 |  | 14,671 |  | 108,661 |  | 1,155 |
| Total | \$ 76,024 | \$ | 68,263 | \$ | 56,648 | \$ | 18,731 | \$ | 219,666 | \$ | (67) |
| Total credit default swaps sold | \$ 211,128 | \$ | 200,959 | \$ | 123,957 | \$ | 31,246 | \$ | 567,290 | \$ | 396 |
| Other credit contracts | 43 |  | 25 |  | - |  | 276 |  | 344 |  | (17) |
| Total credit derivatives and other credit contracts | \$ 211,171 | \$ | 200,984 | \$ | 123,957 | \$ | 31,522 | \$ | 567,634 | \$ | 379 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | At December 31, 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maximum Potential Payout/Notional |  |  |  |  | Fair Value (Asset) Liability(1) |
|  | Years to Maturity |  |  |  |  |  |
|  | Less than 1 | 1-3 | 3-5 | Over 5 | Total |  |
|  |  |  | (dollars in | millions) |  |  |
| Single name credit default swaps(2): |  |  |  |  |  |  |
| Investment grade | \$ 84,543 | \$138,467 | \$ 63,754 | \$12,906 | \$299,670 | \$(1,831) |
| Non-investment grade | 38,054 | 56,261 | 24,432 | 2,389 | 121,136 | 3,811 |
| Total | \$122,597 | \$194,728 | \$ 88,186 | \$15,295 | \$420,806 | \$ 1,980 |
| Index and basket credit default swaps(2): |  |  |  |  |  |  |
| Investment grade | \$ 33,507 | \$ 59,403 | \$ 45,505 | \$ 5,327 | \$143,742 | \$(1,977) |
| Non-investment grade | 52,590 | 43,899 | 15,480 | 13,002 | 124,971 | 782 |
| Total | \$ 86,097 | \$103,302 | \$ 60,985 | \$18,329 | \$268,713 | \$(1,195) |
| Total credit default swaps sold | \$208,694 | \$298,030 | \$149,171 | \$33,624 | \$689,519 | \$ 785 |
| Other credit contracts | 19 | 107 | 2 | 332 | 460 | (24) |
| Total credit derivatives and other credit contracts | \$208,713 | \$298,137 | \$149,173 | \$33,956 | \$689,979 | \$ 761 |

(1) Fair value amounts are shown on a gross basis prior to cash collateral or counterparty netting.
(2) In order to provide an indication of the current payment status or performance risk of the CDS, a breakdown of CDS based on the Firm's internal credit ratings by investment grade and non-investment grade is provided. Internal credit ratings serve as the Credit Risk Management Department's assessment of credit risk, and the basis for a comprehensive credit limits framework used to control credit risk. The Firm uses quantitative models and judgment to estimate the various risk parameters related to each obligor. Internal ratings procedures, methodologies, and models are all independently and formally governed, and models and methodologies are reviewed by a separate model risk management oversight function.

## Purchased Credit Protection with Identical Underlying Reference Obligations

For single name and non-tranched index and basket credit default swaps, the Firm has purchased protection with a notional amount of approximately $\$ 480.1$ billion and $\$ 577.7$ billion at June 30, 2016 and December 31, 2015, respectively, compared with a notional amount of approximately
$\$ 521.9$ billion and $\$ 619.5$ billion (included in the previous tables) at June 30, 2016 and December 31, 2015, respectively, of credit protection sold with identical underlying reference obligations.

For further information on credit derivatives and other credit contracts, see Note 4 to the consolidated financial statements in the 2015 Form 10-K.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 5. Investment Securities

The following tables present information about the Firm's AFS securities, which are carried at fair value, and HTM securities, which are carried at amortized cost. The net unrealized gains or losses on AFS securities are reported on an after-tax basis as a component of AOCI.

AFS and HTM Securities


## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | At December 31, 2015 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underset{\text { Cost }}{\text { Amortized }}$ |  | $\begin{gathered} \text { Gross } \\ \text { Unrealized } \\ \text { Gains } \end{gathered}$ |  | GrossUnrealizedLosses |  | Fair Value |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| AFS debt securities: |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |
| U.S. Treasury securities | \$ | 31,555 | \$ | 5 | \$ | 143 | \$ | 31,417 |
| U.S. agency securities(1) |  | 21,103 |  | 29 |  | 156 |  | 20,976 |
| Total U.S. government and agency securities |  | 52,658 |  | 34 |  | 299 |  | 52,393 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |
| Commercial mortgage-backed securities: |  |  |  |  |  |  |  |  |
| Agency |  | 1,906 |  | 1 |  | 60 |  | 1,847 |
| Non-agency |  | 2,220 |  | 3 |  | 25 |  | 2,198 |
| Auto loan asset-backed securities |  | 2,556 |  | - |  | 9 |  | 2,547 |
| Corporate bonds |  | 3,780 |  | 5 |  | 30 |  | 3,755 |
| Collateralized loan obligations |  | 502 |  | - |  | 7 |  | 495 |
| FFELP student loan asset-backed securities(2) |  | 3,632 |  | - |  | 115 |  | 3,517 |
| Total corporate and other debt |  | 14,596 |  | 9 |  | 246 |  | 14,359 |
| Total AFS debt securities |  | 67,254 |  | 43 |  | 545 |  | 66,752 |
| AFS equity securities |  | 15 |  | - |  | 8 |  | 7 |
| Total AFS securities |  | 67,269 |  | 43 |  | 553 |  | 66,759 |
| HTM securities: |  |  |  |  |  |  |  |  |
| U.S. government securities: |  |  |  |  |  |  |  |  |
| U.S. Treasury securities . |  | 1,001 |  | - |  | 3 |  | 998 |
| U.S. agency securities(1) |  | 4,223 |  | 1 |  | 34 |  | 4,190 |
| Total HTM securities |  | 5,224 |  | 1 |  | 37 |  | 5,188 |
| Total Investment securities | \$ | 72,493 | \$ | 44 | \$ | 590 | \$ | 71,947 |

[^5]
## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

Investment Securities in an Unrealized Loss Position

|  | At June 30, 2016 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less than 12 Months |  | 12 Months or Longer |  | Total |  |
|  | Fair Value | $\substack{\text { Gross } \\ \text { Unrealized } \\ \text { Losses }}$ | Fair Value | Gross <br> Unrealized <br> Losses | Fair Value | $\underset{\substack{\text { Unreass } \\ \text { Lossed }}}{\text { Gros }}$ |
|  |  |  | (dollars | in millions) |  |  |
| AFS debt securities: |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |
| U.S. Treasury securities | \$ 3,028 | \$ 8 | \$ - | \$ - | \$ 3,028 | \$ 8 |
| U.S. agency securities | 5,731 | 10 | 1,225 | 12 | 6,956 | 22 |
| Total U.S. government and agency securities | 8,759 | 18 | 1,225 | 12 | 9,984 | 30 |
| Corporate and other debt: |  |  |  |  |  |  |
| Commercial mortgage-backed securities: |  |  |  |  |  |  |
| Agency . | 31 | - | 1,181 | 31 | 1,212 | 31 |
| Non-agency | 216 | - | 625 | 10 | 841 | 10 |
| Auto loan asset-backed securities | 83 | - | 204 | - | 287 | - |
| Corporate bonds | 172 | 1 | 175 | 1 | 347 | 2 |
| Collateralized loan obligations | - | - | 494 | 7 | 494 | 7 |
| FFELP student loan asset-backed securities | 583 | 12 | 2,637 | 93 | 3,220 | 105 |
| Total corporate and other debt | 1,085 | 13 | 5,316 | 142 | 6,401 | 155 |
| Total AFS debt securities | 9,844 | 31 | 6,541 | 154 | 16,385 | 185 |
| AFS equity securities | 7 | 8 | - | - | 7 | 8 |
| Total AFS securities | 9,851 | 39 | 6,541 | 154 | 16,392 | 193 |

HTM securities:
U.S. government and agency securities:

| U.S. agency securities | 72 |  | - |  | - |  | - |  | 72 |  | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total HTM securities | 72 |  | - |  | - |  | - |  | 72 |  | - |
| Total Investment securities | \$ 9,923 | \$ | 39 | \$ | 6,541 | \$ | 154 | \$ | 16,464 | \$ | 193 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | At December 31, 2015 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less than 12 Months |  |  |  | 12 Months or Longer |  |  |  | Total |  |  |  |
|  | Fair Value |  | GrossUnrealizedLosses |  | Fair Value |  | GrossUnrealizedLosses |  | Fair Value |  | $\begin{gathered} \text { Gross } \\ \text { Unrealized } \\ \text { Losses } \end{gathered}$ |  |
|  |  |  |  |  |  | (dollars in | mil |  |  |  |  |  |
| AFS debt securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury securities | \$ | 25,994 | \$ | 126 | \$ | 2,177 | \$ | 17 | \$ | 28,171 | \$ | 143 |
| U.S. agency securities |  | 14,242 |  | 135 |  | 639 |  | 21 |  | 14,881 |  | 156 |
| Total U.S. government and agency securities |  | 40,236 |  | 261 |  | 2,816 |  | 38 |  | 43,052 |  | 299 |
| Corporate and other debt: |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial mortgage-backed securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Agency |  | 1,185 |  | 44 |  | 422 |  | 16 |  | 1,607 |  | 60 |
| Non-agency |  | 1,479 |  | 21 |  | 305 |  | 4 |  | 1,784 |  | 25 |
| Auto loan asset-backed securities |  | 1,644 |  | 7 |  | 881 |  | 2 |  | 2,525 |  | 9 |
| Corporate bonds |  | 2,149 |  | 19 |  | 525 |  | 11 |  | 2,674 |  | 30 |
| Collateralized loan obligations |  | 352 |  | 5 |  | 143 |  | 2 |  | 495 |  | 7 |
| FFELP student loan asset-backed securities |  | 2,558 |  | 79 |  | 929 |  | 36 |  | 3,487 |  | 115 |
| Total corporate and other debt |  | 9,367 |  | 175 |  | 3,205 |  | 71 |  | 12,572 |  | 246 |
| Total AFS debt securities |  | 49,603 |  | 436 |  | 6,021 |  | 109 |  | 55,624 |  | 545 |
| AFS equity securities |  | 7 |  | 8 |  | - |  | - |  | 7 |  | 8 |
| Total AFS securities |  | 49,610 |  | 444 |  | 6,021 |  | 109 |  | 55,631 |  | 553 |
| HTM securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. government and agency securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury securities . . . |  | 898 |  | 3 |  | - |  | - |  | 898 |  | 3 |
| U.S. agency securities . . |  | 3,677 |  | 34 |  | - |  | - |  | 3,677 |  | 34 |
| Total HTM securities |  | 4,575 |  | 37 |  | - |  | - |  | 4,575 |  | 37 |
| Total Investment securities | \$ | 54,185 | \$ | 481 | \$ | 6,021 | \$ | 109 | \$ | 60,206 | \$ | 590 |

As discussed in Note 2 to the consolidated financial statements in the 2015 Form 10-K, AFS and HTM securities with a current fair value less than their amortized cost are analyzed as part of the Firm's ongoing assessment of temporary versus other-than-temporarily impaired at the individual security level.

The Firm believes there are no securities in an unrealized loss position that are other-than-temporarily-impaired at June 30, 2016 and December 31, 2015 for the reasons discussed herein.

For AFS debt securities, the Firm does not intend to sell the securities and is not likely to be required to sell the securities prior to recovery of amortized cost basis. For AFS and HTM debt securities, the securities have not experienced credit losses as the net unrealized losses reported in the previous table are primarily due to higher interest rates since those securities were purchased. Additionally, the Firm does not expect to experience a credit loss based on consideration of the relevant information (as discussed in Note 2
to the consolidated financial statements in the 2015 Form $10-\mathrm{K}$ ), including for U.S. government and agency securities, the existence of an explicit and implicit guarantee provided by the U.S. government. The risk of credit loss on securities in an unrealized loss position is considered minimal because all of the Firm's agency securities as well as asset-backed securities ("ABS"), commercial mortgagebacked securities ("CMBS") and collateralized loan obligations ("CLOs") are highly rated and because corporate bonds are all investment grade.

For AFS equity securities, the Firm has the intent and ability to hold these securities for a period of time sufficient to allow for any anticipated recovery in market value.

See Note 12 for additional information on securities issued by VIEs, including U.S. agency mortgage-backed securities, non-agency CMBS, auto loan ABS, CLO and FFELP student loan ABS.

## MORGAN STANLEY <br> NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

Amortized Cost, Fair Value and Annualized Average Yield of Investment Securities by Contractual Maturity Dates

|  | At June 30, 2016 |  |  |
| :---: | :---: | :---: | :---: |
|  | Amortized Cost | Fair Value | $\begin{gathered} \text { Annualized } \\ \text { Average Yield } \end{gathered}$ |
|  |  | ollars in millions) |  |
| AFS debt securities: |  |  |  |
| U.S. government and agency securities: |  |  |  |
| U.S. Treasury securities: |  |  |  |
| Due within 1 year | \$ 2,698 | \$ 2,702 | 0.7\% |
| After 1 year through 5 years | 22,137 | 22,317 | 1.0\% |
| After 5 years through 10 years | 5,088 | 5,109 | 1.4\% |
| Total | 29,923 | 30,128 |  |
| U.S. agency securities: |  |  |  |
| Due within 1 year | 200 | 200 | 0.7\% |
| After 1 year through 5 years | 2,629 | 2,632 | 0.5\% |
| After 5 years through 10 years | 1,327 | 1,357 | 1.9\% |
| After 10 years | 19,065 | 19,218 | 1.6\% |
| Total | 23,221 | 23,407 |  |
| Total U.S. government and agency securities | 53,144 | 53,535 | 1.2\% |
| Corporate and other debt: |  |  |  |
| Commercial mortgage-backed securities: |  |  |  |
| Agency: |  |  |  |
| Due within 1 year | 73 | 74 | 0.8\% |
| After 1 year through 5 years | 404 | 406 | 1.0\% |
| After 5 years through 10 years | 639 | 641 | 1.3\% |
| After 10 years | 1,023 | 992 | 1.6\% |
| Total | 2,139 | 2,113 |  |
| Non-agency: |  |  |  |
| After 10 years | 2,159 | 2,185 | 1.9\% |
| Total | 2,159 | 2,185 |  |
| Auto loan asset-backed securities: |  |  |  |
| Due within 1 year | 4 | 4 | 0.9\% |
| After 1 year through 5 years | 1,902 | 1,909 | 1.3\% |
| After 5 years through 10 years | 165 | 165 | 1.6\% |
| Total | 2,071 | 2,078 |  |
| Corporate bonds: |  |  |  |
| Due within 1 year | 638 | 640 | 1.3\% |
| After 1 year through 5 years | 2,655 | 2,695 | 1.8\% |
| After 5 years through 10 years | 716 | 738 | 2.6\% |
| Total | 4,009 | 4,073 |  |
| Collateralized loan obligations: |  |  |  |
| After 5 years through 10 years | 502 | 495 | 1.5\% |
| Total | 502 | 495 |  |

## MORGAN STANLEY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  |  | June 30, 2016 |  |
| :---: | :---: | :---: | :---: |
|  | Amortized Cost | Fair Value | Annualized Average Yield |
|  |  | ars in millions) |  |
| FFELP student loan asset-backed securities: |  |  |  |
| After 1 year through 5 years | 59 | 59 | 0.6\% |
| After 5 years through 10 years | 922 | 897 | 0.9\% |
| After 10 years | 2,364 | 2,284 | 0.9\% |
| Total | 3,345 | 3,240 |  |
| Total corporate and other debt | 14,225 | 14,184 | 1.5\% |
| Total AFS debt securities | 67,369 | 67,719 | 1.3\% |
| AFS equity securities | 15 | 7 | - \% |
| Total AFS securities | 67,384 | 67,726 | 1.3\% |
| HTM securities: |  |  |  |
| U.S. government securities: |  |  |  |
| U.S. Treasury securities: |  |  |  |
| Due within 1 year | 200 | 201 | 0.7\% |
| After 1 year through 5 years | 1,408 | 1,422 | 1.1\% |
| After 5 years through 10 years | 1,693 | 1,719 | 1.7\% |
| After 10 years | 404 | 416 | 2.5\% |
| Total | 3,705 | 3,758 |  |
| U.S. agency securities: |  |  |  |
| After 10 years | 8,713 | 8,809 | 2.0\% |
| Total | 8,713 | 8,809 |  |
| Total HTM securities | 12,418 | 12,567 | 1.8\% |
| Total Investment securities | \$ 79,802 | \$ 80,293 | 1.4\% |

Gross Realized Gains and Gross Realized (Losses) on Sales of AFS Securities

|  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  |  | Six Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  |  |  |  | ollars | mi |  |  |  |
| Gross realized gains | \$ | 71 | \$ | 40 | \$ | 85 | \$ | 69 |
| Gross realized (losses) |  | (1) |  | (10) |  | (3) |  | (14) |
| Total | \$ | 70 | \$ | 30 | \$ | 82 | \$ | 55 |

Gross realized gains and losses are recognized in Other revenues in the consolidated statements of income.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 6. Collateralized Transactions

The Firm enters into reverse repurchase agreements, repurchase agreements, securities borrowed and securities loaned transactions to, among other things, acquire securities to cover short positions and settle other securities obligations, to accommodate customers' needs and to finance its inventory positions. For further discussion of the Firm's collateralized transactions, see Note 6 to the consolidated financial statements in the 2015 Form 10-K.

Offsetting of Certain Collateralized Transactions

|  | At June 30, 2016 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underset{\text { Gross }}{\text { Amounts(1) }}$ | Amounts Offset |  | $\begin{aligned} & \text { Net Amounts } \\ & \text { Presented } \end{aligned}$ |  |  | mounts Not Offset(2) | Net Exposure |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |
| Assets |  |  |  |  |  |  |  |  |  |
| Securities purchased under agreements to resell | \$ 162,813 | \$ | $(65,224)$ | \$ | 97,589 | \$ | $(91,746)$ | \$ | 5,843 |
| Securities borrowed | 138,436 |  | $(7,155)$ |  | 131,281 |  | $(124,773)$ |  | 6,508 |
| Liabilities |  |  |  |  |  |  |  |  |  |
| Securities sold under agreements to repurchase . | \$ 115,552 | \$ | $(65,224)$ | \$ | 50,328 | \$ | $(42,541)$ | \$ | 7,787 |
| Securities loaned | 24,396 |  | $(7,155)$ |  | 17,241 |  | $(16,724)$ |  | 517 |
|  | At December 31, 2015 |  |  |  |  |  |  |  |  |
|  | Gross Amounts(1) |  | $\begin{gathered} \text { Amounts } \\ \text { Offset } \end{gathered}$ |  | et Amounts Presented |  | $\begin{aligned} & \hline \text { Amounts Not } \\ & \text { Offset(2) } \end{aligned}$ |  | Exposure |
|  |  |  |  | ollar | s in millions |  |  |  |  |
| Assets |  |  |  |  |  |  |  |  |  |
| Securities purchased under agreements to resell | \$ 135,714 | \$ | $(48,057)$ | \$ | 87,657 | \$ | $(84,752)$ | \$ | 2,905 |
| Securities borrowed | 147,445 |  | $(5,029)$ |  | 142,416 |  | $(134,250)$ |  | 8,166 |
| Liabilities |  |  |  |  |  |  |  |  |  |
| Securities sold under agreements to repurchase . | \$ 84,749 | \$ | $(48,057)$ | \$ | 36,692 | \$ | $(31,604)$ | \$ | 5,088 |
| Securities loaned. | 24,387 |  | $(5,029)$ |  | 19,358 |  | $(18,881)$ |  | 477 |

(1) Amounts include transactions which are either not subject to master netting agreements or are subject to such agreements but the Firm has not determined the agreements to be legally enforceable as follows: $\$ 5.5$ billion of Securities purchased under agreements to resell, $\$ 3.7$ billion of Securities borrowed, $\$ 7.2$ billion of Securities sold under agreements to repurchase and $\$ 0.4$ billion of Securities loaned at June 30, 2016, and $\$ 2.6$ billion of Securities purchased under agreements to resell, $\$ 3.0$ billion of Securities borrowed and $\$ 4.9$ billion of Securities sold under agreements to repurchase at December 31, 2015.
(2) Amounts relate to master netting agreements that have been determined by the Firm to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.

For information related to offsetting of derivatives, see Note 4.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Secured Financing Transactions-Maturities and Collateral Pledged

Gross Secured Financing Balances by Remaining Contractual Maturity

|  | At June 30, 2016 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Overnight and Open |  | $\begin{aligned} & \text { Less than } \\ & \text { 30 Days } \end{aligned}$ |  | 30-90 Days |  | Over 90 Days |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Securities sold under agreements to repurchase(1) | \$ | 38,732 | \$ | 30,586 | \$ | 20,309 | \$ | 25,925 | \$ | 115,552 |
| Securities loaned(1) |  | 13,085 |  | 50 |  | 1,336 |  | 9,925 |  | 24,396 |
| Gross amount of secured financing included in the offsetting disclosure | \$ | 51,817 | \$ | 30,636 | \$ | 21,645 | \$ | 35,850 | \$ | 139,948 |
| Obligation to return securities received as collateral |  | 18,738 |  | - |  | - |  | - |  | 18,738 |
| Total | \$ | 70,555 | \$ | 30,636 | \$ | 21,645 | \$ | 35,850 | \$ | 158,686 |
|  | At December 31, 2015 |  |  |  |  |  |  |  |  |  |
|  |  | vernight d Open |  | $\begin{aligned} & \text { ess than } \\ & 0 \text { Days } \end{aligned}$ | 30-90 Days |  | Over 90 Days |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Securities sold under agreements to repurchase(1) | \$ | 20,410 | \$ | 25,245 | \$ | 13,221 | \$ | 25,873 | \$ | 84,749 |
| Securities loaned(1) |  | 12,247 |  | 478 |  | 2,156 |  | 9,506 |  | 24,387 |
| Gross amount of secured financing included in the offsetting disclosure | \$ | 32,657 | \$ | 25,723 | \$ | 15,377 | \$ | 35,379 | \$ | 109,136 |
| Obligation to return securities received as collateral |  | 19,316 |  | - |  | - |  | - |  | 19,316 |
| Total | \$ | 51,973 | \$ | 25,723 | \$ | 15,377 | \$ | 35,379 | \$ | 128,452 |

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## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)-(Continued)

## Gross Secured Financing Balances by Class of Collateral Pledged

|  | $\begin{gathered} \text { At } \\ \text { June 30, } 2016 \end{gathered}$ |  | $\begin{gathered} \text { At } \\ \text { December 31, } 2015 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Securities sold under agreements to repurchase(1) |  |  |  |  |
| U.S. government and agency securities | \$ | 39,920 | \$ | 36,609 |
| State and municipal securities |  | 2,104 |  | 173 |
| Other sovereign government obligations |  | 42,329 |  | 24,820 |
| Asset-backed securities |  | 745 |  | 441 |
| Corporate and other debt |  | 8,638 |  | 4,020 |
| Corporate equities |  | 21,515 |  | 18,473 |
| Other |  | 301 |  | 213 |
| Total securities sold under agreements to repurchase | \$ | 115,552 | \$ | 84,749 |
| Securities loaned(1) |  |  |  |  |
| U.S. government and agency securities | \$ | 182 | \$ | - |
| Other sovereign government obligations |  | 7,454 |  | 7,336 |
| Corporate and other debt |  | 123 |  | 71 |
| Corporate equities |  | 16,602 |  | 16,972 |
| Other |  | 35 |  | 8 |
| Total securities loaned | \$ | 24,396 | \$ | 24,387 |
| Gross amount of secured financing included in the offsetting disclosure | \$ | 139,948 | \$ | 109,136 |
| Obligation to return securities received as collateral |  |  |  |  |
| Corporate and other debt |  | - |  | 3 |
| Corporate equities |  | 18,737 |  | 19,313 |
| Other |  | 1 |  |  |
| Total obligation to return securities received as collateral | \$ | 18,738 | \$ | 19,316 |
| Total | \$ | 158,686 | \$ | 128,452 |

(1) Amounts are presented on a gross basis, prior to netting in the consolidated balance sheets.

## Trading Assets Pledged

The Firm pledges its trading assets to collateralize repurchase agreements and other secured financings. Pledged financial instruments that can be sold or repledged by the secured party are identified as Trading assets (pledged to various parties) in the consolidated balance sheets. At June 30, 2016 and December 31, 2015, the carrying value of Trading assets that have been loaned or pledged to counterparties, where those counterparties do not have the right to sell or repledge the collateral, were $\$ 41.1$ billion and $\$ 35.0$ billion, respectively.

## Collateral Received

The Firm receives collateral in the form of securities in connection with reverse repurchase agreements, securities borrowed and derivative transactions, customer margin loans and securities-based lending. In many cases, the Firm is permitted to sell or repledge these securities held as collateral and use the securities to secure repurchase agreements, to enter into securities lending and derivative transactions or for delivery to counterparties to cover short
positions. The Firm additionally receives securities as collateral in connection with certain securities-for-securities transactions in which it is the lender. In instances where the Firm is permitted to sell or repledge these securities, it reports the fair value of the collateral received and the related obligation to return the collateral included in Trading assets and Trading liabilities, respectively, in its consolidated balance sheets. At June 30, 2016 and December 31, 2015, the total fair value of financial instruments received as collateral where the Firm is permitted to sell or repledge the securities was $\$ 528.0$ billion and $\$ 522.6$ billion, respectively, and the fair value of the portion that had been sold or repledged was $\$ 407.0$ billion and $\$ 398.1$ billion, respectively.

## Other

The Firm also engages in margin lending to clients that allows the client to borrow against the value of qualifying securities and is included within Customer and other receivables in the consolidated balance sheets. Under these agreements and transactions, the Firm receives collateral,

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

including U.S. government and agency securities, other sovereign government obligations, corporate and other debt, and corporate equities. Customer receivables generated from margin lending activities are collateralized by customer-owned securities held by the Firm. The Firm monitors required margin levels and established credit terms daily and, pursuant to such guidelines, requires customers to deposit additional collateral, or reduce positions, when necessary. At June 30, 2016 and December 31, 2015,
the amounts related to margin lending were approximately $\$ 23.2$ billion and $\$ 25.3$ billion, respectively.

For a further discussion of the Firm's margin lending activities, see Note 6 to the consolidated financial statements in the 2015 Form 10-K.

The Firm has additional secured liabilities. For further discussion of other secured financings, see Note 10.

## Cash and Securities Deposited with Clearing Organizations or Segregated

|  | $\begin{gathered} \text { At } \\ \text { June } 30,2016 \end{gathered}$ |  | $\begin{gathered} \text { At } \\ \text { December 31, } 2015 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (dollars in | illi |  |
| Securities(1) | \$ | 23,710 | \$ | 14,390 |
| Other assets-Cash deposited with c other regulations or requirements |  | 32,771 |  | 31,469 |
| Total | . | 56,481 | \$ | 45,859 |

(1) Securities deposited with clearing organizations or segregated under federal and other regulations or requirements are sourced from Securities purchased under agreements to resell and Trading assets in the consolidated balance sheets.

## 7. Loans and Allowance for Credit Losses

## Loans

The Firm's loans held for investment are recorded at amortized cost, and its loans held for sale are recorded at the lower of cost or fair value in the consolidated balance sheets. For a further description of these loans, refer to Note 7 to the consolidated financial statements in the 2015 Form 10-K. See Note 3 for further information regarding Loans and lending commitments held at fair value.

Loans Held for Investment and Held for Sale

| $\underline{\text { Loans by Product Type }}$ | At June 30, 2016 |  |  | At December 31, 2015 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \hline \begin{array}{l} \text { Loans Held } \\ \text { for } \\ \text { Investment } \end{array} \end{aligned}$ | $\begin{aligned} & \text { Loans Held } \\ & \text { for Sale } \end{aligned}$ | $\begin{gathered} \text { Total } \\ \text { Loans(1)(2) } \\ \hline \end{gathered}$ | Loans Held for Investment | $\begin{aligned} & \text { Loans Held } \\ & \text { for Sale } \end{aligned}$ | $\begin{gathered} \text { Total } \\ \text { Loans(1)(2) } \\ \hline \end{gathered}$ |
|  | (dollars in millions) |  |  |  |  |  |
| Corporate loans | . \$ 24,186 | \$ 14,448 | \$ 38,634 | \$ 23,554 | \$ 11,924 | \$ 35,478 |
| Consumer loans | 23,337 | - | 23,337 | 21,528 | - | 21,528 |
| Residential real estate loans | 22,668 | 84 | 22,752 | 20,863 | 104 | 20,967 |
| Wholesale real estate loans | 7,415 | 1,350 | 8,765 | 6,839 | 1,172 | 8,011 |
| Total loans, gross of allowance for loan losses | 77,606 | 15,882 | 93,488 | 72,784 | 13,200 | 85,984 |
| Allowance for loan losses | (323) | - | (323) | (225) | - | (225) |
| Total loans, net of allowance for loan losses | . 877,283 | \$ 15,882 | \$ 93,165 | \$ 72,559 | \$ 13,200 | \$85,759 |

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## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Credit Quality

For a further discussion about the Firm's evaluation of credit transactions and monitoring and credit quality indicators, see Note 7 to the consolidated financial statements in the 2015 Form 10-K.

Credit Quality Indicators for Loans Held for Investment, Gross of Allowance for Loan Losses, by Product Type

|  | At June 30, 2016 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Corporate | Consumer | Residential Real Estate | Wholesale Real Estate | Total |
|  | (dollars in millions) |  |  |  |  |
| Pass | \$ 22,183 | \$ 23,337 | \$ 22,627 | \$ 7,191 | \$ 75,338 |
| Special mention | 539 | - | - | 224 | 763 |
| Substandard | 1,308 | - | 41 | - | 1,349 |
| Doubtful | 156 | - | - | - | 156 |
| Loss | - | - | - | - | - |
| Total loans | \$ 24,186 | \$ 23,337 | \$ 22,668 | \$ 7,415 | \$ 77,606 |
|  | At December 31, 2015 |  |  |  |  |
|  | Corporate | Consumer | Residential <br> Real Estate | Wholesale Real Estate | Total |
|  |  |  |  |  |  |
| Pass | \$ 22,040 | \$ 21,528 | \$ 20,828 | \$ 6,839 | \$ 71,235 |
| Special mention | 300 | - | - | - | 300 |
| Substandard | 1,202 | - | 35 | - | 1,237 |
| Doubtful | 12 | - | - | - | 12 |
| Loss | - | - | 二 | - | - |
| Total loans | \$ 23,554 | \$ 21,528 | \$ 20,863 | \$ 6,839 | \$ 72,784 |

## Allowance for Credit Losses and Impaired Loans

For factors considered by the Firm in determining the allowance for loan losses and impairments, see Notes 2 and 7 to the consolidated financial statements in the 2015 Form 10-K.

Loans by Product Type

|  | At June 30, 2016 |  |  |  |  |  | At December 31, 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Corporate |  | Residential Real Estate |  | Total |  | Corporate |  | Residential Real Estate |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |  |  |
| Impaired loans with allowance | \$ | 244 | \$ | - | \$ | 244 | \$ | 39 | \$ | - | \$ | 39 |
| Impaired loans without allowance(1) |  | 338 |  | 30 |  | 368 |  | 89 |  | 17 |  | 106 |
| Impaired loans unpaid principal balance(2) |  | 593 |  | 32 |  | 625 |  | 130 |  | 19 |  | 149 |
| Past due 90 days loans and on nonaccrual |  | 1 |  | 20 |  | 21 |  | 1 |  | 21 |  | 22 |

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## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

Loans by Region

|  | At June 30, 2016 |  |  |  |  |  |  |  | At December 31, 2015 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Americas |  | EMEA |  | AsiaPacific |  | Total |  | Americas |  | EMEA |  | AsiaPacific |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Impaired loans | \$ | 589 | \$ | 23 | \$ | - | \$ | 612 | \$ | 108 | \$ | 12 | \$ | 25 | \$ | 145 |
| Past due 90 days loans and on nonaccrual |  | 21 |  | - |  | - |  | 21 |  | 22 |  | - |  | - |  | 22 |
| Allowance for loan losses |  | 277 |  | 43 |  | 3 |  | 323 |  | 183 |  | 34 |  | 8 |  | 225 |
| EMEA-Europe, Middle East and Afric |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


|  | Corporate |  | Consumer |  | Residential Real Estate |  | Wholesale Real Estate |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | dolla | s in millio |  |  |  |  |
| Allowance for Loan Losses |  |  |  |  |  |  |  |  |  |  |
| Balance at December 31, 2015 | \$ | 166 | \$ | 5 | \$ | 17 | \$ | 37 | \$ | 225 |
| Gross charge-offs |  | - |  | - |  | - |  | - |  | - |
| Gross recoveries |  | - |  | - |  | - |  | - |  | - |
| Net recoveries/(charge-offs) |  | - |  | - |  | - |  | - |  | - |
| Provision for (release of) loan losses(1) |  | 116 |  | (1) |  | 1 |  | 12 |  | 128 |
| Other(2) |  | (30) |  | - |  | - |  | - |  | (30) |
| Balance at June 30, 2016 | \$ | 252 | \$ | 4 | \$ | 18 | \$ | 49 | \$ | 323 |
| Allowance for Loan Losses by Impairment Methodology |  |  |  |  |  |  |  |  |  |  |
| Inherent | \$ | 147 | \$ | 4 | \$ | 18 | \$ | 49 | \$ | 218 |
| Specific |  | 105 |  | - |  | - |  | - |  | 105 |
| Total allowance for loan losses at June 30, 2016 | \$ | 252 | \$ | 4 | \$ | 18 | \$ | 49 | \$ | 323 |
| Loans Evaluated by Impairment Methodology(3) |  |  |  |  |  |  |  |  |  |  |
| Inherent | \$ | 23,604 | \$ | 23,337 | \$ | 22,638 | \$ | 7,415 | \$ | 76,994 |
| Specific |  | 582 |  | - |  | 30 |  | - |  | 612 |
| Total loans evaluated at June 30, 2016 | \$ | 24,186 | \$ | 23,337 | \$ | 22,668 | \$ | 7,415 | \$ | 77,606 |
| Allowance for Lending Commitments |  |  |  |  |  |  |  |  |  |  |
| Balance at December 31, 2015 | \$ | 180 | \$ | 1 | \$ | - | \$ | 4 | \$ | 185 |
| Provision for lending commitments(4) |  | 1 |  | - |  | - |  | 2 |  | 3 |
| Other |  | - |  | (1) |  | - |  | - |  | (1) |
| Balance at June 30, 2016 | \$ | 181 | \$ | - | \$ | - | \$ | 6 | \$ | 187 |
| Allowance for Lending Commitments by Impairment Methodology |  |  |  |  |  |  |  |  |  |  |
| Inherent | \$ | 173 | \$ | - | \$ | - | \$ | 6 | \$ | 179 |
| Specific |  | 8 |  | - |  | - |  | - |  | 8 |
| Total allowance for lending commitments at June 30, $2016$ | \$ | 181 | \$ | - | \$ | - | \$ | 6 | \$ | 187 |
| Lending Commitments Evaluated by Impairment Methodology(3) |  |  |  |  |  |  |  |  |  |  |
| Inherent | \$ | 63,120 | \$ | 5,264 | \$ | 327 | \$ | 496 | \$ | 69,207 |
| Specific |  | 64 |  | - |  | - |  | - |  | 64 |
| Total lending commitments evaluated at June 30, 2016 | \$ | 63,184 | \$ | 5,264 | \$ | 327 | \$ | 496 | \$ | 69,271 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)



[^9]
## Troubled Debt Restructurings

At June 30, 2016 and December 31, 2015, the impaired loans and lending commitments within held for investment include TDRs of $\$ 137.2$ million and $\$ 44.0$ million related to loans and $\$ 18.7$ million and $\$ 34.8$ million related to lending commitments, respectively, within corporate loans. At June 30, 2016 and December 31, 2015, the Firm recorded an allowance of $\$ 12.1$ million and $\$ 5.1$ million, respectively, against these TDRs. These restructurings
typically include modifications of interest rates, collateral requirements, other loan covenants, and payment extensions.

## Employee Loans

Employee loans are granted primarily in conjunction with a program established in the Wealth Management business segment to retain and recruit certain employees. These loans are recorded in Customer and other receivables in the

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

consolidated balance sheets. These loans are full recourse, generally require periodic payments and have repayment terms ranging from 1 to 12 years. The Firm establishes an allowance for loan amounts it does not consider recoverable, which is recorded in Compensation and benefits expense. At June 30, 2016, the Firm had $\$ 4,877$ million of employee loans, net of an allowance of approximately $\$ 100$ million. At December 31, 2015, the Firm had $\$ 4,923$ million of employee loans, net of an allowance of approximately $\$ 108$ million.

## 8. Equity Method Investments

## Overview

The Firm has investments accounted for under the equity method of accounting (see Note 1 to the consolidated financial statements in the 2015 Form 10-K) of $\$ 3,235$ million and $\$ 3,144$ million at June 30, 2016 and December 31, 2015, respectively, included in Other assets-Other investments in the consolidated balance sheets. Income (loss) from equity method investments was $\$(14)$ million and $\$ 45$ million for the current quarter and prior year quarter, respectively and $\$ 1$ million and $\$ 83$ million for the current year period and prior year period, respectively, and is included in Other revenues in the consolidated statements of income. In addition, a loss of $\$ 35$ million was recognized in the current quarter in connection with the sale of solar investments and impairments of the remaining unsold solar investments accounted for under the equity method.

## Japanese Securities Joint Venture

Included in the equity method investments is the Firm's $40 \%$ voting interest (" $40 \%$ interest") in Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. ("MUMSS"). Mitsubishi UFJ Financial Group, Inc. ("MUFG") holds a $60 \%$ voting interest. The Firm accounts for its equity
method investment in MUMSS within the Institutional Securities business segment. During the current quarter and prior year quarter, the Firm recorded income from its $40 \%$ interest in MUMSS of $\$ 23$ million and $\$ 71$ million, respectively, and income of $\$ 57$ million and $\$ 140$ million in the current year period and prior year period, respectively, within Other revenues in the consolidated statements of income.

In June 2015, MUMSS paid a dividend of approximately \$291 million, of which the Firm received approximately $\$ 116$ million for its proportionate share of MUMSS.

## 9. Deposits

$\underline{\text { Deposits }}$

(1) Total deposits subject to the FDIC insurance at June 30, 2016 and December 31, 2015 were $\$ 110$ billion and $\$ 113$ billion, respectively. Of the total time deposits subject to the FDIC insurance at June 30, 2016 and December 31, 2015, $\$ 20$ million and $\$ 14$ million, respectively, met or exceeded the FDIC insurance limit.
(2) Certain time deposit accounts are carried at fair value under the fair value option (see Note 3).
(3) Deposits were primarily held in the U.S.

Interest bearing deposits at June 30, 2016 included $\$ 151,008$ million of savings deposits payable upon demand and $\$ 1,043$ million of time deposits maturing in 2016, $\$ 578$ million of time deposits maturing in 2017 and $\$ 11$ million of time deposits maturing in 2018.

## 10. Long-Term Borrowings and Other Secured Financings

## Long-Term Borrowings

Components of Long-term Borrowings


During the current year period and prior year period, the Firm issued notes with a principal amount of approximately $\$ 20.6$ billion and $\$ 22.9$ billion, respectively, and approximately $\$ 15.9$ billion and $\$ 13.0$ billion, respectively, in aggregate long-term borrowings matured or were retired.

The weighted average maturity of long-term borrowings, based upon stated maturity dates, was approximately 6.3 years and 6.1 years at June 30, 2016 and December 31, 2015, respectively.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Other Secured Financings

Other secured financings include the liabilities related to transfers of financial assets that are accounted for as financings rather than sales, consolidated VIEs where the Firm is deemed to be the primary beneficiary, pledged commodities, certain equity-linked notes and other secured borrowings. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets. See Note 12 for further information on Other secured financings related to VIEs and securitization activities.

## $\underline{\text { Components of Other Secured Financings }}$

|  | $\underset{\substack{\text { At } \\ \text { June } 30, 2016}}{ }$ |  | At mber 31, 2015 |
| :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |
| Secured financings with original maturities greater than one year | \$ 8,159 | \$ | 7,629 |
| Secured financings with original maturities one year or less . . | 1,444 |  | 1,435 |
| Failed sales(1) | 298 |  | 400 |
| Total | \$ 9,901 | \$ | 9,464 |

## 11. Commitments, Guarantees and Contingencies

## Commitments

The Firm's commitments are summarized in the following table by years to maturity. Since commitments associated with these instruments may expire unused, the amounts shown do not necessarily reflect the actual future cash funding requirements.

Commitments

|  | Years to Maturity at June 30, 2016 |  |  |  |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Less } \\ \text { than } 1 \end{gathered}$ |  | 1-3 |  | 3-5 |  | Over 5 |  |  |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Letters of credit and other financial guarantees obtained to satisfy collateral requirements | \$ | 125 | \$ | - | \$ | 1 | \$ | 42 | \$ | 168 |
| Investment activities |  | 598 |  | 93 |  | 16 |  | 290 |  | 997 |
| Corporate lending commitments(1) |  | 15,625 |  | 24,405 |  | 47,248 |  | 1,501 |  | 88,779 |
| Consumer lending commitments |  | 5,255 |  | 5 |  | - |  | 4 |  | 5,264 |
| Residential real estate lending commitments |  | 52 |  | 43 |  | 87 |  | 236 |  | 418 |
| Wholesale real estate lending commitments |  | 127 |  | 266 |  | 137 |  | 69 |  | 599 |
| Forward-starting reverse repurchase agreements and securities borrowing agreements(2) |  | 69,990 |  | - |  | - |  | - |  | 69,990 |
| Underwriting commitments |  | 25 |  | - |  | - |  | - |  | 25 |
| Total | \$ | 91,797 | \$ | 24,812 | \$ | 47,489 | \$ | 2,142 | \$ | 166,240 |

(1) Due to the nature of the Firm's obligations under the commitments, these amounts include certain commitments participated to third parties of $\$ 3.9$ billion.
(2) The Firm enters into forward-starting reverse repurchase and securities borrowing agreements that primarily settle within three business days of the trade date, and of the total amount at June 30, 2016, $\$ 59.7$ billion settled within three business days.

For a further description of these commitments, refer to Note 12 to the consolidated financial statements in the 2015 Form 10-K.

The Firm sponsors several non-consolidated investment funds for third-party investors where it typically acts as general partner of, and investment advisor to, these funds and typically commits to invest a minority of the capital of such funds, with subscribing third-party investors contributing the majority. The Firm's employees, including its
senior officers as well as the Firm's Board of Directors, may participate on the same terms and conditions as other investors in certain of these funds that the Firm forms primarily for client investment, except that the Firm may waive or lower applicable fees and charges for its employees. The Firm has contractual capital commitments, guarantees, lending facilities and counterparty arrangements with respect to these investment funds.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Guarantees

Obligations Under Guarantee Arrangements at June 30, 2016


[^10]The Firm has obligations under certain guarantee arrangements, including contracts and indemnification agreements, that contingently require the Firm to make payments to the guaranteed party based on changes in an underlying measure (such as an interest or foreign exchange rate, security or commodity price, an index, or the occurrence or nonoccurrence of a specified event) related to an asset, liability or equity security of a guaranteed party. Also included as guarantees are contracts that contingently require the Firm to make payments to the guaranteed party based on another entity's failure to perform under an agreement, as well as indirect guarantees of the indebtedness of others.

For more information on the nature of the obligation and related business activity for market value guarantees, liquidity facilities, whole loan sale guarantees and general partner guarantees related to certain investment management funds, as well as the other products in the previous table, please see Note 12 to the consolidated financial statements in the 2015 Form 10-K.

## Other Guarantees and Indemnities

In the normal course of business, the Firm provides guarantees and indemnifications in a variety of transactions. These provisions generally are standard contractual terms. Certain of these guarantees and indemnifications related to trust preferred securities, indemnities and exchange/
clearinghouse member guarantees are described in Note 12 to the consolidated financial statements in the 2015 Form 10-K.

In addition, in the ordinary course of business, the Firm guarantees the debt and/or certain trading obligations (including obligations associated with derivatives, foreign exchange contracts and the settlement of physical commodities) of certain subsidiaries. These guarantees generally are entity or product specific and are required by investors or trading counterparties. The activities of the Firm's subsidiaries covered by these guarantees (including any related debt or trading obligations) are included in the consolidated financial statements.

## Trust Preferred Securities

The Firm has established Morgan Stanley Capital Trusts for the limited purpose of issuing trust preferred securities to third parties and lending such proceeds to the Firm in exchange for junior subordinated debentures. The Morgan Stanley Capital Trusts are SPEs, and only the Parent provides a guarantee for the trust preferred securities. The Firm has directly guaranteed the repayment of the trust preferred securities to the holders in accordance with the terms thereof. See Note 11 to the consolidated financial statements in the 2015 Form 10-K for details on the Firm's junior subordinated debentures. Additionally, see Note 20 for further information about subsequent events.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Finance Subsidiary

The Parent Company fully and unconditionally guarantees the securities issued by Morgan Stanley Finance LLC, a $100 \%$-owned finance subsidiary.

## Contingencies

Legal. In the normal course of business, the Firm has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities as a global diversified financial services institution. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the entities that would otherwise be the primary defendants in such cases are bankrupt or are in financial distress. These actions have included, but are not limited to, residential mortgage and credit crisis related matters. Over the last several years, the level of litigation and investigatory activity (both formal and informal) by governmental and self-regulatory agencies has increased materially in the financial services industry. As a result, the Firm expects that it may become the subject of increased claims for damages and other relief and, while the Firm has identified below any individual proceedings where the Firm believes a material loss to be reasonably possible and reasonably estimable, there can be no assurance that material losses will not be incurred from claims that have not yet been asserted or are not yet determined to be probable or possible and reasonably estimable losses.

The Firm contests liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the consolidated financial statements and the Firm can reasonably estimate the amount of that loss, the Firm accrues the estimated loss by a charge to income. The Firm's future legal expenses may fluctuate from period to period, given the current environment regarding government investigations and private litigation affecting global financial services firms, including the Firm.

In many proceedings and investigations, however, it is inherently difficult to determine whether any loss is probable or even possible or to estimate the amount of any loss. In addition, even where a loss is possible or an exposure to loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, it is not always possible to reasonably estimate the size of the possible loss or range of loss.

For certain legal proceedings and investigations, the Firm cannot reasonably estimate such losses, particularly for proceedings and investigations where the factual record is being developed or contested or where plaintiffs or governmental entities seek substantial or indeterminate damages,
restitution, disgorgement or penalties. Numerous issues may need to be resolved, including through potentially lengthy discovery and determination of important factual matters, determination of issues related to class certification and the calculation of damages or other relief, and by addressing novel or unsettled legal questions relevant to the proceedings or investigations in question, before a loss or additional loss or range of loss or additional range of loss can be reasonably estimated for a proceeding or investigation.

For certain other legal proceedings and investigations, the Firm can estimate reasonably possible losses, additional losses, ranges of loss or ranges of additional loss in excess of amounts accrued, but does not believe, based on current knowledge and after consultation with counsel, that such losses will have a material adverse effect on the Firm's consolidated financial statements as a whole, other than the matters referred to in the following paragraphs.

On July 15, 2010, China Development Industrial Bank ("CDIB") filed a complaint against the Firm, styled China Development Industrial Bank v. Morgan Stanley \& Co. Incorporated et al., which is pending in the Supreme Court of the State of New York, New York County ("Supreme Court of NY"). The complaint relates to a $\$ 275$ million credit default swap referencing the super senior portion of the STACK 2006-1 CDO. The complaint asserts claims for common law fraud, fraudulent inducement and fraudulent concealment and alleges that the Firm misrepresented the risks of the STACK 2006-1 CDO to CDIB, and that the Firm knew that the assets backing the CDO were of poor quality when it entered into the credit default swap with CDIB. The complaint seeks compensatory damages related to the approximately $\$ 228$ million that CDIB alleges it has already lost under the credit default swap, rescission of CDIB's obligation to pay an additional $\$ 12$ million, punitive damages, equitable relief, fees and costs. On February 28, 2011, the court denied the Firm's motion to dismiss the complaint. Based on currently available information, the Firm believes it could incur a loss in this action of up to approximately $\$ 240$ million plus pre- and postjudgment interest, fees and costs.

On January 25, 2011, the Firm was named as a defendant in The Bank of New York Mellon Trust, National Association v. Morgan Stanley Mortgage Capital, Inc., a litigation pending in the United States District Court for the Southern District of New York ("SDNY"). The suit, brought by the trustee of a series of commercial mortgage pass-through certificates, alleges that the Firm breached certain representations and warranties with respect to an $\$ 81$ million commercial mortgage loan that was originated and transferred to the trust by the Firm. The complaint seeks, among other things, to have the Firm repurchase the loan and pay additional monetary damages. On June 16, 2014, the court granted the Firm's supplemental motion for summary judgment, which was appealed by plaintiff. On April 27, 2016, the United States Court of Appeals for the Second

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

Circuit vacated the judgment of the SDNY and remanded the case to the SDNY for further proceedings consistent with its opinion. Based on currently available information, the Firm believes it could incur a loss in this action of up to approximately $\$ 81$ million, plus pre-judgment interest, fees and costs.

On August 7, 2012, U.S. Bank, in its capacity as trustee, filed a complaint on behalf of Morgan Stanley Mortgage Loan Trust 2006-4SL and Mortgage Pass-Through Certificates, Series 2006-4SL against the Firm. The matter is styled Morgan Stanley Mortgage Loan Trust 2006-4SL, et al. v. Morgan Stanley Mortgage Capital Inc. and is pending in the Supreme Court of NY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $\$ 303$ million, breached various representations and warranties. The complaint seeks, among other relief, rescission of the mortgage loan purchase agreement underlying the transaction, specific performance and unspecified damages and interest. On August 8, 2014, the court granted in part and denied in part the Firm's motion to dismiss. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 149$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus pre- and post-judgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On August 8, 2012, U.S. Bank, in its capacity as trustee, filed a complaint on behalf of Morgan Stanley Mortgage Loan Trust 2006-14SL, Mortgage Pass-Through Certificates, Series 2006-14SL, Morgan Stanley Mortgage Loan Trust 2007-4SL and Mortgage Pass-Through Certificates, Series 2007-4SL against the Firm styled Morgan Stanley Mortgage Loan Trust 2006-14SL, et al. v. Morgan Stanley Mortgage Capital Holdings LLC, as successor in interest to Morgan Stanley Mortgage Capital Inc., pending in the Supreme Court of NY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trusts, which had original principal balances of approximately $\$ 354$ million and $\$ 305$ million respectively, breached various representations and warranties. The complaint seeks, among other relief, rescission of the mortgage loan purchase agreements underlying the transactions, specific performance and unspecified damages and interest. On August 16, 2013, the court granted in part and denied in part the Firm's motion to dismiss the complaint. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 527$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus pre- and postjudgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On September 28, 2012, U.S. Bank, in its capacity as trustee, filed a complaint on behalf of Morgan Stanley Mortgage Loan Trust 2006-13ARX against the Firm styled Morgan Stanley Mortgage Loan Trust 2006-13ARX v. Morgan Stanley Mortgage Capital Holdings LLC, as successor in interest to Morgan Stanley Mortgage Capital Inc., pending in the Supreme Court of NY. The plaintiff filed an amended complaint on January 17, 2013, which asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $\$ 609$ million, breached various representations and warranties. The amended complaint seeks, among other relief, declaratory judgment relief, specific performance and unspecified damages and interest. By order dated September 30, 2014, the court granted in part and denied in part the Firm's motion to dismiss the amended complaint. On July 13, 2015, the plaintiff perfected its appeal from the court's September 30, 2014 decision. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 170$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus pre- and post-judgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On January 10, 2013, U.S. Bank, in its capacity as trustee, filed a complaint on behalf of Morgan Stanley Mortgage Loan Trust 2006-10SL and Mortgage Pass-Through Certificates, Series 2006-10SL against the Firm styled Morgan Stanley Mortgage Loan Trust 2006-10SL, et al. v. Morgan Stanley Mortgage Capital Holdings LLC, as successor in interest to Morgan Stanley Mortgage Capital Inc., pending in the Supreme Court of NY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $\$ 300$ million, breached various representations and warranties. The complaint seeks, among other relief, an order requiring the Firm to comply with the loan breach remedy procedures in the transaction documents, unspecified damages, and interest. On August 8, 2014, the court granted in part and denied in part the Firm's motion to dismiss the complaint. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 197$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus pre- and post-judgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On May 3, 2013, plaintiffs in Deutsche ZentralGenossenschaftsbank AG et al. v. Morgan Stanley et al. filed a complaint against the Firm, certain affiliates, and other defendants in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to plaintiffs of certain

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Firm to plaintiff currently at issue in this action was approximately $\$ 644$ million. The complaint alleges causes of action against the Firm for common law fraud, fraudulent concealment, aiding and abetting fraud, negligent misrepresentation, and rescission and seeks, among other things, compensatory and punitive damages. On June 10, 2014, the court granted in part and denied in part the Firm's motion to dismiss the complaint. The Firm perfected its appeal from that decision on June 12, 2015. At June 25, 2016, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately $\$ 258$ million, and the certificates had incurred actual losses of approximately $\$ 84$ million. Based on currently available information, the Firm believes it could incur a loss in this action up to the difference between the $\$ 258$ million unpaid balance of these certificates (plus any losses incurred) and their fair market value at the time of a judgment against the Firm, or upon sale, plus pre- and postjudgment interest, fees and costs. The Firm may be entitled to be indemnified for some of these losses.

On July 8, 2013, U.S. Bank National Association, in its capacity as trustee, filed a complaint against the Firm styled U.S. Bank National Association, solely in its capacity as Trustee of the Morgan Stanley Mortgage Loan Trust 2007-2AX (MSM 2007-2AX) v. Morgan Stanley Mortgage Capital Holdings LLC, as Successor-by-Merger to Morgan Stanley Mortgage Capital Inc. and Greenpoint Mortgage Funding, Inc., pending in the Supreme Court of NY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $\$ 650$ million, breached various representations and warranties. The complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, unspecified damages and interest. On August 22, 2013, the Firm filed a motion to dismiss the complaint, which was granted in part and denied in part on November 24, 2014. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 240$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus pre- and post-judgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On December 30, 2013, Wilmington Trust Company, in its capacity as trustee, filed a complaint against the Firm. The matter is styled Wilmington Trust Company v. Morgan

Stanley Mortgage Capital Holdings LLC et al. and is pending in the Supreme Court of NY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $\$ 516$ million, breached various representations and warranties. The complaint seeks, among other relief, unspecified damages, attorneys' fees, costs and interest. On February 28, 2014, the defendants filed a motion to dismiss the complaint, which was granted in part and denied in part on June 14, 2016. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 152$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus attorney's fees, costs and interest, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On April 28, 2014, Deutsche Bank National Trust Company, in its capacity as trustee for Morgan Stanley Structured Trust I 2007-1, filed a complaint against the Firm styled Deutsche Bank National Trust Company v. Morgan Stanley Mortgage Capital Holdings LLC, pending in the SDNY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $\$ 735$ million, breached various representations and warranties. The complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, unspecified compensatory and/or rescissory damages, interest and costs. On April 3, 2015, the court granted in part and denied in part the Firm's motion to dismiss the complaint. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 292$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands that it did not repurchase, plus pre- and post-judgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

On January 23, 2015, Deutsche Bank National Trust Company, in its capacity as trustee, filed a complaint against the Firm styled Deutsche Bank National Trust Company solely in its capacity as Trustee of the Morgan Stanley ABS Capital I Inc. Trust 2007-NC4 v. Morgan Stanley Mortgage Capital Holdings LLC as Successor-by-Merger to Morgan Stanley Mortgage Capital Inc., and Morgan Stanley ABS Capital I Inc., pending in the Supreme Court of NY. The complaint asserts claims for breach of contract and alleges, among other things, that the loans in the trust, which had an

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

original principal balance of approximately $\$ 1.05$ billion, breached various representations and warranties. The complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, compensatory, consequential, rescissory, equitable and punitive damages, attorneys' fees, costs and other related expenses, and interest. On October 20, 2015, the court granted in part and denied in part the Firm's motion to dismiss the complaint. Based on currently available
information, the Firm believes that it could incur a loss in this action of up to approximately $\$ 277$ million, the total original unpaid balance of the mortgage loans for which the Firm received repurchase demands from a certificate holder and a monoline insurer that the Firm did not repurchase, plus pre- and post-judgment interest, fees and costs, but plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

## 12. Variable Interest Entities and Securitization Activities

## Overview

The Firm is involved with various special purpose entities ("SPE") in the normal course of business. In most cases, these entities are deemed to be VIEs. The Firm's transactions with VIEs primarily include securitizations, municipal tender option bond trusts, credit protection purchased through credit-linked notes, other structured financings, collateralized loan and debt obligations, equity-linked notes, partnership investments and certain investment management funds. The Firm's continuing involvement in VIEs that it does not consolidate can include ownership of retained interests in Firm-sponsored transactions, interests purchased in the secondary market (both for Firmsponsored transactions and transactions sponsored by third parties), and derivatives with securitization SPEs (primarily
interest rate derivatives in commercial mortgage and residential mortgage securitizations and credit derivatives in which the Firm has purchased protection in synthetic CDOs).

For a further discussion on the Firm's VIEs, the determination and structure of VIEs and securitization activities, see Note 13 to the consolidated financial statements in the 2015 Form 10-K.

As a result of adopting the accounting update, Amendments to the Consolidation Analysis, on January 1, 2016, certain consolidated entities are now considered VIEs and are included in the balances at June 30, 2016. See Note 2 for further information.

## Consolidated VIEs

Assets and Liabilities by Type of Activity

|  | At June 30, 2016 |  |  |  | At December 31, 2015 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | VIE Assets |  | VIE Liabilities |  | VIE Assets |  | VIE Liabilities |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Credit-linked notes | \$ | 901 | \$ | - | \$ | 900 | \$ | - |
| Other structured financings |  | 924 |  | 240 |  | 787 |  | 13 |
| Asset-backed securitizations(1) |  | 319 |  | 191 |  | 668 |  | 423 |
| Other(2) |  | 931 |  | 29 |  | 245 |  | - |
| Total | \$ | 3,075 | \$ | 460 | \$ | 2,600 | \$ | 436 |

[^11]
## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

$\underline{\text { Assets and Liabilities by Balance Sheet Caption }}$

|  | $\begin{gathered} \text { At June 30, } \\ 2016 \end{gathered}$ |  | At December 31,2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Assets |  |  |  |  |
| Cash and due from banks | \$ | 62 | \$ | 14 |
| Trading assets, at fair value |  | 1,973 |  | 1,842 |
| Customer and other receivables |  | 3 |  | 3 |
| Goodwill |  | 18 |  | - |
| Intangible assets |  | 141 |  | - |
| Other assets |  | 878 |  | 741 |
| Total assets | \$ | 3,075 | \$ | 2,600 |
| Liabilities |  |  |  |  |
| Other secured financings, at fair value | \$ | 430 | \$ | 431 |
| Other liabilities and accrued expenses |  | 30 |  | 5 |
| Total liabilities | \$ | 460 | \$ | 436 |

Consolidated VIE assets and liabilities are presented in the previous tables after intercompany eliminations. The assets owned by many consolidated VIEs cannot be removed unilaterally by the Firm and are not generally available to the Firm. The related liabilities issued by many consolidated VIEs are non-recourse to the Firm. In certain other consolidated VIEs, the Firm either has the unilateral right to remove assets or provide additional recourse through derivatives such as total return swaps, guarantees or other forms of involvement.

As part of the Institutional Securities business segment's securitization and related activities, the Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain assets transferred in securitization transactions sponsored by the Firm (see Note 11).

In general, the Firm's exposure to loss in consolidated VIEs is limited to losses that would be absorbed on the VIE's net assets recognized in its financial statements, net of amounts
absorbed by third-party variable interest holders. At June 30, 2016 and December 31, 2015, noncontrolling interests in the consolidated financial statements related to consolidated VIEs were $\$ 257$ million and $\$ 37$ million, respectively. The Firm also had additional maximum exposure to losses of approximately $\$ 76$ million and $\$ 72$ million at June 30, 2016 and December 31, 2015, respectively, primarily related to certain derivatives, commitments, guarantees and other forms of involvement.

## Non-consolidated VIEs

The following tables include all VIEs in which the Firm has determined that its maximum exposure to loss is greater than specific thresholds or meets certain other criteria. Most of the VIEs included in the following tables are sponsored by unrelated parties; the Firm's involvement generally is the result of its secondary market-making activities, securities held in its Investment securities portfolio (see Note 5), and certain investments in funds.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Non-Consolidated VIE Assets and Liabilities, Maximum and Carrying Value of Exposure to Loss

|  | At June 30, 2016 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mortgage- and Asset-Backed Securitizations |  | Collateralized Debt Obligations |  | $\begin{aligned} & \text { Municipal } \\ & \text { Tender } \\ & \text { Option Bonds } \end{aligned}$ |  | Other Structured Financings |  | Other |  |
|  |  |  |  |  | dolla | in million |  |  |  |  |
| VIE assets that the Firm does not consolidate (unpaid principal balance) | \$ | 115,088 | \$ | 6,825 | \$ | 4,999 | \$ | 4,081 | \$ | 39,281 |
| Maximum exposure to loss: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity interests | \$ | 12,670 | \$ | 955 | \$ | 31 | \$ | 1,712 | \$ | 4,706 |
| Derivative and other contracts |  | - |  | - |  | 3,001 |  | - |  | 73 |
| Commitments, guarantees and other |  | 612 |  | 350 |  | - |  | 363 |  | 300 |
| Total maximum exposure to loss | \$ | 13,282 | \$ | 1,305 | \$ | 3,032 | \$ | 2,075 | \$ | 5,079 |
| Carrying value of exposure to loss-Assets: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity interests | \$ | 12,670 | \$ | 955 | \$ | 3 | \$ | 1,324 | \$ | 4,706 |
| Derivative and other contracts |  | - |  | - |  | 5 |  | - |  | 27 |
| Total carrying value of exposure to loss-Assets | \$ | 12,670 | \$ | 955 | \$ | 8 | \$ | 1,324 | \$ | 4,733 |
| Carrying value of exposure to loss-Liabilities: |  |  |  |  |  |  |  |  |  |  |
| Derivative and other contracts | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 31 |
| Commitments, guarantees and other |  | - |  | - |  | - |  | 2 |  | 10 |
| Total carrying value of exposure to loss-Liabilities | \$ | - | \$ | - | \$ | - | \$ | 2 | \$ | 41 |
|  |  |  |  |  | Dec | ber 31, 20 |  |  |  |  |
|  |  | rtgage- and set-Backed uritizations |  | teralized <br> Debt <br> igations |  | nicipal ender n Bonds |  | Other ctured ancings |  | Other |
|  |  |  |  |  | dolla | in million |  |  |  |  |
| VIE assets that the Firm does not consolidate (unpaid |  |  |  |  |  |  |  |  |  |  |
| Maximum exposure to loss: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity interests | \$ | 13,361 | \$ | 1,259 | \$ | 1 | \$ | 1,129 | \$ | 3,854 |
| Derivative and other contracts |  | - |  | - |  | 2,834 |  | - |  | 67 |
| Commitments, guarantees and other |  | 494 |  | 231 |  | - |  | 361 |  | 222 |
| Total maximum exposure to loss | \$ | 13,855 | \$ | 1,490 | \$ | 2,835 | \$ | 1,490 | \$ | 4,143 |
| Carrying value of exposure to loss-Assets: |  |  |  |  |  |  |  |  |  |  |
| Debt and equity interests | \$ | 13,361 | \$ | 1,259 | \$ | 1 | \$ | 685 | \$ | 3,854 |
| Derivative and other contracts |  | - |  | - |  | 5 |  | - |  | 13 |
| Total carrying value of exposure to loss-Assets | \$ | 13,361 | \$ | 1,259 | \$ | 6 | \$ | 685 | \$ | 3,867 |
| Carrying value of exposure to loss-Liabilities: |  |  |  |  |  |  |  |  |  |  |
| Derivative and other contracts . | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 15 |
| Commitments, guarantees and other . . . |  | - |  | - |  | - |  | 3 |  | - |
| Total carrying value of exposure to loss-Liabilities | \$ | - | \$ | - | \$ | - | \$ | 3 | \$ | 15 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

$\underline{\text { Non-Consolidated VIE Mortgage- and Asset-Backed Securitization Assets }}$

|  | At June 30, 2016 |  |  |  | At December 31, 2015 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unpaid Principal Balance |  | Debt and Equity Interests |  | Unpaid <br> Principal <br> Balance |  | Debt and Equity Interests |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Residential mortgages | \$ | 3,708 | \$ | 410 | \$ | 13,787 | \$ | 1,012 |
| Commercial mortgages |  | 55,158 |  | 2,576 |  | 57,313 |  | 2,871 |
| U.S. agency collateralized mortgage obligations |  | 20,853 |  | 3,766 |  | 13,236 |  | 2,763 |
| Other consumer or commercial loans |  | 35,369 |  | 5,918 |  | 42,536 |  | 6,715 |
| Total mortgage- and asset-backed securitization assets | \$ | 115,088 | \$ | 12,670 |  | 126,872 | \$ | 13,361 |

The Firm's maximum exposure to loss often differs from the carrying value of the variable interests held by the Firm. The maximum exposure to loss is dependent on the nature of the Firm's variable interest in the VIEs and is limited to the notional amounts of certain liquidity facilities, other credit support, total return swaps, written put options, and the fair value of certain other derivatives and investments the Firm has made in the VIEs. Liabilities issued by VIEs generally are non-recourse to the Firm. Where notional amounts are utilized in quantifying maximum exposure related to derivatives, such amounts do not reflect fair value write-downs already recorded by the Firm.

The Firm's maximum exposure to loss does not include the offsetting benefit of any financial instruments that the Firm may utilize to hedge these risks associated with its variable interests. In addition, the Firm's maximum exposure to loss is not reduced by the amount of collateral held as part of a transaction with the VIE or any party to the VIE directly against a specific exposure to loss.

Securitization transactions generally involve VIEs. Primarily as a result of its secondary market-making activities, the Firm owned additional VIE assets mainly issued by securi-
tization SPEs for which the maximum exposure to loss is less than specific thresholds. These additional assets totaled $\$ 12.7$ billion and $\$ 12.9$ billion at June 30, 2016 and December 31, 2015, respectively. These assets were either retained in connection with transfers of assets by the Firm, acquired in connection with secondary market-making activities or held as AFS securities in its Investment securities portfolio (see Note 5) or held as investments in funds. At June 30, 2016 and December 31, 2015, these assets consisted of securities backed by residential mortgage loans, commercial mortgage loans or other consumer loans, such as credit card receivables, automobile loans and student loans, CDOs or CLOs, and investment funds. The Firm's primary risk exposure is to the securities issued by the SPE owned by the Firm, with the risk highest on the most subordinate class of beneficial interests. These assets generally are included in Trading assets-Corporate and other debt, Trading assets-Investments or AFS securities within its Investment securities portfolio and are measured at fair value (see Note 3). The Firm does not provide additional support in these transactions through contractual facilities, such as liquidity facilities, guarantees or similar derivatives. The Firm's maximum exposure to loss generally equals the fair value of the assets owned.

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## $\underline{\text { Transfers of Assets with Continuing Involvement }}$

Transactions with SPEs in which the Firm, acting as principal, transferred financial assets with continuing involvement and received sales treatment are shown herein.

|  | At June 30, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Residential } \\ \text { Mortgage } \\ \text { Loans } \end{gathered}$ |  | $\begin{gathered} \text { Commercial } \\ \text { Mortgage } \\ \text { Loans } \\ \hline \end{gathered}$ |  | U.S. Agency Collateralized Mortgage Obligations |  |  |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| SPE assets (unpaid principal balance)(2) | \$ | 21,239 | \$ | 51,025 | \$ | 11,116 | \$ | 11,668 |
| Retained interests (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | - | \$ | 43 | \$ | 755 | \$ | - |
| Non-investment grade |  | 54 |  | 64 |  | - |  | 974 |
| Total retained interests (fair value) | \$ | 54 | \$ | 107 | \$ | 755 | \$ | 974 |
| Interests purchased in the secondary market (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | - | \$ | 32 | \$ | 142 | \$ | - |
| Non-investment grade |  | 53 |  | 47 |  | - |  | - |
| Total interests purchased in the secondary market (fair value) | \$ | 53 | \$ | 79 | \$ | 142 | \$ | - |
| Derivative assets (fair value) | \$ | - | \$ | 291 | \$ | - | \$ | 206 |
| Derivative liabilities (fair value) |  | - |  | - |  | - |  | 449 |
|  | At December 31, 2015 |  |  |  |  |  |  |  |
|  |  | Residential <br> Mortgage <br> Loans |  | mercial ortgage oans |  | Agency ateralized ortgage ligations |  | redit <br> ed Notes and <br> her(1) |
|  |  |  |  | (dollars i |  | ons) |  |  |
| SPE assets (unpaid principal balance)(2) | \$ | 22,440 | \$ | 72,760 | \$ | 17,978 | \$ | 12,235 |
| Retained interests (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | - | \$ | 238 | \$ | 649 | \$ | - |
| Non-investment grade |  | 160 |  | 63 |  | - |  | 1,136 |
| Total retained interests (fair value) | \$ | 160 | \$ | 301 | \$ | 649 | \$ | 1,136 |
| Interests purchased in the secondary market (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | - | \$ | 88 | \$ | 99 | \$ | - |
| Non-investment grade |  | 60 |  | 63 |  | - |  | 10 |
| Total interests purchased in the secondary market (fair value) | \$ | 60 | \$ | 151 | \$ | 99 | \$ | 10 |
| Derivative assets (fair value) | \$ | - | \$ | 343 | \$ | - | \$ | 151 |
| Derivative liabilities (fair value) |  | - |  | - |  | - |  | 449 |

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | At June 30, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Retained interests (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | - | \$ | 798 |  | \$ - | \$ | 798 |
| Non-investment grade |  | - |  | 15 |  | 1,077 |  | 1,092 |
| Total retained interests (fair value) | \$ | - | \$ | 813 |  | 1,077 | \$ | 1,890 |
| Interests purchased in the secondary market (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | - | \$ | 174 | \$ | \$ - | \$ | 174 |
| Non-investment grade |  | - |  | 85 |  | 15 |  | 100 |
| Total interests purchased in the secondary market (fair value) | \$ | - |  | 259 | \$ | - 15 | \$ | 274 |
| Derivative assets (fair value) | \$ | - | \$ | 482 |  | \$ 15 | \$ | 497 |
| Derivative liabilities (fair value) |  | - |  | 102 |  | 347 |  | 449 |
|  |  |  |  | At Decem | er | 31, 2015 |  |  |
|  |  | Level 1 |  | Level 2 |  | Level 3 |  | Total |
|  |  |  |  | (dollars | m | millions) |  |  |
| Retained interests (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | \$ |  | \$ 886 | \$ | 1 | \$ | 887 |
| Non-investment grade |  | - |  | 17 |  | 1,342 |  | 1,359 |
| Total retained interests (fair value) | \$ | \$ |  | \$ 903 |  | $\underline{\text { 1,343 }}$ | \$ | 2,246 |
| Interests purchased in the secondary market (fair value): |  |  |  |  |  |  |  |  |
| Investment grade | \$ | \$ |  | \$ 187 |  | \$ - | \$ | 187 |
| Non-investment grade |  | - |  | 112 |  | 21 |  | 133 |
| Total interests purchased in the secondary market (fair value) | \$ | \$ |  | \$ 299 |  | \$ 21 | \$ | 320 |
| Derivative assets (fair value) | \$ | \$ - |  | \$ 466 |  | - 28 | \$ | 494 |
| Derivative liabilities (fair value) |  | - |  | 110 |  | 339 |  | 449 |

Transferred assets are carried at fair value prior to securitization, and any changes in fair value are recognized in the consolidated statements of income. The Firm may act as underwriter of the beneficial interests issued by these securitization vehicles. Investment banking underwriting net revenues are recognized in connection with these
transactions. The Firm may retain interests in the securitized financial assets as one or more tranches of the securitization. These retained interests are included in the consolidated balance sheets at fair value. Any changes in the fair value of such retained interests are recognized in the consolidated statements of income.

Proceeds from New Securitization Transactions and Retained Interests in Securitization Transactions

|  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { Six Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Proceeds received from new securitization transactions | \$ | 4,163 | \$ | 6,273 | \$ | 6,876 | \$ | 11,164 |
| Proceeds from retained interests in securitization transactions |  | 502 |  | 658 |  | 1,133 |  | 1,606 |

Net gains on sale of assets in securitization transactions at the time of the sale were not material in the current quarter, current year period, prior year quarter and prior year period. The Firm has provided, or otherwise agreed to be
responsible for representations and warranties regarding certain assets transferred in securitization transactions sponsored by the Firm (see Note 11).

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

Proceeds from Sales to CLO Entities Sponsored by Non-Affiliates

| Three | Ended | Six Months Ended June 30, |  |
| :---: | :---: | :---: | :---: |
| 2016 | 2015 | 2016 | 2015 |
| (dollars in millions) |  |  |  |

Proceeds from sale of corporate loans sold to those SPEs . . . . . . . . . . . . . . . \$ $\quad-\quad \$ \quad 621 \quad \$ \quad 31 \quad \$ \quad 966$
Net gains on sale of corporate loans to CLO transactions at the time of sale were not material in the current quarter, current year period, prior year quarter and prior year period.

The Firm also enters into transactions in which it sells equity securities and contemporaneously enters into bilateral OTC equity derivatives with the purchasers of the securities, through which it retains the exposure to the securities as shown in the following table.

|  | At June 30, 2016 |  | At December 31, 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (dollars |  |  |
| Carrying value of assets derecognized at the time of sale and gross cash proceeds | \$ | 9,524 | \$ | 7,878 |
| Fair value of assets sold |  | 9,692 |  | 7,935 |
| Fair value of derivative assets recognized in the consolidated balance sheets |  | 218 |  | 97 |
| Fair value of derivative liabilities recognized in the consolidated balance sheets |  | 50 |  | 40 |

## Failed Sales

For transfers that fail to meet the accounting criteria for a sale, the Firm continues to recognize the assets in Trading assets at fair value, and the Firm recognizes the associated liabilities in Other secured financings at fair value in the consolidated balance sheets (see Note 10).

The assets transferred to unconsolidated VIEs in transactions accounted for as failed sales cannot be removed unilaterally by the Firm and are not generally available to the Firm. The related liabilities are also non-recourse to the

## 13. Regulatory Requirements

## Regulatory Capital Framework

For a discussion of the Firm's regulatory capital framework, see Note 14 to the consolidated financial statements in the 2015 Form 10-K.

## Risk-Based Capital Requirement

The Firm is required to maintain minimum risk-based and leverage capital ratios under the regulatory capital requirements. The Firm's binding risk-based capital ratios for regulatory purposes are the lower of the capital ratios computed under the (i) standardized approaches for calculating credit risk-weighted assets ("RWAs") and market risk RWAs (the "Standardized Approach"); and (ii) applicable advanced approaches for calculating credit risk, market risk and operational risk RWAs (the "Advanced Approach").

Firm. In certain other failed sale transactions, the Firm has the right to remove assets or provide additional recourse through derivatives such as total return swaps, guarantees or other forms of involvement.

Carrying Value of Assets and Liabilities Related to Failed Sales

|  |  | At June 30, 2016 |  |  | At December 31, 2015 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Assets |  | Labilities | Assets |  | ilities |
|  | (dollars in millions) |  |  |  |  |  |  |
| Failed sales | \$ | 298 | \$ | 298 | \$ 400 | \$ | 400 |

In addition to the minimum risk-based capital ratio requirements, on a fully phased-in basis by 2019, the Firm will be subject to:

- A greater than $2.5 \%$ Common Equity Tier 1 capital conservation buffer;
- The Common Equity Tier 1 global systemically important bank ("G-SIB") capital surcharge, currently at $3 \%$; and
- Up to a $2.5 \%$ Common Equity Tier 1 countercyclical capital buffer, currently set by banking regulators at zero (collectively, the "buffers").

In 2016, the phase-in amount for each of the buffers is $25 \%$ of the fully phased-in buffer requirement. Failure to maintain the buffers will result in restrictions on the Firm's

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers.

The methods for calculating each of the Firm's risk-based capital ratios will change through January 1, 2022 as aspects of the capital rules are phased in. These changes may result in differences in the Firm's reported capital
ratios from one reporting period to the next that are independent of changes to its capital base, asset composition, off-balance sheet exposures or risk profile.

For a further discussion of the Firm's calculation of riskbased capital ratios, see Note 14 to the consolidated financial statements in the 2015 Form 10-K.

## The Firm's Regulatory Capital and Capital Ratios

At June 30, 2016 and December 31, 2015, the Firm's binding ratios are based on the Advanced Approach transitional rules.

## $\underline{\text { Regulatory Capital Measures and Minimum Regulatory Capital Ratios }}$

|  | At June 30, 2016 |  |  |  | At December 31, 2015 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount |  | Ratio | $\begin{aligned} & \text { Minimum } \\ & \text { Ratio(1) } \end{aligned}$ | Amount |  | Ratio | Minimum Ratio(1) |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Regulatory capital and capital ratios: |  |  |  |  |  |  |  |  |
| Common Equity Tier 1 capital | \$ | 59,796 | 16.8\% | 5.9\% | \$ | 59,409 | 15.5\% | 4.5\% |
| Tier 1 capital |  | 66,782 | 18.8\% | 7.4\% |  | 66,722 | 17.4\% | 6.0\% |
| Total capital |  | 79,830 | 22.4\% | 9.4\% |  | 79,403 | 20.7\% | 8.0\% |
| Tier 1 leverage(2) |  | - | 8.3\% | 4.0\% |  | - | 8.3\% | 4.0\% |
| Assets: |  |  |  |  |  |  |  |  |
| Total RWAs | \$ | 355,982 | N/A | N/A | \$ | 384,162 | N/A | N/A |
| Adjusted average assets(3) |  | 804,511 | N/A | N/A |  | 803,574 | N/A | N/A |

N/A—Not Applicable
(1) Percentages represent minimum regulatory capital ratios under the transitional rules.
(2) Tier 1 leverage ratios are calculated under Standardized Approach transitional rules.
(3) Adjusted average assets represent the denominator of the Tier 1 leverage ratio and are composed of the average daily balance of consolidated on-balance sheet assets under U.S. GAAP during the calendar quarter, adjusted for disallowed goodwill, transitional intangible assets, certain deferred tax assets, certain investments in the capital instruments of unconsolidated financial institutions and other adjustments.

## U.S. Bank Subsidiaries' Regulatory Capital and Capital Ratios

Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA") (collectively, "U.S. Bank Subsidiaries") are subject to similar regulatory capital requirements as the Firm. Failure to meet minimum capital requirements can initiate certain mandatory and discretionary actions by regulators that, if undertaken, could have a direct material effect on the Firm's U.S. Bank Subsidiaries' financial statements. Under
capital adequacy guidelines and the regulatory framework for prompt corrective action, each of the Firm's U.S. Bank Subsidiaries must meet specific capital guidelines that involve quantitative measures of its assets, liabilities and certain off-balance sheet items as calculated under regulatory accounting practices.

At June 30, 2016 and December 31, 2015, the Firm's U.S. Bank Subsidiaries' binding ratios are based on the Standardized Approach transitional rules.

## U.S. Bank Subsidiaries' Regulatory Capital Measures and Required Capital Ratios

|  | Morgan Stanley Bank, N.A. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | At June 30, 2016 |  |  |  | At December 31, 2015 |  |  |  |
|  | Amount |  | Ratio | Required Capital Ratio(1) | Amount |  | Ratio | Required Capital Ratio(1) |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Common Equity Tier 1 capital | \$ | 14,523 | 16.8\% | 6.5\% | \$ | 13,333 | 15.1\% | 6.5\% |
| Tier 1 capital . . . . . . . . . . |  | 14,523 | 16.8\% | 8.0\% |  | 13,333 | 15.1\% | 8.0\% |
| Total capital |  | 16,321 | 18.9\% | 10.0\% |  | 15,097 | 17.1\% | 10.0\% |
| Tier 1 leverage |  | 14,523 | 10.9\% | 5.0\% |  | 13,333 | 10.2\% | 5.0\% |
| MorganStanley |  |  | 60 |  |  |  |  |  |

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)


Under regulatory capital requirements adopted by the U.S. federal banking agencies, U.S. depository institutions, in order to be considered well-capitalized, must maintain certain minimum capital ratios. Each U.S. depository institution subsidiary of the Firm must be well-capitalized in order for the Firm to continue to qualify as a financial holding company and to continue to engage in the broadest range of financial activities permitted for financial holding companies. At June 30, 2016 and December 31, 2015, the Firm's U.S. Bank Subsidiaries maintained capital at levels sufficiently in excess of the universally mandated wellcapitalized requirements to address any additional capital needs and requirements identified by the U.S. federal banking regulators.

## Broker-Dealer Regulatory Capital Requirements

Morgan Stanley \& Co. LLC ("MS\&Co.") is a registered broker-dealer and registered futures commission merchant and, accordingly, is subject to the minimum net capital requirements of the U.S. Securities and Exchange Commission ("SEC") and the U.S. Commodity Futures Trading Commission ("CFTC"). MS\&Co. has consistently operated with capital in excess of its regulatory capital requirements. MS\&Co.'s net capital totaled $\$ 10,353$ million and $\$ 10,254$ million at June 30, 2016 and December 31, 2015, respectively, which exceeded the amount required by $\$ 8,397$ million and $\$ 8,458$ million, respectively. MS\&Co. is required to hold tentative net capital in excess of $\$ 1$ billion and net capital in excess of $\$ 500$ million in accordance with the market and credit risk standards of Appendix E of SEC Rule 15c3-1. In addition, MS\&Co. is required to notify the SEC in the event that its tentative net capital is less than $\$ 5$ billion. At June 30, 2016 and December 31, 2015, MS\&Co. had tentative net capital in excess of the minimum and the notification requirements.

Morgan Stanley Smith Barney LLC ("MSSB LLC") is a registered broker-dealer and introducing broker for the futures business and, accordingly, is subject to the minimum net capital requirements of the SEC and the CFTC. MSSB LLC has consistently operated with capital in excess of its regulatory capital requirements. MSSB LLC's net capital totaled $\$ 3,752$ million and $\$ 3,613$ million at

June 30, 2016 and December 31, 2015, respectively, which exceeded the amount required by $\$ 3,595$ million and $\$ 3,459$ million, respectively.

Morgan Stanley \& Co. International plc ("MSIP"), a London-based broker-dealer subsidiary, is subject to the capital requirements of the Prudential Regulation Authority, and Morgan Stanley MUFG Securities Co., Ltd. ("MSMS"), a Tokyo-based broker-dealer subsidiary, is subject to the capital requirements of the Financial Services Agency. MSIP and MSMS have consistently operated with capital in excess of their respective regulatory capital requirements.

## Other Regulated Subsidiaries

Certain other U.S. and non-U.S. subsidiaries of the Firm are subject to various securities, commodities and banking regulations, and capital adequacy requirements promulgated by the regulatory and exchange authorities of the countries in which they operate. These subsidiaries have consistently operated with capital in excess of their local capital adequacy requirements.

## 14. Total Equity

## Dividends and Share Repurchases

The Firm repurchased approximately $\$ 625$ million of our outstanding common stock as part of our share repurchase program during the current quarter and $\$ 1,250$ million during the current year period. The Firm repurchased approximately $\$ 625$ million during the prior year quarter and $\$ 875$ million in the prior year period.

For a description of the 2015 capital plan, see Note 15 to the consolidated financial statements in the 2015 Form 10-K.

In June 2016, the Firm received a conditional nonobjection from the Federal Reserve to its 2016 capital plan. The capital plan included a share repurchase of up to $\$ 3.5$ billion of the Firm's outstanding common stock during the period beginning July 1, 2016 through June 30, 2017. Additionally, the capital plan included an increase in the quarterly common stock dividend to $\$ 0.20$ per share from

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

$\$ 0.15$ per share during the period beginning with the dividend declared on July 20, 2016 (see Note 20). The Federal Reserve Board also asked the Firm to submit an additional capital plan by December 29, 2016 addressing weaknesses identified in the Firm's capital planning process.

## Preferred Stock

For a description of Series A through Series J preferred stock issuances, see Note 15 to the consolidated financial statements in the 2015 Form 10-K. Dividends declared on the Firm's outstanding preferred stock were $\$ 156$ million during the current
quarter and $\$ 141$ million during the prior year quarter, and $\$ 234$ million during the current year period and $\$ 219$ million during the prior year period. On June 15, 2016, the Firm announced that the Board declared a quarterly dividend for preferred stock shareholders of record on June 30, 2016 that was paid on July 15, 2016. The Firm is authorized to issue 30 million shares of preferred stock. The preferred stock has a preference over the common stock upon liquidation. The Firm's preferred stock qualifies as Tier 1 capital in accordance with regulatory capital requirements (see Note 13).

## Preferred Stock Outstanding

| Series | SharesOutstandingAt June 30,2016 | Liquidation Preference per Share |  | Carrying Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { At } \\ \text { June 30, } \\ 2016 \end{gathered}$ |  | $\underset{\substack{\text { At } \\ \text { December 31, } \\ 2015}}{ }$ |  |
|  | (shares in millions) |  |  | (dollars in millions) |  |  |  |
| A | 44,000 | \$ | 25,000 | \$ | 1,100 | \$ | 1,100 |
| C(1) | 519,882 |  | 1,000 |  | 408 |  | 408 |
| E | 34,500 |  | 25,000 |  | 862 |  | 862 |
| F | 34,000 |  | 25,000 |  | 850 |  | 850 |
| G | 20,000 |  | 25,000 |  | 500 |  | 500 |
| H | 52,000 |  | 25,000 |  | 1,300 |  | 1,300 |
| I | 40,000 |  | 25,000 |  | 1,000 |  | 1,000 |
| J | 60,000 |  | 25,000 |  | 1,500 |  | 1,500 |
| Total |  |  |  | \$ | 7,520 | \$ | 7,520 |

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Accumulated Other Comprehensive Income (Loss)

Changes in AOCI by Component, Net of Tax and Noncontrolling Interests

|  | Foreign Currency Translation Adjustments |  | $\underline{\text { AFS Securities }}$ |  | $\begin{gathered} \begin{array}{c} \text { Pensions, } \\ \text { Postretirement } \\ \text { and Other } \end{array} \\ \hline \text { dollars in millions) } \end{gathered}$ |  | DVA |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| Balance at March 31, 2016 | \$ | (831) | \$ | 76 | \$ | (373) | \$ | (110) | \$ | $(1,238)$ |
| Change in OCI before reclassifications |  | 52 |  | 188 |  | (5) |  | 143 |  | 378 |
| Amounts reclassified from $\mathrm{AOCI}(2)(3)$ |  | - |  | (45) |  | - |  | - |  | (45) |
| Net OCI during the period |  | 52 |  | 143 |  | (5) |  | 143 |  | 333 |
| Balance at June 30, 2016 | \$ | (779) | \$ | 219 | \$ | (378) | \$ | 33 | \$ | (905) |
| Balance at March 31, 2015 | \$ | (883) | \$ | 127 | \$ | (510) | \$ | - |  | $(1,266)$ |
| Change in OCI before reclassifications |  | 50 |  | (208) |  | (4) |  | - |  | (162) |
| Amounts reclassified from $\mathrm{AOCI}(3)$ |  | - |  | (20) |  | 1 |  | - |  | (19) |
| Net OCI during the period |  | 50 |  | (228) |  | (3) |  | - |  | (181) |
| Balance at June 30, 2015 | \$ | (833) | \$ | (101) | \$ | (513) | \$ | - |  | $(1,447)$ |
| Balance at December 31, 2015 | \$ | (963) | \$ | (319) | \$ | (374) | \$ | - | \$ | $(1,656)$ |
| Cumulative adjustment for accounting change related to DVA(1) |  | - |  | - |  | - |  | (312) |  | (312) |
| Change in OCI before reclassifications |  | 184 |  | 590 |  | (3) |  | 371 |  | 1,142 |
| Amounts reclassified from $\mathrm{AOCI}(2)(3)$ |  | - |  | (52) |  | (1) |  | (26) |  | (79) |
| Net OCI during the period |  | 184 |  | 538 |  | (4) |  | 345 |  | 1,063 |
| Balance at June 30, 2016 | \$ | (779) | \$ | 219 | \$ | (378) | \$ | 33 | \$ | (905) |
| Balance at December 31, 2014 | \$ | (663) | \$ | (73) | \$ | (512) | \$ | - | \$ | $(1,248)$ |
| Change in OCI before reclassifications |  | (170) |  | 7 |  | (4) |  | - |  | (167) |
| Amounts reclassified from $\mathrm{AOCI}(3)$ |  | - |  | (35) |  | ) |  | - |  | (32) |
| Net OCI during the period |  | (170) |  | (28) |  | (1) |  | - |  | (199) |
| Balance at June 30, 2015 | \$ | (833) | \$ | (101) | \$ | (513) | \$ | - | \$ | $(1,447)$ |

(1) In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, a cumulative catch up adjustment was recorded as of January 1, 2016 to move the cumulative DVA amount, net of noncontrolling interest and tax, related to outstanding liabilities under the fair value option election from Retained earnings into AOCI. See Note 2 for further information.
(2) Amounts reclassified from AOCI related to realization of DVA are classified within Trading revenues in the consolidated statements of income. The tax impact in Provision for (benefit from) income taxes resulting from such reclassifications was $\$(15)$ million related to DVA in the current year period. See Note 2 for further information.
(3) Amounts reclassified from AOCI related to realized gains and losses from sales of AFS securities are classified within Other revenues in the consolidated statements of income. The tax impact in Provision for (benefit from) income taxes resulting from such reclassifications was $\$(26)$ million in the current quarter and $\$(30)$ million in the current year period, and $\$(11)$ million in the prior quarter and $\$(20)$ million for the prior year period.

## Noncontrolling Interests

Noncontrolling interests were $\$ 1,259$ million and $\$ 1,002$ million at June 30, 2016 and December 31, 2015, respectively. The increase in noncontrolling interests was primarily due to the consolidation of certain investment management funds sponsored by the Firm. See Note 2 for further information on the adoption of the accounting update Amendments to the Consolidation Analysis.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 15. Earnings per Common Share

Calculation of Basic and Diluted Earnings per Common Share ("EPS")

|  |  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  | Six Months EndedJune 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (in millions, except for per share data) |  |  |  |  |  |  |  |
| Basic EPS: |  |  |  |  |  |  |  |  |
| Income from continuing operations | \$ | 1,650 | \$ | 1,833 | \$ | 2,810 | \$ | 4,301 |
| Income (loss) from discontinued operations |  | (4) |  | (2) |  | (7) |  | (7) |
| Net income |  | 1,646 |  | 1,831 |  | 2,803 |  | 4,294 |
| Net income applicable to noncontrolling interests |  | 64 |  | 24 |  | 87 |  | 93 |
| Net income applicable to Morgan Stanley |  | 1,582 |  | 1,807 |  | 2,716 |  | 4,201 |
| Less: Preferred stock dividends |  | (156) |  | (141) |  | (234) |  | (219) |
| Less: Allocation of (earnings) loss to participating RSUs(1) |  | (1) |  | (1) |  | (1) |  | (3) |
| Earnings applicable to Morgan Stanley common shareholders | \$ | 1,425 | \$ | 1,665 | \$ | 2,481 | \$ | 3,979 |
| Weighted average common shares outstanding |  | 1,866 |  | 1,919 |  | 1,875 |  | 1,922 |
| Earnings per basic common share: |  |  |  |  |  |  |  |  |
| Income from continuing operations | \$ | 0.77 | \$ | 0.87 | \$ | 1.33 | \$ | 2.07 |
| Income (loss) from discontinued operations |  | (0.01) |  | - |  | (0.01) |  | - |
| Earnings per basic common share | \$ | 0.76 | \$ | 0.87 | \$ | 1.32 | \$ | 2.07 |
| Diluted EPS: |  |  |  |  |  |  |  |  |
| Earnings applicable to Morgan Stanley common shareholders | \$ | 1,425 | \$ | 1,665 | \$ | 2,481 | \$ | 3,979 |
| Weighted average common shares outstanding |  | 1,866 |  | 1,919 |  | 1,875 |  | 1,922 |
| Effect of dilutive securities: Stock options and RSUs(1) |  | 33 |  | 41 |  | 32 |  | 40 |
| Weighted average common shares outstanding and common stock equivalents |  | 1,899 |  | 1,960 |  | 1,907 |  | 1,962 |
| Earnings per diluted common share: |  |  |  |  |  |  |  |  |
| Income from continuing operations | \$ | 0.75 | \$ | 0.85 | \$ | 1.30 | \$ | 2.03 |
| Income (loss) from discontinued operations |  | - |  | - |  | - |  | - |
| Earnings per diluted common share | \$ | 0.75 | \$ | 0.85 | \$ | 1.30 | \$ | 2.03 |

[^14]
## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 16. Interest Income and Interest Expense

Interest Income and Interest Expense

|  | $\begin{gathered} \text { Three Months Ended } \\ \text { June 30, } \\ \hline \end{gathered}$ |  |  |  | $\begin{gathered} \text { Six Months Ended } \\ \text { June 30, } \\ \hline \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Interest income(1): |  |  |  |  |  |  |  |  |
| Trading assets(2) | \$ | 526 | \$ | 555 | \$ | 1,109 | \$ | 1,149 |
| Investment securities |  | 237 |  | 238 |  | 473 |  | 438 |
| Loans |  | 680 |  | 529 |  | 1,327 |  | 1,004 |
| Interest bearing deposits with banks |  | 52 |  | 22 |  | 105 |  | 45 |
| Securities purchased under agreements to resell and Securities borrowed(3) |  | (120) |  | (200) |  | (198) |  | (305) |
| Customer receivables and Other(4) |  | 292 |  | 242 |  | 598 |  | 539 |
| Total interest income | \$ | 1,667 | \$ | 1,386 | \$ | 3,414 | \$ | 2,870 |
| Interest expense(1): |  |  |  |  |  |  |  |  |
| Deposits | \$ | 15 | \$ | 17 | \$ | 37 | \$ | 35 |
| Short-term borrowings |  | 7 |  | 5 |  | 14 |  | 9 |
| Long-term borrowings |  | 844 |  | 915 |  | 1,804 |  | 1,841 |
| Securities sold under agreements to repurchase and Securities loaned(5) |  | 259 |  | 235 |  | 513 |  | 543 |
| Customer payables and Other(6) |  | (371) |  | (484) |  | (766) |  | (852) |
| Total interest expense | \$ | 754 | \$ | 688 | \$ | 1,602 | \$ | 1,576 |
| Net interest | \$ | 913 | \$ | 698 | \$ | 1,812 | \$ | 1,294 |

[^15]
## 17. Employee Benefit Plans

The Firm sponsors various retirement plans for the majority of its U.S. and non-U.S. employees. The Firm provides certain other postretirement benefits, primarily health care and life insurance, to eligible U.S. employees.

Components of Net Periodic Benefit Expense (Income) for Pension and Other Postretirement Plans

|  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { Six Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Service cost, benefits earned during the period | \$ | 4 | \$ | 5 | \$ | 8 | \$ | 10 |
| Interest cost on projected benefit obligation |  | 39 |  | 38 |  | 77 |  | 77 |
| Expected return on plan assets |  | (30) |  | (29) |  | (60) |  | (59) |
| Net amortization of prior service credit |  | (5) |  | (5) |  | (9) |  | (10) |
| Net amortization of actuarial loss |  | 3 |  | 7 |  | 6 |  | 13 |
| Net periodic benefit expense | \$ | 11 | \$ | 16 | \$ | 22 | \$ | 31 |

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 18. Income Taxes

The Firm is under continuous examination by the Internal Revenue Service (the "IRS") and other tax authorities in certain countries, such as Japan and the United Kingdom ("U.K."), and in states in which it has significant business operations, such as New York. The Firm is currently at various levels of field examination with respect to audits by the IRS, as well as New York State and New York City, for tax years 2009-2012 and 2007-2009, respectively. The Firm believes that the resolution of these tax matters will not have a material effect in the consolidated balance sheets, although a resolution could have a material impact in the consolidated statements of income for a particular future period and on the effective tax rate for any period in which such resolution occurs.

In April 2016, the Firm received a notification from the IRS that the Congressional Joint Committee on Taxation approved the final report of an Appeals Office review of matters from tax years 1999-2005, and the Revenue Agent's Report reflecting agreed closure of the 2006-2008 tax years. The Firm has reserved the right to contest certain items, associated with tax years 1999-2005, the resolution of which is not expected to have a material impact on the effective tax rate or the consolidated financial statements.

During 2016, the Firm expects to reach a conclusion with the U.K. tax authorities on substantially all issues through
tax year 2010, the resolution of which is not expected to have a material impact on the effective tax rate or the consolidated financial statements.

The Firm has established a liability for unrecognized tax benefits that it believes is adequate in relation to the potential for additional assessments. Once established, the Firm adjusts liabilities for unrecognized tax benefits only when more information is available or when an event occurs necessitating a change.

It is reasonably possible that significant changes in the balance of unrecognized tax benefits may occur within the next 12 months related to certain tax authority examinations referred to herein. At this time, however, it is not possible to reasonably estimate the expected change to the total amount of unrecognized tax benefits and the impact on the Firm's effective tax rate over the next 12 months.

The Firm's effective tax rate from continuing operations for the prior year period included a net discrete tax benefit of $\$ 564$ million. This net discrete tax benefit was primarily associated with the repatriation of non-U.S. earnings at a cost lower than originally estimated due to an internal restructuring to simplify the Firm's legal entity organization in the U.K.

## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## 19. Segment and Geographic Information

## Segment Information

For a discussion about the Firm's business segments, see Note 21 to the consolidated financial statements in the 2015 Form 10-K.
$\underline{\text { Selected Financial Information }}$


## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)



## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

|  | Six Months Ended June 30, 2015 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \hline \text { Institutional } \\ & \text { Securities(1) } \end{aligned}$ |  | WealthManagement |  | $\begin{gathered} \text { Investment } \\ \text { Management } \\ \hline \end{gathered}$ |  | Intersegment Eliminations |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Total non-interest revenues(2)(3) | \$ | 10,751 | \$ | 6,283 | \$ | 1,431 | \$ | (109) | \$ | 18,356 |
| Interest income |  | 1,593 |  | 1,519 |  | 1 |  | (243) |  | 2,870 |
| Interest expense |  | 1,714 |  | 93 |  | 12 |  | (243) |  | 1,576 |
| Net interest |  | (121) |  | 1,426 |  | (11) |  | - |  | 1,294 |
| Net revenues | \$ | 10,630 | \$ | 7,709 | \$ | 1,420 | \$ | (109) | \$ | 19,650 |
| Income from continuing operations before income taxes | \$ | 3,435 | \$ | 1,740 | \$ | 407 | \$ | - | \$ | 5,582 |
| Provision for income taxes(4) |  | 517 |  | 644 |  | 120 |  | - |  | 1,281 |
| Income from continuing operations |  | 2,918 |  | 1,096 |  | 287 |  | - |  | 4,301 |
| Income (loss) from discontinued operations, net of income taxes |  | (7) |  | - |  | - |  | - |  | (7) |
| Net income |  | 2,911 |  | 1,096 |  | 287 |  | - |  | 4,294 |
| Net income applicable to noncontrolling interests |  | 74 |  | - |  | 19 |  | - |  | 93 |
| Net income applicable to Morgan Stanley | \$ | 2,837 | \$ | 1,096 | \$ | 268 | \$ | - | \$ | 4,201 |

(1) In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, for the current quarter and current year period DVA gains (losses) are recorded within OCI when unrealized and in Trading revenues when realized. In the prior year quarter and prior year period, the realized and unrealized DVA gains (losses) are recorded in Trading revenues. See Notes 2 and 14 for further information
(2) In certain management fee arrangements, the Firm is entitled to receive performance-based fees (also referred to as incentive fees and includes carried interest) when the return on assets under management exceeds certain benchmark returns or other performance targets. In such arrangements, performance fee revenues are accrued (or reversed) quarterly based on measuring account/fund performance to date versus the performance benchmark stated in the investment management agreement. The Firm's portion of unrealized cumulative amount of performance-based fee revenue (for which the Firm is not obligated to pay compensation) at risk of reversing if fund performance falls below stated investment management agreement benchmarks was approximately $\$ 421$ million and $\$ 422$ million at June 30, 2016 and December 31, 2015, respectively. See Note 11 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.
(3) The Firm waives a portion of its fees from certain registered money market funds that comply with the requirements of Rule $2 \mathrm{a}-7$ of the Investment Company Act of 1940. These fee waivers resulted in a reduction of fees of approximately $\$ 12$ million and $\$ 50$ million for the current quarter and prior year quarter, respectively, and $\$ 35$ million and $\$ 100$ million for the current year period and prior year period, respectively.
(4) The Firm's effective tax rate from continuing operations for the prior year period included a net discrete tax benefit of $\$ 564$ million, within Institutional Securities (see Note 18).

Total Assets by Business Segment


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## MORGAN STANLEY

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)—(Continued)

## Geographic Information

For a discussion about the Firm's geographic net revenues, see Note 21 to the consolidated financial statements in the 2015 Form 10-K.

## Net Revenues by Region

|  | Three Months EndedJune 30, |  |  |  | Six Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Americas | \$ | 6,538 | \$ | 6,777 | \$ | 12,290 | \$ | 13,707 |
| EMEA |  | 1,312 |  | 1,436 |  | 2,441 |  | 3,198 |
| Asia-Pacific |  | 1,059 |  | 1,530 |  | 1,970 |  | 2,745 |
| Net revenues | \$ | 8,909 | \$ | 9,743 | \$ | 16,701 | \$ | 19,650 |

## 20. Subsequent Events

The Firm has evaluated subsequent events for adjustment to or disclosure in the consolidated financial statements through the date of this report and has not identified any recordable or disclosable events, not otherwise reported in these consolidated financial statements or the notes thereto, except for the following:

## Common Stock Dividend

On July 20, 2016, the Firm announced that its Board of Directors declared a quarterly dividend per common share of $\$ 0.20$. The dividend is payable on August 15, 2016 to common shareholders of record on July 29, 2016.

## Long-Term Borrowings

Subsequent to June 30, 2016 and through July 29, 2016, longterm borrowings increased by approximately $\$ 3.4$ billion, net of redemptions. This amount includes the issuance of $\$ 3.0$ billion of senior debt on July 25, 2016.

## Trust Preferred Securities

On July 19, 2016, the Firm announced that Morgan Stanley Capital Trust III, Morgan Stanley Capital Trust IV and Morgan Stanley Capital Trust V will redeem all of their issued and outstanding Capital Securities on August 18, 2016, and that Morgan Stanley Capital Trust VIII will redeem all of its issued and outstanding Capital Securities on August 3, 2016, pursuant to the optional redemption provisions provided in the respective governing documents. In the aggregate, $\$ 2.8$ billion will be redeemed. The Firm will concurrently redeem the related underlying junior subordinated debentures.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Morgan Stanley:

We have reviewed the accompanying condensed consolidated balance sheet of Morgan Stanley and subsidiaries (the "Company") as of June 30, 2016, and the related condensed consolidated statements of income and comprehensive income for the three-month and six-month periods ended June 30, 2016 and 2015, and the condensed consolidated statements of cash flows and changes in total equity for the six-month periods ended June 30, 2016 and 2015. These interim condensed consolidated financial statements are the responsibility of the management of the Company.

We conducted our reviews in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our reviews, we are not aware of any material modifications that should be made to such condensed consolidated interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated statement of financial condition of the Company as of December 31, 2015, and the consolidated statements of income, comprehensive income, cash flows and changes in total equity for the year then ended (not presented herein) included in the Company's Annual Report on Form $10-\mathrm{K}$; and in our report dated February 23, 2016, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated balance sheet as of December 31, 2015 is fairly stated, in all material respects, in relation to the consolidated statement of financial condition from which it has been derived.
/s/ Deloitte \& Touche LLP
New York, New York
August 3, 2016

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

## Introduction

Morgan Stanley, a financial holding company, is a global financial services firm that maintains significant market positions in each of its business segments-Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms "Morgan Stanley" or "us", "we", or "our" mean Morgan Stanley (the "Parent") together with its consolidated subsidiaries.

A description of the clients and principal products and services of each of our business segments is as follows:

Institutional Securities provides investment banking, sales and trading and other services to corporations, governments, financial institutions, and high-to-ultra high net worth clients. Investment banking services comprise capital raising and financial advisory services, including services relating to the underwriting of debt, equity and other securities as well as advice on mergers and acquisitions, restructurings, real estate and project finance. Sales and trading services include sales, financing and market-making activities in equity securities and fixed income products, including foreign exchange and commodities, as well as prime brokerage services. Other services include corporate lending activities and credit products, investments and research.

Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small-to-medium sized businesses and institutions covering brokerage and investment advisory services, market-making activities in fixed income securities,
financial and wealth planning services, annuity and insurance products, credit and other lending products, banking and retirement plan services.

Investment Management provides a broad range of investment strategies and products that span geographies, asset classes, and public and private markets, to a diverse group of clients across institutional and intermediary channels. Strategies and products comprise equity, fixed income, liquidity and alternative / other products. Institutional clients include defined benefit/defined contribution pensions, foundations, endowments, government entities, sovereign wealth funds, insurance companies, third-party fund sponsors and corporations. Individual clients are serviced through intermediaries, including affiliated and non-affiliated distributors.

The results of operations in the past have been, and in the future may continue to be, materially affected by competition, risk factors, legislative, legal and regulatory developments, as well as other factors. These factors also may have an adverse impact on our ability to achieve our strategic objectives. Additionally, the discussion of our results of operations herein may contain forward-looking statements. These statements, which reflect management's beliefs and expectations, are subject to risks and uncertainties that may cause actual results to differ materially. For a discussion of the risks and uncertainties that may affect our future results, see "Forward-Looking Statements" immediately preceding Part I, Item 1, "Business-Competition" and "Business-Supervision and Regulation" in Part I, Item 1, "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015 (the "2015 Form 10-K"), "Business Segments-Wealth Management-Other Items," and "Liquidity and Capital Resources" herein.

## Executive Summary

## Business Segment Financial Information and Other Statistical Data



|  |  | e 30, 2016 |  | 31, 2015 |
| :---: | :---: | :---: | :---: | :---: |
|  |  | s in millio per | ex | noted and |
| Total loans(3) | \$ | 93,165 | \$ | 85,759 |
| Total assets | \$ | 828,873 | \$ | 787,465 |
| Global Liquidity Reserve managed by bank and non-bank lega |  |  |  |  |
| Bank legal entities | \$ | 91,062 | \$ | 94,328 |
| Non-bank legal entities |  | 116,393 |  | 108,936 |
| Total | \$ | 207,455 | \$ | 203,264 |
| Total deposits | \$ | 152,693 | \$ | 156,034 |
| Long-term borrowings | \$ | 163,492 | \$ | 153,768 |
| Maturities of long-term borrowings outstanding (next 12 months) | \$ | 24,244 | \$ | 22,396 |
| Book value per common share(5) | \$ | 36.29 | \$ | 35.24 |
| Capital ratios (Transitional-Advanced)(6): |  |  |  |  |
| Common Equity Tier 1 capital ratio |  | 16.8\% |  | 15.5\% |
| Tier 1 capital ratio |  | 18.8\% |  | 17.4\% |
| Total capital ratio |  | 22.4\% |  | 20.7\% |
| Capital ratios (Transitional-Standardized)(6): |  |  |  |  |
| Tier 1 leverage ratio(7) |  | 8.3\% |  | 8.3\% |
| Worldwide employees |  | 54,529 |  | 56,218 |

## EMEA-Europe, Middle East and Africa

(1) For the calculation of basic and diluted earnings per common share, see Note 15 to the consolidated financial statements in Item 1.
(2) For a discussion of how the geographic breakdown for net revenues is determined, see Note 21 to the consolidated financial statements in Item 8 of the 2015 Form 10-K.
(3) Amounts include loans held for investment (net of allowance) and loans held for sale but exclude loans at fair value, which are included in Trading assets in the consolidated balance sheets (see Note 7 to the consolidated financial statements in Item 1).
(4) For a discussion of Global Liquidity Reserve, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Liquidity Risk Management Framework-Global Liquidity Reserve" in Part II, Item 7 of the 2015 Form 10-K.
(5) Book value per common share equals common shareholders' equity of $\$ 69,596$ million at June 30, 2016 and $\$ 67,662$ million at December 31, 2015 divided by common shares outstanding of 1,918 million at June 30, 2016 and 1,920 million at December 31, 2015.
(6) For a discussion of our regulatory capital ratios, see "Liquidity and Capital Resources-Regulatory Requirements" herein.
(7) See Note 13 to the consolidated financial statements in Item 1 for information on the Tier 1 leverage ratio.

## Overview of Financial Results

## Consolidated Results for the Quarter Ended June 30, 2016

- We reported net revenues of $\$ 8,909$ million in the quarter ended June 30, 2016 ("current quarter"), compared with $\$ 9,743$ million in the quarter ended June 30, 2015 ("prior year quarter"). For the current quarter, net income applicable to Morgan Stanley was $\$ 1,582$ million, or $\$ 0.75$ per diluted common share, compared with income of $\$ 1,807$ million, or $\$ 0.85$ per diluted common share, in the prior year quarter.
- The prior year quarter included positive revenues due to the impact of debt valuation adjustments ("DVA") of $\$ 182$ million or $\$ 0.06$ per diluted common share. Excluding DVA, net revenues were $\$ 9,561$ million and net income applicable to Morgan Stanley was $\$ 1,688$ million, or $\$ 0.79$ per diluted common share, in the prior year quarter (see "Selected Non-Generally Accepted Accounting Principles ("Non-GAAP") Financial Information" herein).
- Effective January 1, 2016, we early adopted a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities that requires unrealized gains and losses from debt-related credit spreads and other credit factors to be presented in other comprehensive income (loss) ("OCI") as opposed to Trading revenues. Results for 2015 are not restated pursuant to that guidance.


## Consolidated Results for the Six Months Ended June 30, 2016

- We reported net revenues of $\$ 16,701$ million in the six months ended June 30, 2016 ("current year period"), compared with $\$ 19,650$ million in the six months ended June 30, 2015 ("prior year period"). For the current year period, net income applicable to Morgan Stanley was $\$ 2,716$ million, or $\$ 1.30$ per diluted common share, compared with income of $\$ 4,201$ million, or $\$ 2.03$ per diluted common share in the prior year period.
- The prior year period included a net discrete tax benefit of $\$ 564$ million or $\$ 0.29$ per diluted common share, primarily associated with the repatriation of non-U.S. earnings at a cost lower than originally estimated, and positive revenues associated with DVA of $\$ 307$ million or $\$ 0.10$ per diluted common share. For a further discussion of the net discrete tax benefit, see "Supplemental Financial Information and Disclosures- Income Tax Matters" herein.
- Net revenues excluding DVA were $\$ 19,343$ million in the prior year period, while net income applicable to Morgan Stanley was $\$ 4,002$ million excluding DVA, or
$\$ 1.93$ per diluted common share excluding DVA, in the prior year period. Excluding both DVA and the net discrete tax benefit, net income applicable to Morgan Stanley was $\$ 3,438$ million, or $\$ 1.64$ per diluted common share, in the prior year period (see "Selected NonGenerally Accepted Accounting Principles ("NonGAAP") Financial Information" herein).


## Business Segment Net Revenues for the Current Quarter and Current Year Period

- Institutional Securities net revenues of $\$ 4,578$ million in the current quarter and $\$ 8,292$ million in the current year period decreased $11 \%$ and $22 \%$ from the comparable periods reflecting lower underwriting and sales and trading results, partly offset by continued strength in merger, acquisition and restructuring transactions ("M\&A") advisory.
- Wealth Management net revenues of $\$ 3,811$ million in the current quarter and $\$ 7,479$ million in the current year period decreased $2 \%$ and $3 \%$ from the comparable periods reflecting lower transactional revenues, partly offset by strong growth in net interest income.
- Investment Management net revenues of $\$ 583$ million in the current quarter and $\$ 1,060$ million in the current year period decreased $22 \%$ and $25 \%$ from the comparable periods reflecting lower investment gains and carried interest in infrastructure and private equity investments. Asset management fees were relatively unchanged from the comparable periods.


## Consolidated Non-Interest Expenses for the Current Quarter and Current Year Period

- Compensation and benefits expenses of $\$ 4,015$ million in the current quarter and $\$ 7,698$ million in the current year period decreased $9 \%$ and $14 \%$ from $\$ 4,405$ million in the prior year quarter and $\$ 8,929$ million in the prior year period, primarily due to a decrease in discretionary incentive compensation driven mainly by lower revenues, a decrease in the formulaic payout to Wealth Management representatives linked to lower revenues, and a decrease in salaries due to lower headcount. In the current year period, compensation and benefits expenses also reflected a decrease in the fair value of deferred compensation plan referenced investments and carried interest.
- Non-compensation expenses were $\$ 2,411$ million in the current quarter and $\$ 4,782$ million in the current year period compared with $\$ 2,611$ million in the prior year quarter and $\$ 5,139$ million in the prior year period, representing an $8 \%$ and a $7 \%$ decrease, primarily due to lower litigation costs and expense reductions across Professional services, Marketing and business development and Occupancy and equipment.


## Return on Average Common Equity

- The annualized return on average common equity was $8.3 \%$ in the current quarter and $7.2 \%$ in the current year period. For the prior year quarter, the annualized return on average common equity was $9.9 \%$, or $9.1 \%$ excluding DVA. For the prior year period, the annualized return on average common equity was $12.0 \%$, or $11.3 \%$ excluding DVA, and $9.6 \%$ excluding DVA and a net discrete tax benefit (see "Selected Non-Generally Accepted Accounting Principles ("Non-GAAP") Financial Information" herein).


## Selected Non-Generally Accepted Accounting Principles ("Non-GAAP") Financial Information

We prepare our Consolidated Financial Statements using accounting principles generally accepted in the United States ("U.S. GAAP"). From time to time, we may disclose certain "non-GAAP financial measures" in the course of
our earnings releases, earnings and other conference calls, financial presentations and otherwise. A "non-GAAP financial measure" excludes, or includes, amounts from the most directly comparable measure calculated and presented in accordance with U.S. GAAP. Non-GAAP financial measures disclosed by us are provided as additional information to investors and analysts in order to provide them with further transparency about, or as an alternative method for assessing, our financial condition, operating results or prospective regulatory capital requirements. These measures are not in accordance with, or a substitute for, U.S. GAAP and may be different from or inconsistent with non-GAAP financial measures used by other companies. Whenever we refer to a non-GAAP financial measure, we will also generally define it or present the most directly comparable financial measure calculated and presented in accordance with U.S. GAAP, along with a reconciliation of the differences between the U.S. GAAP financial measure and the nonGAAP financial measure.

Non-GAAP Financial Measures by Business Segment

|  | Three Months EndedJune 30, |  |  |  | Six Months EndedJune 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in billions) |  |  |  |  |  |  |  |
| Pre-tax profit margin(1): |  |  |  |  |  |  |  |  |
| Institutional Securities |  | 33\% |  | 31\% |  | 29\% |  | 32\% |
| Wealth Management |  | 23\% |  | 23\% |  | 22\% |  | 23\% |
| Investment Management |  | 20\% |  | 29\% |  | 15\% |  | 29\% |
| Consolidated |  | 28\% |  | 28\% |  | 25\% |  | 28\% |
| Average common equity(2)(3): |  |  |  |  |  |  |  |  |
| Institutional Securities | \$ | 43.2 | \$ | 35.3 | \$ | 43.2 | \$ | 36.1 |
| Wealth Management |  | 15.3 |  | 11.3 |  | 15.3 |  | 10.9 |
| Investment Management |  | 2.8 |  | 2.3 |  | 2.8 |  | 2.3 |
| Parent(2) |  | 7.7 |  | 18.3 |  | 7.3 |  | 17.0 |
| Consolidated average common equity | \$ | 69.0 | \$ | 67.2 | \$ | 68.6 | \$ | 66.3 |
| Return on average common equity(2)(3): |  |  |  |  |  |  |  |  |
| Institutional Securities |  | 8.0\% |  | 11.3\% |  | 6.4\% |  | 15.1\% |
| Wealth Management |  | 12.9\% |  | 18.2\% |  | 12.7\% |  | 18.4\% |
| Investment Management |  | 10.6\% |  | 27.7\% |  | 8.8\% |  | 23.5\% |
| Consolidated |  | 8.3\% |  | 9.9\% |  | 7.2\% |  | 12.0\% |


|  | Three Months EndedJune 30, |  |  |  | Six Months EndedJune 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in millions, except per share amounts) |  |  |  |  |  |  |  |
| Net revenues |  |  |  |  |  |  |  |  |
| Net revenues-U.S. GAAP | \$ | 8,909 | \$ | 9,743 | \$ | 16,701 | \$ | 19,650 |
| Impact of DVA(4) |  | - |  | (182) |  | - |  | (307) |
| Net revenues-non-GAAP | \$ | 8,909 | \$ | 9,561 | \$ | $\underline{\text { 16,701 }}$ | \$ | $\underline{\text { 19,343 }}$ |
| Net income applicable to Morgan Stanley |  |  |  |  |  |  |  |  |
| Net income applicable to Morgan Stanley-U.S. GAAP | \$ | 1,582 | \$ | 1,807 | \$ | 2,716 | \$ | 4,201 |
| Impact of DVA(4) |  | - |  | (119) |  | - |  | (199) |
| Net income applicable to Morgan Stanley, excluding DVA-nonGAAP | \$ | 1,582 | \$ | 1,688 | \$ | 2,716 | \$ | 4,002 |
| Impact of net discrete tax benefits(5) |  | - |  | - |  | - |  | (564) |
| Net income applicable to Morgan Stanley, excluding DVA and net discrete tax benefits-non-GAAP | \$ | 1,582 | \$ | 1,688 | \$ | 2,716 | \$ | 3,438 |
| Earnings per diluted common share |  |  |  |  |  |  |  |  |
| Earnings per diluted common share-U.S. GAAP | \$ | 0.75 | \$ | 0.85 | \$ | 1.30 | \$ | 2.03 |
| Impact of DVA(4) |  | - |  | (0.06) |  | - |  | (0.10) |
| Earnings per diluted common share, excluding |  |  |  |  |  |  |  |  |
| DVA-non-GAAP . | \$ | 0.75 | \$ | 0.79 | \$ | 1.30 | \$ | 1.93 |
| Impact of net discrete tax benefits(5) |  | - |  | - |  | - |  | (0.29) |
| Earnings per diluted common share, excluding DVA and net discrete tax benefits-non-GAAP | \$ | 0.75 | \$ | 0.79 | \$ | 1.30 | \$ | 1.64 |
| Effective income tax rate |  |  |  |  |  |  |  |  |
| Effective income tax rate from continuing operations-U.S. |  |  |  |  |  |  |  |  |
| GAAP . . . . . . . . . . . . . |  | 33.5\% |  | 32.8\% |  | 33.4\% |  | 22.9\% |
| Impact of net discrete tax benefits(5) |  | - |  | - |  | - |  | 10.2\% |
| Effective income tax rate from continuing operations-non-GAAP |  | 33.5\% |  | 32.8\% |  | 33.4\% |  | 33.1\% |

## Non-GAAP Financial Measures

Average common equity, return on average common equity, average tangible common equity, return on average tangible common equity and tangible book value per common share are all non-GAAP financial measures we consider to be useful measures to us, investors and analysts to assess capital adequacy and to allow better comparability of period-to-period operating performance. For a discussion of tangible common equity, see "Liquidity and Capital Resources-Tangible Equity" herein.


DVA-Debt valuation adjustments represent the change in the fair value resulting from fluctuations in our credit spreads and other credit factors related to liabilities carried at fair value, primarily certain Long-term and Short-term borrowings.
(1) Pre-tax profit margin is a non-GAAP financial measure that we consider to be a useful measure to us, investors and analysts to assess operating performance and represents income from continuing operations before income taxes as a percentage of net revenues, which are two U.S. GAAP reported amounts without adjustment.
(2) Average common equity for each business segment is determined using our Required Capital framework, an internal capital adequacy measure (see "Liquidity and Capital Resources-Regulatory Requirements-Attribution of Average Common Equity according to the Required Capital Framework" herein). Each business segment's return on average common equity equals net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity for that segment. Effective tax rates used in the computation are determined on a separate legal entity basis.
(3) Return on average common equity equals consolidated net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity. Effective January 1, 2016, as a result of the adoption of a provision of the accounting update related to DVA, we have redefined the calculation of the return on average common equity excluding DVA to adjust for DVA only in the denominator. Prior to January 1, 2016, for the return on average common equity, excluding DVA, and excluding DVA and net discrete tax benefits, both the numerator and denominator were adjusted to exclude those items.
(4) In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, unrealized DVA gains (losses) in the current quarter and current year period are recorded within OCI in the consolidated statements of comprehensive income. In the prior year quarter and prior year period, the DVA gains (losses) were recorded within Trading revenues in the consolidated statements of income. See Notes 2 and 14 to the consolidated financial statements in Item 1 for further information.
(5) For a discussion of our net discrete tax benefit, see "Supplemental Financial Information and Disclosures-Income Tax Matters" herein.
(6) The impact of DVA on average common equity and average tangible common equity was approximately $\$(106)$ million and $\$(714)$ million in the current quarter and prior year quarter, respectively. The impact of DVA on average common equity and average tangible common equity was approximately $\$(128)$ million and $\$(756)$ million in the current year period and prior year period, respectively. The impact of the net discrete tax benefit on average common equity and average tangible common equity was approximately $\$ 322$ million in the prior year period.
(7) Return on average tangible common equity equals net income applicable to Morgan Stanley less preferred dividends as a percentage of average tangible common equity. Effective January 1, 2016, as a result of the adoption of a provision of the accounting update related to DVA, we have redefined the calculation of return on average tangible common equity excluding DVA to adjust for DVA only in the denominator. Prior to January 1, 2016, for the return on average tangible common equity, excluding DVA, and excluding DVA and net discrete tax benefits, both the numerator and the denominator were adjusted to exclude the impact of DVA and the impact of net discrete tax benefits. The impact of DVA was $1.0 \%$ and $0.9 \%$ in the prior year quarter and prior year period, respectively. The impact of the net discrete tax benefit was $1.9 \%$ in the prior year period.
(8) Tangible book value per common share equals tangible common equity of $\$ 60,185$ million at June 30, 2016 and $\$ 58,098$ million at December 31 , 2015 divided by common shares outstanding of 1,918 million at June 30, 2016 and 1,920 million at December 31, 2015.

## Return on Equity Target

We are aiming to improve our return to shareholders, and accordingly have established a target return on average common equity excluding DVA ("Return on Equity") to be achieved by 2017, subject to the successful execution of our strategic objectives. For further information on our Return on Equity target and related assumptions, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Executive Summary-Return on Equity Target" in Part II, Item 7 of the 2015 Form 10-K.

## Business Segments

Substantially all of our operating revenues and operating expenses are directly attributable to the business segments. Certain revenues and expenses have been allocated to each business segment, generally in proportion to its respective net revenues, non-interest expenses or other relevant measures.

As a result of treating certain intersegment transactions as transactions with external parties, we include an Intersegment Eliminations category to reconcile the business segment results to our consolidated results.

## Net Revenues

For discussions of our net revenues, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Business Segments-Net Revenues" and "Management's Discussion and Analysis of Financial Condition and Results of Operations-Business Segments-Net Revenues by Segment" in Part II, Item 7 of the 2015 Form 10-K.

## Compensation Expense

For a discussion of our compensation expense, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Business SegmentsCompensation Expense" in Part II, Item 7 of the 2015 Form 10-K.

## INSTITUTIONAL SECURITIES

## INCOME STATEMENT INFORMATION

|  | Three Months Ended June 30, |  |  | Six Months Ended June 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | From Prior | r |
|  | 2016 |  | 2015 |  |  |  |  |  | 2016 |  | 2015 | Year Quarter | Year Period |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |
| Revenues: |  |  |  |  |  |  |  |  |  |
| Investment banking | \$ 1,108 | \$ | 1,440 | \$ | 2,098 | \$ | 2,613 | (23)\% | (20)\% |
| Trading | 2,498 |  | 2,785 |  | 4,389 |  | 6,207 | (10)\% | (29)\% |
| Investments | 76 |  | 16 |  | 108 |  | 128 | N/M | (16)\% |
| Commissions and fees | 607 |  | 683 |  | 1,262 |  | 1,356 | (11)\% | (7)\% |
| Asset management, distribution and administration fees | 69 |  | 69 |  | 142 |  | 145 | 0\% | (2)\% |
| Other | 138 |  | 212 |  | 142 |  | 302 | (35)\% | (53)\% |
| Total non-interest revenues | 4,496 |  | 5,205 |  | 8,141 |  | 10,751 | (14)\% | (24)\% |
| Interest income | 966 |  | 723 |  | 2,019 |  | 1,593 | 34\% | 27\% |
| Interest expense | 884 |  | 756 |  | 1,868 |  | 1,714 | 17\% | 9\% |
| Net interest | 82 |  | (33) |  | 151 |  | (121) | N/M | N/M |
| Net revenues | 4,578 |  | 5,172 |  | 8,292 |  | 10,630 | (11)\% | (22)\% |
| Compensation and benefits | 1,625 |  | 1,897 |  | 3,007 |  | 3,923 | (14)\% | (23)\% |
| Non-compensation expenses | 1,447 |  | 1,653 |  | 2,871 |  | 3,272 | (12)\% | (12)\% |
| Total non-interest expenses | 3,072 |  | 3,550 |  | 5,878 |  | 7,195 | (13)\% | (18)\% |
| Income from continuing operations before income taxes | 1,506 |  | 1,622 |  | 2,414 |  | 3,435 | (7)\% | (30)\% |
| Provision for income taxes | 453 |  | 511 |  | 728 |  | 517 | (11)\% | 41\% |
| Income from continuing operations | 1,053 |  | 1,111 |  | 1,686 |  | 2,918 | (5)\% | (42)\% |
| Income (loss) from discontinued operations, net of income taxes | (4) |  | (2) |  | (7) |  | (7) | N/M | 0\% |
| Net income | 1,049 |  | 1,109 |  | 1,679 |  | 2,911 | (5)\% | (42)\% |
| Net income applicable to noncontrolling interests | 61 |  | 22 |  | 100 |  | 74 | N/M | 35\% |
| Net income applicable to Morgan Stanley | \$ 988 | \$ | 1,087 | \$ | 1,579 | \$ | 2,837 | (9)\% | (44)\% |

[^17]
## Investment Banking

Investment Banking Revenues

|  | Three Months Ended June 30, |  |  |  | Six Months Ended June 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | From Prior Year Quarter | From Prior Year Period |
|  | 2016 |  | 2015 |  |  |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Advisory revenues | \$ | 497 | \$ | 423 | \$ | 1,088 | \$ | 894 | 17\% | 22\% |
| Underwriting revenues: |  |  |  |  |  |  |  |  |  |  |
| Equity underwriting revenues |  | 266 |  | 489 |  | 426 |  | 796 | (46)\% | (46)\% |
| Fixed income underwriting revenues |  | 345 |  | 528 |  | 584 |  | 923 | (35)\% | (37)\% |
| Total underwriting revenues |  | 611 |  | 1,017 |  | 1,010 |  | 1,719 | (40)\% | (41)\% |
| Total investment banking revenues | \$ | 1,108 | \$ | 1,440 | \$ | 2,098 | \$ | 2,613 | (23)\% | (20)\% |

Investment Banking Volumes

|  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \\ & \hline \end{aligned}$ |  |  |  | Six Months EndedJune 30, |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2016(1) |  | 2015(1) |  | 2016(1) | 2015(1) |
|  | (dollars in billions) |  |  |  |  |  |  |
| Completed mergers and acquisitions(2) | \$ | 235 | \$ | 137 | \$ | 526 | \$262 |
| Equity and equity-related offerings(3) |  | 14 |  | 20 |  | 22 | 39 |
| Fixed income offerings(4) |  | 63 |  | 73 |  | 114 | 147 |

(1) Source: Thomson Reuters, data at July 1, 2016. Completed mergers and acquisitions volumes are based on full credit to each of the advisors in a transaction. Equity and equity-related offerings and fixed income offerings are based on full credit for single book managers and equal credit for joint book managers. Transaction volumes may not be indicative of net revenues in a given period. In addition, transaction volumes for prior periods may vary from amounts previously reported due to the subsequent withdrawal or change in the value of a transaction.
(2) Amounts include transactions of $\$ 100$ million or more.
(3) Amounts include Rule 144A issuances and registered public offerings of common stock and convertible securities and rights offerings.
(4) Amounts include non-convertible preferred stock, mortgage-backed and asset-backed securities, and taxable municipal debt. Amounts include publicly registered and Rule 144A issues. Amounts exclude leveraged loans and self-led issuances.

Investment banking revenues are composed of fees from advisory services and revenues from the underwriting of securities offerings and syndication of loans, net of syndication expenses.

Investment banking revenues of $\$ 1,108$ million in the current quarter and $\$ 2,098$ million in the current year period decreased $23 \%$ and $20 \%$ from the comparable periods due to lower underwriting revenues, partially offset by higher advisory revenues.

- Advisory revenues increased in the current quarter and current year period due to higher completed M\&A activity (see Investment Banking Volumes table).
- Equity underwriting revenues decreased as a result of significantly lower market volumes in both initial public offerings ("IPO") and follow on offerings, while Fixed income underwriting revenues decreased primarily due to lower bond and loan fees.


## Sales and Trading Net Revenues

## Sales and Trading Net Revenues

|  | Three Months Ended June 30, |  |  |  | Six Months Ended June 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | From Prior Year Quarter | From Prior Year Period |
|  | 2016 |  | 2015 |  |  |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Trading | \$ | 2,498 | \$ | 2,785 | \$ | 4,389 | \$ | 6,207 | (10)\% | (29)\% |
| Commissions and fees |  | 607 |  | 683 |  | 1,262 |  | 1,356 | (11)\% | (7)\% |
| Asset management, distribution and administration fees |  | 69 |  | 69 |  | 142 |  | 145 | 0\% | (2)\% |
| Net interest |  | 82 |  | (33) |  | 151 |  | (121) | N/M | N/M |
| Total sales and trading net revenues | \$ | 3,256 | \$ | 3,504 | \$ | 5,944 | \$ | 7,587 | (7)\% | (22)\% |

N/M—Not Meaningful

## Sales and Trading Net Revenues by Business

|  | Three Months Ended June 30, |  |  |  | Six Months EndedJune 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  | From Prior Year Quarter | From Prior Year Period |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Equity | \$ | 2,145 | \$ | 2,342 | \$ | 4,201 | \$ | 4,635 | (8)\% | (9)\% |
| Fixed income and commodities |  | 1,297 |  | 1,377 |  | 2,170 |  | 3,380 | (6)\% | (36)\% |
| Other |  | (186) |  | (215) |  | (427) |  | (428) | 13\% | 0\% |
| Total sales and trading net revenues | \$ | 3,256 | \$ | 3,504 | \$ | 5,944 | \$ | 7,587 | (7)\% | (22)\% |

## Sales and Trading Net Revenues, Excluding DVA in 2015

Sales and trading net revenues, including equity and fixed income and commodities sales and trading net revenues that exclude the impact of DVA in 2015, are non-GAAP financial measures that we consider useful for us, investors and analysts to allow further comparability of period-to-period operating performance.

|  | Three Months Ended June 30, |  |  |  | Six Months Ended June 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | From Prior Year Quarter | From Prior Year Period |
|  | 2016 |  | 2015 |  |  |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Total sales and trading net revenues-U.S. GAAP | \$ | 3,256 | \$ | 3,504 | \$ | 5,944 | \$ | 7,587 | (7)\% | (22)\% |
| Impact of DVA(1) |  | - |  | (182) |  | - |  | (307) | (100)\% | (100)\% |
| Total sales and trading net revenues-non-GAAP | \$ | 3,256 | \$ | 3,322 | \$ | 5,944 | \$ | 7,280 | (2)\% | (18)\% |
| Equity sales and trading net revenues-U.S. GAAP | \$ | 2,145 | \$ | 2,342 | \$ | 4,201 | \$ | 4,635 | (8)\% | (9)\% |
| Impact of DVA(1) |  | - |  | (72) |  | - |  | (97) | (100)\% | (100)\% |
| Equity sales and trading net revenues-non-GAAP | \$ | 2,145 | \$ | 2,270 | \$ | 4,201 | \$ | 4,538 | (6)\% | (7)\% |
| Fixed income and commodities sales and trading net revenues-U.S. GAAP | \$ | 1,297 | \$ | 1,377 | \$ | 2,170 | \$ | 3,380 | (6)\% | (36)\% |
| Impact of DVA(1) |  | - |  | (110) |  | - |  | (210) | (100)\% | (100)\% |
| Fixed income and commodities sales and trading net revenues-non-GAAP | \$ | 1,297 | \$ | 1,267 | \$ | 2,170 | \$ | 3,170 | 2\% | (32)\% |

[^18]
## Sales and Trading Net Revenues during the Current Quarter

## Equity

- Equity sales and trading net revenues were $\$ 2,145$ million, a decrease from the strong comparable period reflecting significantly reduced volumes and levels of client engagement in Asia, partly offset by improved performance in Europe and the U.S.


## Fixed Income and Commodities

- Fixed income and commodities net revenues of $\$ 1,297$ million decreased from the comparable period. The prior year quarter results included positive DVA revenues of $\$ 110$ million. Excluding the impact of DVA, fixed income and commodities net revenues were essentially flat with the prior year quarter. Results primarily reflected an improved credit market environment and improved revenues from structured transactions in natural gas and power, substantially offset by lower results from counterparty risk management activities in the current quarter and the positive impact of a rating upgrade in the prior year quarter, and the absence of revenues from the global oil merchanting business, which was sold on November 1, 2015. For more information on the sale of the global oil merchanting business, see "Management's Discussion and Analysis of Financial Conditions and Results of Operations - Business Segments - Institutional Securities - Investments, Other Revenues, Non-interest Expenses, Income Tax Items, Dispositions and Other Items - 2015 Compared with 2014 Dispositions" in Part II, Item 7 of the 2015 Form 10-K.


## Sales and Trading Net Revenues during the Current Year Period

## Equity

- Equity sales and trading net revenues were $\$ 4,201$ million, a decrease from the strong comparable period primarily reflecting declines in Asia across all products from reduced volumes.


## Fixed Income and Commodities

- Fixed income and commodities net revenues of $\$ 2,170$ million decreased from the comparable period. In the prior year period, fixed income and commodities results included positive DVA revenues of $\$ 210$ million. Excluding the impact of DVA, fixed income and commodities net revenues were lower in the current year period as compared with the prior year period primarily reflecting lower results in interest rate products and foreign exchange, a challenging credit environment early in the current year period, lower commodities results due to the absence of revenues from the global oil merchanting business, as discussed herein, and the depressed energy price environment in the first quarter of 2016.


## Investments, Other Revenues, Non-interest Expenses and Other Items <br> Investments

- Net investment gains of $\$ 76$ million in the current quarter increased from the comparable period primarily reflecting higher gains on business related investments.
- Net investment gains of $\$ 108$ million in the current year period decreased from the comparable period primarily reflecting losses on investments associated with our compensation plans and lower gains on principal investments in real estate, partly offset by higher gains on business related investments.


## Other

- Other revenues of $\$ 138$ million in the current quarter and $\$ 142$ million in the current year period decreased $35 \%$ and $53 \%$ from the comparable periods primarily due to lower results related to our 40\% stake in Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. ("MUMSS") (see Note 8 to the consolidated financial statements in Item 1 for further information). In the current year period, other revenues also decreased from the comparable period due to an increase in the allowance for losses on loans held for investment.


## Non-interest Expenses

Non-interest expenses of $\$ 3,072$ million in the current quarter and $\$ 5,878$ million in the current year period decreased $13 \%$ and $18 \%$ from the comparable periods driven by a $14 \%$ and $23 \%$ reduction in Compensation and benefits expenses and a $12 \%$ reduction in both periods in Non-compensation expenses.

- Compensation and benefits expenses decreased in the current quarter and current year period primarily due to a decrease in discretionary incentive compensation driven mainly by lower revenues and a decrease in salaries due to lower headcount. In the current year period, Compensation and benefits expenses also reflected a decrease in the fair value of deferred compensation plan referenced investments.
- Non-compensation expenses decreased in the current quarter and current year period primarily due to lower litigation costs, transaction related expenses in Asia and expense reductions across Professional services, Marketing and business development and Occupancy and equipment.


## Noncontrolling Interests

Noncontrolling interests primarily relate to Mitsubishi UFJ Financial Group, Inc.'s interest in Morgan Stanley MUFG Securities Co., Ltd. ("MSMS").

## WEALTH MANAGEMENT

## INCOME STATEMENT INFORMATION

|  |  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  | Six Months EndedJune 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  | From Prior Year Quarter | From Prior Year Period |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Revenues: |  |  |  |  |  |  |  |  |  |  |
| Investment banking | \$ | 123 | \$ | 186 | \$ | 244 | \$ | 378 | (34)\% | (35)\% |
| Trading |  | 252 |  | 196 |  | 446 |  | 428 | 29\% | 4\% |
| Investments |  | - |  | 13 |  | (2) |  | 15 | N/M | N/M |
| Commissions and fees |  | 423 |  | 490 |  | 835 |  | 1,016 | (14)\% | (18)\% |
| Asset management, distribution and administration fees |  | 2,082 |  | 2,174 |  | 4,136 |  | 4,289 | (4)\% | (4)\% |
| Other |  | 102 |  | 79 |  | 160 |  | 157 | 29\% | 2\% |
| Total non-interest revenues |  | 2,982 |  | 3,138 |  | 5,819 |  | 6,283 | (5)\% | (7)\% |
| Interest income |  | 920 |  | 782 |  | 1,834 |  | 1,519 | 18\% | 21\% |
| Interest expense |  | 91 |  | 45 |  | 174 |  | 93 | 102\% | 87\% |
| Net interest |  | 829 |  | 737 |  | 1,660 |  | 1,426 | 12\% | 16\% |
| Net revenues |  | 3,811 |  | 3,875 |  | 7,479 |  | 7,709 | (2)\% | (3)\% |
| Compensation and benefits |  | 2,152 |  | 2,200 |  | 4,240 |  | 4,425 | (2)\% | (4)\% |
| Non-compensation expenses |  | 800 |  | 790 |  | 1,594 |  | 1,544 | 1\% | 3\% |
| Total non-interest expenses |  | 2,952 |  | 2,990 |  | 5,834 |  | 5,969 | (1)\% | (2)\% |
| Income from continuing operations before income taxes |  | 859 |  | 885 |  | 1,645 |  | 1,740 | (3)\% | (5)\% |
| Provision for income taxes |  | 343 |  | 324 |  | 636 |  | 644 | 6\% | (1)\% |
| Net income applicable to Morgan Stanley | \$ | 516 | \$ | 561 | \$ | 1,009 | \$ | 1,096 | (8)\% | (8)\% |

[^19]
## Statistical Data

Financial Information and Statistical Data (dollars in billions, except where noted)

|  | June 30,$2016$ |  | $\underset{\substack{\text { At } \\ \text { December 31, } \\ 2015}}{ }$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Client assets | \$ | 2,034 | \$ | 1,985 |
| Fee-based client assets(1) | \$ | 820 | \$ | 795 |
| Fee-based client assets as a percentage of total client assets |  | 40\% |  | 40\% |
| Client liabilities(2) | \$ | 69 | \$ | 64 |
| Bank deposit program | \$ | 150 | \$ | 149 |
| Investment securities portfolio | \$ | 64.6 | \$ | 57.9 |
| Loans and lending commitments | \$ | 61.3 | \$ | 55.3 |
| Wealth Management representatives |  | 15,909 |  | 15,889 |
| Retail locations |  | 609 |  | 608 |


|  | Three Months Ended June 30, |  |  |  | Six Months EndedJune 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
| Annualized revenues per representative (dollars in thousands)(3) | \$ | 959 | \$ | 978 | \$ | 941 | \$ | 968 |
| Client assets per representative (dollars in millions)(4) | \$ | 128 | \$ | 129 | \$ | 128 | \$ | 129 |
| Fee-based asset flows(5) | \$ | 12.0 | \$ | 13.9 | \$ | 17.9 | \$ | 27.2 |

[^20]
## Net Revenues

## Transactional Revenues

|  | $\begin{aligned} & \text { Three Months Ended } \\ & \text { June 30, } \end{aligned}$ |  |  |  | Six Months EndedJune 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | From Prior Year Quarter | From Prior Year Period |
|  | 2016 |  | 2015 |  |  |  | 2016 |  | 2015 |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Investment banking | \$ | 123 | \$ | 186 | \$ | 244 | \$ | 378 | (34)\% | (35)\% |
| Trading |  | 252 |  | 196 |  | 446 |  | 428 | 29\% | 4\% |
| Commissions and fees |  | 423 |  | 490 |  | 835 |  | 1,016 | (14)\% | (18)\% |
| Transactional revenues | \$ | 798 | \$ | 872 | \$ | 1,525 | \$ | 1,822 | (8)\% | (16)\% |

Transactional revenues of $\$ 798$ million in the current quarter and $\$ 1,525$ million in the current year period decreased $8 \%$ and $16 \%$ from the comparable periods due to lower revenues in Investment banking and Commissions and fees, partially offset by higher revenues in Trading.

- Investment banking revenues decreased in the current quarter and current year period primarily due to reduced levels of underwriting volumes driven by lower levels of new issue activity.
- Trading revenues increased in the current quarter primarily due to gains related to investments associated with certain employee deferred compensation plans and higher revenues from fixed income products. The increase in the current year period was primarily due to higher revenues from fixed income, partially offset by
losses related to investments associated with certain employee deferred compensation plans.
- Commissions and fees decreased in the current quarter and current year period reflected lower daily average commissions primarily due to reduced client activity in equity, mutual fund and annuity products.


## Asset Management

- Asset management, distribution and administration fees of $\$ 2,082$ million in the current quarter and $\$ 4,136$ million in the current year period decreased in both periods $4 \%$ from the comparable periods primarily due to lower fees from mutual funds reflecting the impact of lower average asset levels and lower average fee rates related to fee-based accounts, partially offset by positive flows (see "Fee-Based Client Assets Activity and Average Fee Rate by Account Type" herein).


## Net Interest

- Net interest of $\$ 829$ million in the current quarter and $\$ 1,660$ million in the current year period increased $12 \%$ and $16 \%$ from the comparable periods primarily due to higher loan and investment securities balances which were funded by higher average deposits.


## Other

- Other revenues of $\$ 102$ million in the current quarter increased $29 \%$ from the comparable period, due to higher realized gains from the available for sale ("AFS") securities portfolio. Other revenues of $\$ 160$ million in the current year period were relatively unchanged from the comparable period.


## Non-interest Expenses

Non-interest expenses of $\$ 2,952$ million in the current quarter and $\$ 5,834$ million in the current year period decreased $1 \%$ and $2 \%$ from the comparable periods.

- Compensation and benefits expenses were relatively unchanged in the current quarter. Compensation and benefits expenses decreased in the current year period primarily due to the decrease in formulaic payout to Wealth

Management representatives driven by lower net revenues and a decrease in the fair value of deferred compensation plan referenced investments.

- Non-compensation expenses increased in the current quarter due to higher litigation costs, partially offset by lower Federal Deposit Insurance Corporation ("FDIC") assessment on deposits. Non-compensation expenses increased in the current year period primarily due to higher litigation costs and professional services fees.


## Other Items

## U.S. Department of Labor Conflict of Interest Rule

In April 2016, the U.S. Department of Labor adopted a conflict of interest rule under the Employee Retirement Income Security Act of 1974 that broadens the circumstances under which a firm is considered a fiduciary when transacting with retail investment accounts and sets forth requirements to ensure that advice given by broker-dealers acting as investment advice fiduciaries is impartial. The new fiduciary standard for investment advice will apply on April 10, 2017 and full compliance is required by January 1, 2018. While we are still assessing the impact of the final rule, given the breadth and scale of our platform and continued investment in technology and infrastructure, we believe that we will be able to provide compliant solutions to meet our clients' investment needs (see also "Business-Supervision and RegulationInstitutional Securities and Wealth Management-BrokerDealer and Investment Adviser Regulation" in Part I, Item 1 of the 2015 Form 10-K).
$\underline{\text { Fee-Based Client Assets Activity and Average Fee Rate by Account Type }}$
For a description of fee-based client assets, including descriptions for the fee based client asset types and rollforward items in the following tables, see "Management's Discussion and Analysis of Financial Condition and Results of OperationsBusiness Segments-Wealth Management—Fee-Based Client Assets" in Part II, Item 7 of the 2015 Form 10-K.

|  | $\underset{\substack{\text { At } \\ \text { March 316, }}}{\substack{\text { 2016 }}}$ |  | Inflows |  | Outflows |  | Market Impact |  | $\underset{\substack{\text { June } 30, 2016}}{\text { At }}$ |  | Average for the <br> Three Months <br> June 30, <br> 2016 <br> Fee Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | , | billions) |  |  |  |  | (in bps) |
| Separately managed accounts(1) | \$ | 278 | \$ | 9 | \$ | (7) | \$ | (1) | \$ | 279 | 31 |
| Unified managed accounts |  | 112 |  | 11 |  | (5) |  | 2 |  | 120 | 109 |
| Mutual fund advisory |  | 24 |  | - |  | (1) |  | - |  | 23 | 121 |
| Representative as advisor |  | 114 |  | 8 |  | (8) |  | 3 |  | 117 | 88 |
| Representative as portfolio manager |  | 255 |  | 17 |  | (12) |  | 5 |  | 265 | 101 |
| Subtotal | \$ | 783 | S | 45 | \$ | (33) | \$ | 9 | \$ | 804 | 74 |
| Cash management |  | 15 |  | 4 |  | (3) |  | - |  | 16 | 6 |
| Total fee-based client assets . | \$ | 798 | \$ | 49 | \$ | (36) | \$ | 9 | \$ | 820 | 73 |


|  |  |  | Inflows |  | Outflows |  | Market Impact |  | $\begin{gathered} \text { At } \\ \text { June } 30, \\ 2015 \end{gathered}$ |  | Average for the <br> Three Months Ended <br> June 30, <br> 2015 <br> Fee Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (dollars in billions) |  |  |  |  |  |  |  |  |  | (in bps) |
| Separately managed accounts(1) | \$ | 287 | \$ | 13 | \$ | (7) | \$ | 1 | \$ | 294 | 34 |
| Unified managed accounts |  | 99 |  | 8 |  | (4) |  | - |  | 103 | 114 |
| Mutual fund advisory |  | 30 |  | 1 |  | (2) |  | - |  | 29 | 121 |
| Representative as advisor |  | 121 |  | 8 |  | (8) |  | (1) |  | 120 | 89 |
| Representative as portfolio manager |  | 250 |  | 16 |  | (11) |  | (2) |  | 253 | 104 |
| Subtotal | \$ | 787 | \$ | 46 | \$ | (32) | \$ | (2) | \$ | 799 | 77 |
| Cash management |  | 16 |  | 2 |  | (4) |  | - |  | 14 | 6 |
| Total fee-based client assets | \$ | 803 | \$ | 48 | \$ | (36) | \$ | (2) | \$ | 813 | 75 |


|  | $\begin{gathered} \text { At December 31, } \\ 2015 \end{gathered}$ |  | Inflows |  | Outflows |  | Market Impact |  | $\begin{gathered} \text { At } \\ \text { June } 30, \end{gathered}$$2016$ |  | Average for the <br> Six Months Ended <br> June 30, <br> 2016 <br> Fee Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (dollars in billions) |  |  |  |  |  |  |  |  |  | (in bps) |
| Separately managed accounts(1) | \$ | 283 | \$ | 17 | \$ | (17) | \$ | (4) | \$ | 279 | 32 |
| Unified managed accounts |  | 105 |  | 21 |  | (9) |  | 3 |  | 120 | 109 |
| Mutual fund advisory |  | 25 |  | 1 |  | (3) |  | - |  | 23 | 121 |
| Representative as advisor |  | 115 |  | 13 |  | (14) |  | 3 |  | 117 | 88 |
| Representative as portfolio manager |  | 252 |  | 31 |  | (22) |  | 4 |  | 265 | 102 |
| Subtotal | \$ | 780 | \$ | 83 | \$ | (65) | \$ | 6 | \$ | 804 | 74 |
| Cash management |  | 15 |  | 7 |  | (6) |  | - |  | 16 | 6 |
| Total fee-based client assets | \$ | 795 | \$ | 90 |  | (71) | \$ | 6 | \$ | 820 | 73 |


|  | $\begin{gathered} \text { At December 31, } \\ 2014 \end{gathered}$ |  | Inflows |  | Outflows |  | Market Impact |  | $\begin{gathered} \text { At } \\ \text { June } 30, \\ 2015 \end{gathered}$ |  | Average for the <br> Six Months Ended <br> June 30, <br> 2015 <br> Fee Rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | (dollars in billions) |  |  |  |  |  |  |  | (in bps) |
| Separately managed accounts(1) | \$ | 285 | \$ | 23 | \$ | (14) | \$ | - | \$ | 294 | 35 |
| Unified managed accounts |  | 93 |  | 15 |  | (7) |  | 2 |  | 103 | 114 |
| Mutual fund advisory |  | 31 |  | 1 |  | (3) |  | - |  | 29 | 121 |
| Representative as advisor |  | 119 |  | 16 |  | (15) |  | - |  | 120 | 89 |
| Representative as portfolio manager |  | 241 |  | 31 |  | (20) |  | 1 |  | 253 | 104 |
| Subtotal | \$ | 769 | \$ | 86 | \$ | (59) | \$ | 3 | \$ | 799 | 77 |
| Cash management |  | 16 |  | 3 |  | (5) |  | - |  | 14 | 6 |
| Total fee-based client assets | \$ | 785 | \$ | 89 | \$ | (64) | \$ | 3 | \$ | 813 | 75 |

[^21]
## INVESTMENT MANAGEMENT

## INCOME STATEMENT INFORMATION

|  | Three Months EndedJune 30, |  |  |  | Six Months EndedJune 30, |  |  |  | \% Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  | $\begin{aligned} & \text { From Prior } \\ & \text { Year Quarter } \end{aligned}$ | From Prior Year Period |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| Revenues: |  |  |  |  |  |  |  |  |  |  |
| Investment banking | \$ | - | \$ | - | \$ | 1 | \$ | - | - | N/M |
| Trading |  | 5 |  | (6) |  | (5) |  | (3) | N/M | (67)\% |
| Investments |  | 50 |  | 232 |  | (14) |  | 384 | (78)\% | N/M |
| Commissions and fees |  | - |  | - |  | 3 |  | - | - | N/M |
| Asset management, distribution and administration fees |  | 517 |  | 522 |  | 1,043 |  | 1,036 | (1)\% | 1\% |
| Other |  | 9 |  | 9 |  | 31 |  | 14 | - | 121\% |
| Total non-interest revenues |  | 581 |  | 757 |  | 1,059 |  | 1,431 | (23)\% | (26)\% |
| Interest income |  | 3 |  | - |  | 4 |  | 1 | N/M | N/M |
| Interest expense |  | 1 |  | 6 |  | 3 |  | 12 | (83)\% | (75)\% |
| Net interest |  | 2 |  | (6) |  | 1 |  | (11) | N/M | N/M |
| Net revenues |  | 583 |  | 751 |  | 1,060 |  | 1,420 | (22)\% | (25)\% |
| Compensation and benefits |  | 238 |  | 308 |  | 451 |  | 581 | (23)\% | (22)\% |
| Non-compensation expenses |  | 227 |  | 223 |  | 447 |  | 432 | 2\% | 3\% |
| Total non-interest expenses |  | 465 |  | 531 |  | 898 |  | 1,013 | (12)\% | (11)\% |
| Income from continuing operations before income taxes |  | 118 |  | 220 |  | 162 |  | 407 | (46)\% | (60)\% |
| Provision for income taxes |  | 37 |  | 59 |  | 47 |  | 120 | (37)\% | (61)\% |
| Income from continuing operations |  | 81 |  | 161 |  | 115 |  | 287 | (50)\% | (60)\% |
| Net income |  | 81 |  | 161 |  | 115 |  | 287 | (50)\% | (60)\% |
| Net income applicable to noncontrolling interests |  | 3 |  | 2 |  | (13) |  | 19 | 50\% | N/M |
| Net income applicable to Morgan Stanley | \$ | 78 | \$ | 159 | \$ | 128 | \$ | 268 | (51)\% | (52)\% |

## Net Revenues

## Investments

- Investments gains of $\$ 50$ million in the current quarter and losses of $\$ 14$ million in the current year period compared with gains of $\$ 232$ million and $\$ 384$ million in the comparable periods, reflected lower investment gains and carried interest in infrastructure and private equity investments. Investments losses in the current year period also reflect the reversal of previously accrued carried interest.


## Asset Management, Distribution and Administration Fees

- Asset management, distribution and administration fees of $\$ 517$ million in the current quarter and $\$ 1,043$ million in the current year period were relatively unchanged from the comparable periods, as asset class balances and fee rates remained stable.


## Non-interest Expenses

Non-interest expenses of $\$ 465$ million in the current quarter and $\$ 898$ million in the current year period decreased $12 \%$ and $11 \%$ from the comparable periods primarily due to lower Compensation and benefit expenses.

- Compensation and benefits expenses decreased in the current quarter and current year period primarily due to the decrease in deferred compensation associated with carried interest and the decrease in discretionary incentive compensation driven by lower revenues.


## Assets Under Management or Supervision

Effective in the second quarter of 2016, the presentation of assets under management or supervision ("AUM") for Investment Management has been revised to better align asset classes with its present organizational structure. With this change, the Alternative / Other products asset class now includes products in fund of funds, real estate, private equity and credit strategies, as well as multi-asset portfolios. All prior period information has been recast in the new format.

## Assets Under Management or Supervision and Average Fee Rate by Asset Class

For a description of the rollforward items in the following tables, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Business Segments—Investment Management—Statistical Data" in Part II, Item 7 of the 2015 Form 10-K.

|  | At <br> March 31, 2016 |  | Inflows |  | Outflows |  | Distributions |  | Market Impact |  | Foreign Currency Impact |  | $\begin{gathered} \text { At } \\ \text { June 30, } \\ 2016 \end{gathered}$ |  | Average for the <br> Three Months Ended <br> June 30, <br> 2016 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text { otal } \\ & \text { UM } \end{aligned}$ |  |  | Fee Rate |  |  |  |  |  |  |
|  |  |  |  |  | (dollars in billions) |  |  |  |  |  |  |  | \$ |  | \$ |  | \$ |  | (in bps) |
| Equity | \$ | 81 | \$ | 5 | \$ | (6) |  |  | \$ | - | \$ | 1 |  | - |  | 81 |  | 81 | 74 |
| Fixed income |  | 62 |  | 7 |  | (8) |  | - |  | - | - |  |  | 61 |  | 61 | 32 |
| Liquidity |  | 146 |  | 291 |  | (289) |  | - |  | 1 |  | - |  | 149 |  | 146 | 19 |
| Alternative / Other products |  | 116 |  | 9 |  | (10) |  | (1) |  | 1 |  | - |  | 115 |  | 116 | 74 |
| Total assets under management or supervision | \$ | 405 | \$ | 312 | \$ | (313) | \$ | (1) | \$ | 3 | \$ | - | \$ | 406 | \$ | 404 | 48 |
| Shares of minority stake assets . . . |  | 8 |  |  |  |  |  |  |  |  |  |  |  | 8 |  | 8 |  |


|  | $\begin{gathered} \text { At } \\ \text { March 31, } \\ 2015 \\ \hline \end{gathered}$ |  | Inflows | Outflows | Distributions |  | Market Impact |  | Foreign Currency Impact |  | $\begin{gathered} \text { At } \\ \text { June 30, } \\ 2015 \\ \hline \end{gathered}$ |  | Average for theThree Months EndedJune 30,2015 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $\begin{aligned} & \hline \text { Total } \\ & \text { AUM } \end{aligned}$ | Fee Rate |  |  |  |  |
|  |  |  |  | (dollars in billions) |  |  |  |  |  | \$ |  | \$ |  | \$ |  | (in bps) |
| Equity | \$ | 98 | \$ 3 | \$ (7) | \$ | - |  |  | \$ |  | 2 |  |  |  |  |  | 71 |
| Fixed income |  | 65 | 6 | (6) |  | - |  | (1) |  | - |  | 64 |  | 65 | 33 |
| Liquidity |  | 131 | 306 | (305) |  | - |  | - |  | - |  | 132 |  | 131 | 9 |
| Alternative / Other products |  | 112 | 6 | (5) |  | (2) |  | (1) |  | 1 |  | 111 |  | 112 | 81 |
| Total assets under management or supervision | \$ | 406 | \$ 321 | \$ (323) | \$ | (2) |  | - | \$ | 1 |  | 403 |  | 406 | 47 |
| Shares of minority stake assets |  | 7 |  |  |  |  |  |  |  |  |  | 7 |  | 7 |  |



bps—Basis points

## Supplemental Financial Information and Disclosures

## U.S. Bank Subsidiaries

We provide loans to a variety of customers, from large corporate and institutional clients to high net worth individuals, primarily through our U.S. bank subsidiaries, Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA") (collectively, "U.S. Bank Subsidiaries"). The lending activities in the Institutional Securities business segment primarily include loans or lending commitments to corporate clients. The lending activities in the Wealth Management business segment primarily include securities-based lending that
allows clients to borrow money against the value of qualifying securities and also include residential real estate loans. We expect our lending activities to continue to grow through further penetration of the Wealth Management business segments' client base. For a further discussion of our credit risks, see "Quantitative and Qualitative Disclosures about Market Risk-Risk Management-Credit Risk" in Item 3. For further discussion about loans and lending commitments, see Notes 7 and 11 to the consolidated financial statements in Item 1.
U.S. Bank Subsidiaries' Supplemental Financial Information Excluding Transactions with Affiliated Entities

|  | At June 30, 2016 |  | At December 31, 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in billions) |  |  |  |
| U.S. Bank Subsidiaries assets | \$ | 175.1 | \$ | 174.2 |
| U.S. Bank Subsidiaries investment securities portfolio(1) |  | 64.6 |  | 57.9 |
| Wealth Management U.S. Bank Subsidiaries data: |  |  |  |  |
| Securities-based lending and other loans(2) | \$ | 31.4 | \$ | 28.6 |
| Residential real estate loans |  | 22.7 |  | 20.9 |
| Total | \$ | 54.1 | \$ | 49.5 |
| Institutional Securities U.S. Bank Subsidiaries data: |  |  |  |  |
| Corporate loans ... | \$ | 21.2 | \$ | 22.9 |
| Wholesale real estate loans |  | 8.9 |  | 8.9 |
| Total | \$ | 30.1 | \$ | 31.8 |

(1) The U.S. Bank Subsidiaries investment securities portfolio includes AFS investment securities of $\$ 54.2$ billion at June 30 , 2016 and $\$ 53.0$ billion at December 31, 2015. The remaining balance represents held to maturity investment securities of $\$ 10.4$ billion at June 30, 2016 and $\$ 4.9$ billion at December 31, 2015.
(2) Other loans primarily include tailored lending.

## Income Tax Matters

The effective tax rate from continuing operations was $33.5 \%$ and $33.4 \%$ for the current quarter and current year period, respectively.

The effective tax rate from continuing operations was $32.8 \%$ and $22.9 \%$ for the prior year quarter and prior year period, respectively. The results for prior year period included a net discrete tax benefit of $\$ 564$ million, primarily associated with the repatriation of non-U.S. earnings at a cost lower than originally estimated due to an internal restructuring to simplify our legal entity organization in the U.K. Excluding this net discrete tax benefit, the effective tax rate from continuing operations for the prior year period would have been $33.1 \%$.

## Accounting Development Updates

The Financial Accounting Standards Board (the "FASB") issued the following accounting updates which apply to us.

The following accounting updates are not expected to have a material impact in the consolidated financial statements:

- Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. This guidance is effective as of January 1, 2017.
- Improvements to Employee Share-Based Payment Accounting. This guidance is effective as of January 1, 2017.
- Contingent Put and Call Options in Debt Instruments. This guidance is effective as of January 1, 2017.
- Recognition and Measurement of Financial Assets and Financial Liabilities. This guidance is effective as of January 1, 2018. On January 1, 2016, we early adopted a specific provision of the accounting update (see Note 2 to the consolidated financial statements in Item 1), with the remainder to be adopted on January 1, 2018.

The following accounting update will not have a material impact in the consolidated financial statements:

- Simplifying the Transition to the Equity Method of Accounting.

The following accounting updates are currently being evaluated to determine the potential impact of adoption:

- Financial Instruments - Credit Losses. This accounting update impacts the impairment model for certain financial assets measured at amortized cost such as loans held for investment and held to maturity debt securities. The amendments in this update will accelerate the recognition of credit losses by replacing the incurred loss impairment methodology with a current expected credit loss ("CECL") methodology that requires an estimate of expected credit losses over the entire life of the financial asset. Additionally, although the CECL methodology will not apply to AFS debt securities, the update will require establishment of an allowance to reflect impairment of these securities, thereby eliminating the concept of a permanent write-down. This update is effective as of

January 1, 2020, with early adoption permitted as of January 1, 2019.

- Leases. This accounting update requires lessees to recognize all leases with terms exceeding one year on the balance sheet which results in the recognition of a right of use asset and corresponding lease liability, including for those leases which we currently classify as operating leases. The right of use asset and lease liability will initially be measured using the present value of the remaining rental payments. The accounting for leases where we are the lessor is largely unchanged. This update is effective as of January 1, 2019 with early adoption permitted.
- Revenue from Contracts with Customers. This accounting update aims to clarify the principles of revenue recognition, to develop a common revenue recognition standard across all industries for U.S. GAAP and International Financial Reporting Standards and to provide enhanced disclosures for users of the financial statements. The core principle of this guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This update is effective as of January 1, 2018, with early adoption permitted as of January 1, 2017.


## Critical Accounting Policies

Our consolidated financial statements are prepared in accordance with U.S. GAAP, which require us to make estimates and assumptions (see Note 1 to the consolidated financial statements in Item 1). We believe that of our significant accounting policies (see Note 2 to the consolidated financial statements in Item 8 of the 2015 Form 10-K and Note 2 to the consolidated financial statements in Item 1), the fair value, goodwill and intangible assets, legal and regulatory contingencies and income taxes policies involve a higher degree of judgment and complexity. For a further discussion about our critical accounting policies, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Critical Accounting Policies" in Part II, Item 7 of the 2015 Form 10-K.

## Liquidity and Capital Resources

Senior management establishes liquidity and capital policies. Through various risk and control committees, senior management reviews business performance relative to these policies, monitors the availability of alternative sources of financing, and oversees the liquidity, interest rate and currency sensitivity of our asset and liability position. The Treasury Department, Firm Risk Committee, Asset and Liability Management Committee, and other committees and control groups assist in evaluating, monitoring and controlling the impact that our business activities have on our consolidated balance sheets, liquidity and capital structure. Liquidity and capital matters are reported regularly to the Board and the Board's Risk Committee.

## The Balance Sheet

We monitor and evaluate the composition and size of our balance sheet on a regular basis. Our balance sheet management process includes quarterly planning, business-specific thresholds, monitoring of business-specific usage versus key performance metrics and new business impact assessments.

We establish balance sheet thresholds at the consolidated, business segment and business unit levels. We monitor balance sheet utilization and review variances resulting from business activity or market fluctuations. On a regular basis, we review current performance versus established thresholds and assess the need to re-allocate our balance sheet based on business unit needs. We also monitor key metrics, including asset and liability size, composition of the balance sheet and capital usage.

Total Assets by Business Segment

|  | At June 30, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Institutional Securities |  | Wealth Management |  | InvestmentManagement |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Assets |  |  |  |  |  |  |  |  |
| Cash and cash equivalents | \$ | 33,333 | \$ | 22,757 | \$ | 43 | \$ | 56,133 |
| Trading assets, at fair value |  | 252,857 |  | 1,175 |  | 2,762 |  | 256,794 |
| Investment securities |  | 15,495 |  | 64,649 |  | - |  | 80,144 |
| Securities purchased under agreements to resell |  | 93,310 |  | 4,279 |  | - |  | 97,589 |
| Securities borrowed |  | 130,812 |  | 469 |  | - |  | 131,281 |
| Customer and other receivables |  | 30,720 |  | 21,597 |  | 510 |  | 52,827 |
| Loans, net of allowance |  | 38,898 |  | 54,267 |  | - |  | 93,165 |
| Other assets(1) |  | 45,948 |  | 13,608 |  | 1,384 |  | 60,940 |
| Total assets | \$ | 641,373 | \$ | 182,801 | \$ | 4,699 | \$ | 828,873 |


|  | At December 31, 2015 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Institutional Securities | Wealth Management |  | Investment Management |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |  |
| Assets |  |  |  |  |  |  |  |
| Cash and cash equivalents | \$ 22,356 | \$ | 31,216 | \$ | 511 | \$ | 54,083 |
| Trading assets, at fair value | 236,174 |  | 883 |  | 2,448 |  | 239,505 |
| Investment securities | 14,124 |  | 57,858 |  | 1 |  | 71,983 |
| Securities purchased under agreements to resell | 83,205 |  | 4,452 |  | - |  | 87,657 |
| Securities borrowed | 141,971 |  | 445 |  | - |  | 142,416 |
| Customer and other receivables | 23,390 |  | 21,406 |  | 611 |  | 45,407 |
| Loans, net of allowance | 36,237 |  | 49,522 |  | - |  | 85,759 |
| Other assets(1) | 45,257 |  | 13,926 |  | 1,472 |  | 60,655 |
| Total assets | \$ 602,714 | \$ | 179,708 | \$ | 5,043 | \$ | 787,465 |

[^22]A substantial portion of total assets consists of liquid marketable securities and short-term receivables arising principally from sales and trading activities in the Institutional Securities business segment. The liquid nature of these assets provides us with flexibility in managing the size of our balance sheet. Total assets increased to $\$ 829$ billion at June 30, 2016 from $\$ 787$ billion at December 31, 2015, due to increases in Trading assets, primarily U.S. government agency securities whose valuations increased as U.S. Treasury yields reached multiyear lows in the wake of the U.K. referendum. Other sovereign government obligations and over-the-counter ("OTC") derivative contracts were also driven higher by interest rate and foreign exchange rate volatility which were also partly driven by the U.K. Referendum. See "U.K. Referendum" herein.

## Securities Repurchase Agreements and Securities Lending

Securities borrowed or securities purchased under agreements to resell and securities loaned or securities sold under agreements to repurchase are treated as collateralized financings (see Notes 2 and 6 to the consolidated financial statements in Item 1).

Collateralized Financing Transactions and Average Balances

|  | At June 30, <br> $\mathbf{2 0 1 6}$ | At December 31, <br> $\mathbf{2 0 1 5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (dollars in millions) |


|  | Average Balance <br> Three Months Ended <br> June 30, 2016 |
| :---: | :---: | :---: |
|  | (dollars in millions) |

Securities purchased under agreements to resell and Securities borrowed period-end balances at June 30, 2016 were lower than the average balance during the current quarter driven by a general decrease in requirements for collateral and a reduction in short positions. Securities sold under agreements to repurchase and Securities loaned period-end balances at June 30, 2016 were higher than the average balance during the current quarter which is in line with the increase of inventory over the period. Securities purchased under agreements to resell and Securities borrowed and Securities sold under agreements to repurchase and Securities loaned period-end balances at December 31, 2015 were lower than the average balance during 2015. The balances moved in line with client financing activity and with general
movements of inventory. Securities financing assets and liabilities also include matched book transactions with minimal market, credit and/or liquidity risk. Matched book transactions accommodate customers, as well as obtain securities for the settlement and financing of inventory positions.

## Other Securities Financing

The customer receivable portion of the securities financing transactions primarily includes customer margin loans, collateralized by customer-owned securities, which are segregated in accordance with regulatory requirements. The customer payable portion of the securities financing transactions primarily includes payables to our prime brokerage customers. Our risk exposure on these transactions is mitigated by collateral maintenance policies that limit our credit exposure to customers. Additionally, included within securities financing transactions were $\$ 10$ billion and $\$ 11$ billion at June 30, 2016 and December 31, 2015, respectively, related to fully collateralized securities-forsecurities lending transactions represented in Trading assets.

## Liquidity Risk Management Framework

The primary goal of our Liquidity Risk Management Framework is to ensure that we have access to adequate funding across a wide range of market conditions. The framework is designed to enable us to fulfill our financial obligations and support the execution of our business strategies.

The following principles guide our Liquidity Risk Management Framework:

- Sufficient liquid assets should be maintained to cover maturing liabilities and other planned and contingent outflows;
- Maturity profile of assets and liabilities should be aligned, with limited reliance on short-term funding;
- Source, counterparty, currency, region and term of funding should be diversified; and
- Liquidity Stress Tests should anticipate, and account for, periods of limited access to funding.

The core components of our Liquidity Risk Management Framework are the Required Liquidity Framework, Liquidity Stress Tests and the Global Liquidity Reserve, which support our target liquidity profile. For a further discussion about our Required Liquidity Framework and Liquidity Stress Tests, see "Management's Discussion and Analysis of Financial Condition and Results of OperationsLiquidity and Capital Resources-Liquidity Risk Management Framework" in Part II, Item 7 of the 2015 Form 10-K.

At June 30, 2016 and December 31, 2015, we maintained sufficient liquidity to meet current and contingent funding obligations as modeled in our Liquidity Stress Tests.

## Global Liquidity Reserve

We maintain sufficient liquidity reserves to cover daily funding needs and to meet strategic liquidity targets sized
by the Required Liquidity Framework and Liquidity Stress Tests. For a further discussion of our Global Liquidity Reserve, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Liquidity Risk Management Framework-Global Liquidity Reserve" in Part II, Item 7 of the 2015 Form 10-K.

Global Liquidity Reserve by Type of Investment

|  | At June 30, 2016 |  | At December 31, 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Cash deposits with banks | \$ | 11,812 | \$ | 10,187 |
| Cash deposits with central banks |  | 39,479 |  | 39,774 |
| Unencumbered highly liquid securities: |  |  |  |  |
| U.S. government obligations |  | 80,560 |  | 72,265 |
| U.S. agency and agency mortgage-backed securities |  | 44,635 |  | 37,678 |
| Non-U.S. sovereign obligations(1) |  | 17,394 |  | 28,999 |
| Other investment grade securities |  | 13,575 |  | 14,361 |
| Global Liquidity Reserve | \$ | 207,455 | \$ | 203,264 |

(1) Non-U.S. sovereign obligations are composed of unencumbered German, French, Dutch, U.K., Brazilian and Japanese government obligations.

Global Liquidity Reserve Managed by Bank and Non-Bank Legal Entities

|  | At June 30, 2016 |  | At December 31, 2015 |  | Daily Average Balance Three Months Ended June 30, 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |  |  |
| Bank legal entities: |  |  |  |  |  |  |
| Domestic | \$ | 85,504 | \$ | 88,432 | \$ | 86,901 |
| Foreign |  | 5,558 |  | 5,896 |  | 5,368 |
| Total Bank legal entities |  | 91,062 |  | 94,328 |  | 92,269 |
| Non-Bank legal entities: |  |  |  |  |  |  |
| Parent |  | 61,087 |  | 54,810 |  | 61,380 |
| Non-Parent |  | 17,673 |  | 20,001 |  | 17,932 |
| Total Domestic |  | 78,760 |  | 74,811 |  | 79,312 |
| Foreign |  | 37,633 |  | 34,125 |  | 38,204 |
| Total Non-Bank legal entities |  | 116,393 |  | 108,936 |  | 117,516 |
| Total | \$ | 207,455 | \$ | 203,264 | \$ | 209,785 |

## Regulatory Liquidity Framework

The Basel Committee on Banking Supervision (the "Basel Committee") has developed two standards intended for use in liquidity risk supervision: the Liquidity Coverage Ratio ("LCR") and the Net Stable Funding Ratio ("NSFR").

## Liquidity Coverage Ratio

The LCR was developed to ensure banking organizations have sufficient high-quality liquid assets to cover net cash outflows arising from significant stress over 30 calendar days. This standard's objective is to promote the short-term resilience of the liquidity risk profile of banking organizations.

The final rule to implement the LCR in the U.S. ("U.S. LCR") applies to us and our U.S. Bank Subsidiaries and each is required to calculate its respective U.S. LCR on each business day. As of January 1, 2016, we and our U.S. Bank Subsidiaries are required to maintain a minimum U.S. LCR of $90 \%$, and this minimum standard will reach the fully phased-in level of $100 \%$ beginning on January 1, 2017. In addition, the Board of Governors of the Federal Reserve System (the "Federal Reserve") has proposed rules that would require large banking organizations, including us, to publicly disclose certain qualitative and quantitative information about their U.S. LCR beginning in the third quarter of 2016. We are compliant with the minimum required U.S. LCR based on current interpretation and we
continue to evaluate its impact on our liquidity and funding requirements.

## Net Stable Funding Ratio

The objective of the NSFR is to reduce funding risk over a one-year horizon by requiring banking organizations to fund their activities with sufficiently stable sources of funding in order to mitigate the risk of future funding stress. The Basel Committee finalized the NSFR framework in 2014. In the second quarter of 2016, the U.S. banking regulators issued a proposal to implement the NSFR in the U.S. The proposal would require a covered company to maintain an amount of available stable funding, which is calculated by applying standardized weightings to its equity and liabilities based on their expected stability, that is no less than the amount of its required stable funding, which is calculated by applying standardized weightings to its assets, derivatives exposures, and certain other offbalance sheet exposures based on their liquidity characteristics. If adopted as proposed, the requirements would apply to us and our U.S. Bank Subsidiaries from January 1, 2018. We are evaluating the potential impact of the proposal, which is subject to public comment and further rulemaking procedures.

## Funding Management

We manage our funding in a manner that reduces the risk of disruption to our operations. We pursue a strategy of diversification of secured and unsecured funding sources (by product, investor and region) and attempt to ensure that the tenor of our liabilities equals or exceeds the expected holding period of the assets being financed.

We fund our balance sheet on a global basis through diverse sources. These sources may include our equity capital, long-term debt, securities sold under agreements to repurchase ("repurchase agreements"), securities lending, deposits, commercial paper, letters of credit and lines of credit. We have active financing programs for both standard and structured products targeting global investors and currencies.

## Secured Financing

For a discussion of our secured financing activities, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Funding Management-Secured Financing" in Part II, Item 7 of the 2015 Form 10-K.

At June 30, 2016 and December 31, 2015, the weighted average maturity of our secured financing against less liquid assets was greater than 120 days.

## Unsecured Financing

For a discussion of our unsecured financing activities, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Funding Management-Unsecured Financing" in Part II, Item 7 of the 2015 Form 10-K. When appropriate, we may use derivative products to conduct asset and liability management and to make adjustments to our interest rate and structured borrowings risk profile (see Note 4 to the consolidated financial statements in Item 1).

## Deposits

Available funding sources to our bank subsidiaries include time deposits, money market deposit accounts, demand deposit accounts, repurchase agreements, federal funds purchased, commercial paper and Federal Home Loan Bank advances. The vast majority of deposits in our U.S. Bank Subsidiaries are sourced from our retail brokerage accounts and are considered to have stable, low-cost funding characteristics. At June 30, 2016 and December 31, 2015 deposits were $\$ 152,693$ million and $\$ 156,034$ million, respectively (see Note 9 to the consolidated financial statements in Item $1)$.

## Short-Term Borrowings

Our unsecured short-term borrowings may consist of bank loans, bank notes, commercial paper and structured notes with maturities of 12 months or less at issuance. At June 30, 2016 and December 31, 2015, we had approximately $\$ 880$ million and $\$ 2,173$ million, respectively, in Shortterm borrowings.

## Long-Term Borrowings

We believe that accessing debt investors through multiple distribution channels helps provide consistent access to the unsecured markets. In addition, the issuance of long-term debt allows us to reduce reliance on short-term credit sensitive instruments. Long-term borrowings are generally managed to achieve staggered maturities, thereby mitigating refinancing risk, and to maximize investor diversification through sales to global institutional and retail clients across regions, currencies and product types. Availability and cost of financing to us can vary depending on market conditions, the volume of certain trading and lending activities, our credit ratings and the overall availability of credit.

We may engage in various transactions in the credit markets (including, for example, debt retirements) that we believe are in our best interests and our investors.

Long-term Borrowings by Maturity Profile

|  | Parent |  | Subsidiaries |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |  |  |
| Due in 2016 | \$ | 6,807 | \$ | 3,442 | \$ | 10,249 |
| Due in 2017 |  | 22,232 |  | 1,322 |  | 23,554 |
| Due in 2018 |  | 18,161 |  | 1,126 |  | 19,287 |
| Due in 2019 |  | 20,534 |  | 896 |  | 21,430 |
| Due in 2020 |  | 16,326 |  | 911 |  | 17,237 |
| Thereafter |  | 67,752 |  | 3,983 |  | 71,735 |
| Total | \$ | 151,812 | \$ | 11,680 | \$ | 163,492 |

For further information on Long-term borrowings, see Notes 10 and 20 to the consolidated financial statements in Item 1.

## Credit Ratings

We rely on external sources to finance a significant portion of our day-to-day operations. The cost and availability of financing generally are impacted by, among other things, our credit ratings. In addition, our credit ratings can have an impact on certain trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration, such as OTC derivative transactions, including credit derivatives and interest rate swaps. Rating agencies consider company-specific factors; other industry factors such as regulatory or legislative changes; the macroeconomic environment; and perceived levels of government support, among other things.

As of December 2, 2015, our credit ratings no longer incorporate uplift from perceived government support from any rating agency given the significant progress of the U.S. financial reform legislation and regulations. Meanwhile, some rating agencies have stated that they currently incorporate various degrees of credit rating uplift from nongovernmental third-party sources of potential support.

## Parent and MSBNA's Senior Unsecured Ratings at July 29, 2016

|  | Parent |  |  |
| :---: | :---: | :---: | :---: |
|  | Short-Term Debt | Long-Term Debt | Rating <br> Outlook |
| DBRS, Inc. | $\mathrm{R}-1$ (middle) | A (high) | Stable |
| Fitch Ratings, Inc. | F1 | A | Stable |
| Moody's Investors Service, Inc. | P-2 | A3 | Stable |
| Rating and Investment Information, Inc. | a-1 | A- | Stable |
| Standard \& Poor's Ratings Services | A-2 | BBB+ | Stable |


|  | Morgan Stanley Bank, N.A. |  |  |
| :---: | :---: | :---: | :---: |
|  | Short-Term Debt | Long-Term Debt | Rating Outlook |
| DBRS, Inc. | - | - | - |
| Fitch Ratings, Inc. | F1 | A+ | Stable |
| Moody's Investors Service, Inc. | P-1 | A1 | Stable |
| Rating and Investment Information, Inc. | - | - | - |
| Standard \& Poor's Ratings Services | A-1 | A | Positive <br> Watch |

In connection with certain OTC trading agreements and certain other agreements where we are a liquidity provider to certain financing vehicles associated with the Institutional Securities business segment, we may be required to provide additional collateral or immediately settle any outstanding liability balances with certain counterparties or pledge additional collateral to certain exchanges and clearing organizations in the event of a future credit rating downgrade irrespective of whether we are in a net asset or net liability position.

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by either or both of Moody's Investors Service, Inc. ("Moody's") and Standard \& Poor's Ratings Services ("S\&P"). The following table shows the future potential collateral amounts and termination payments that could be called or required by counterparties or exchanges and clearing organizations in the event of one-notch or two-notch downgrade scenarios, from the lowest of Moody's or S\&P ratings, based on the relevant contractual downgrade triggers.

Incremental Collateral or Terminating Payments upon Potential Future Rating Downgrade

|  | $\underset{2016}{\text { At June }}$ | $\begin{gathered} \text { At December 31, } \\ 2015 \end{gathered}$ |
| :---: | :---: | :---: |
|  | (dollars in millions) |  |
| One-notch downgrade | \$ 1,118 | \$ 1,169 |
| Two-notch downgrade | 1,330 | 1,465 |

While certain aspects of a credit rating downgrade are quantifiable pursuant to contractual provisions, the impact it would have on our business and results of operations in future periods is inherently uncertain and would depend on a number of interrelated factors, including, among others, the magnitude of the downgrade, the rating relative to peers, the rating assigned by the relevant agency pre-downgrade, individual client behavior and future mitigating actions we might take. The liquidity impact of additional collateral requirements is included in our Liquidity Stress Tests.

## Capital Management

Senior management views capital as an important source of financial strength. We actively manage our consolidated capital position based upon, among other things, business opportunities, risks, capital availability and rates of return together with internal capital policies, regulatory requirements and rating agency guidelines and, therefore, in the future may expand or contract our capital base to address the changing needs of our businesses. We attempt to maintain total capital, on a consolidated basis, at least equal to the sum of our operating subsidiaries' required equity.

We repurchased approximately $\$ 625$ million of our outstanding common stock as part of our share repurchase program during the current quarter and $\$ 1,250$ million during the current year period. We repurchased approximately $\$ 625$ million during the prior year quarter and $\$ 875$ million in the prior year period (see Note 14 to the consolidated financial statements in Item 1).

Pursuant to the share repurchase program, we consider, among other things, business segment capital needs, as well as stock-based compensation and benefit plan requirements. Share repurchases under our program will be exercised from time to time at prices we deem appropriate subject to various factors, including our capital position and market conditions. The share repurchases may be effected through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans, and may be suspended at any time. Share repurchases are subject to regulatory approval (see also "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" in Part II, Item 5 of the 2015 Form 10-K).

In June 2016, we received a conditional non-objection from the Federal Reserve to our 2016 capital plan. The capital
plan included a share repurchase of up to $\$ 3.5$ billion of our outstanding common stock during the period beginning July 1, 2016 through June 30, 2017. Additionally, the capital plan included an increase in the quarterly common stock dividend to $\$ 0.20$ per share from $\$ 0.15$ per share during the period beginning with the dividend declared on July 20, 2016 (see Note 20 to the consolidated financial statements in Item 1). The Federal Reserve Board also asked us to submit an additional capital plan by December 29, 2016 addressing weaknesses identified in our capital planning process.

The Board determines the declaration and payment of dividends on a quarterly basis. On July 20, 2016, we announced that the Board declared a quarterly dividend per common share of $\$ 0.20$. The dividend is payable on August 15, 2016 to common shareholders of record on July 29, 2016 (see Note 20 to the consolidated financial statements in Item 1).

On June 15, 2016, we announced that the Board declared a quarterly dividend for preferred stock shareholders of record on June 30, 2016 that was paid on July 15, 2016.

## Trust Preferred Securities

On July 19, 2016, we announced that Morgan Stanley Capital Trust III, Morgan Stanley Capital Trust IV and Morgan Stanley Capital Trust V will redeem all of their issued and outstanding Capital Securities on August 18, 2016, and that Morgan Stanley Capital Trust VIII will redeem all of its issued and outstanding Capital Securities on August 3, 2016, pursuant to the optional redemption provisions provided in the respective governing documents. In the aggregate, $\$ 2.8$ billion will be redeemed. We will concurrently redeem the related underlying junior subordinated debentures.

## Tangible Equity

Tangible Equity Measures-Period End and Average

|  | Balance at |  |  |  | $\begin{gathered} \text { Monthly Average } \\ \text { Balance } \\ \text { Thre Month Ended } \\ \text { June 30, } 2016 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | June 30, 2016 |  | December 31, 2015 |  |  |  |
|  |  |  |  | illions) |  |  |
| Common equity | \$ | 69,596 | \$ | 67,662 | \$ | 68,951 |
| Preferred equity |  | 7,520 |  | 7,520 |  | 7,520 |
| Morgan Stanley shareholders' equity |  | 77,116 |  | 75,182 |  | 76,471 |
| Junior subordinated debentures issued to capital trusts |  | 2,853 |  | 2,870 |  | 2,851 |
| Less: Goodwill and net intangible assets |  | $(9,411)$ |  | $(9,564)$ |  | $(9,451)$ |
| Tangible Morgan Stanley shareholders' equity(1) | \$ | 70,558 | \$ | 68,488 | \$ | 69,871 |
| Common equity | \$ | 69,596 | \$ | 67,662 | \$ | 68,951 |
| Less: Goodwill and net intangible assets |  | $(9,411)$ |  | $(9,564)$ |  | $(9,451)$ |
| Tangible common equity(1) | \$ | 60,185 | \$ | 58,098 | \$ | 59,500 |

(1) Tangible Morgan Stanley shareholders' equity and tangible common equity are non-GAAP financial measures that we and investors consider to be a useful measure to assess capital adequacy.

## Regulatory Requirements

## Regulatory Capital Framework

We are a financial holding company under the Bank Holding Company Act of 1956, as amended (the "BHC Act"), and are subject to the regulation and oversight of the Federal Reserve. The Federal Reserve establishes capital requirements for us, including well-capitalized standards, and evaluates our compliance with such capital requirements. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for our U.S. Bank Subsidiaries. The regulatory capital requirements are largely based on the Basel III capital standards established by the Basel Committee and also implement certain provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "DoddFrank Act").

The Basel Committee has finalized revisions to the Basel III framework that, if adopted by the U.S. banking agencies, could result in substantial changes to our capital requirements. In particular, the Basel Committee has finalized a new standardized approach methodology for calculating counterparty credit risk exposures in derivatives transactions, and revised frameworks for market risk, interest rate risk in the banking book, and securitization capital requirements. In addition, the Basel Committee has proposed revisions to various regulatory capital standards, the impact of which is uncertain and depends on future rulemakings by the U.S. banking agencies.

## Regulatory Capital Requirements

We are required to maintain minimum risk-based and leverage capital ratios under the regulatory capital requirements. A summary of the calculations of regulatory capital, risk-weighted assets ("RWAs") and transition
provisions follows. For a further discussion of these calculations, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Regulatory RequirementsImplementation of U.S. Basel III" in Part II, Item 7 of the 2015 Form 10-K.

Regulatory Capital. Minimum risk-based capital ratio requirements apply to Common Equity Tier 1 capital, Tier 1 capital and Total capital. Certain adjustments to and deductions from capital are required for purposes of determining these ratios, such as deductions for goodwill, intangibles, certain deferred tax assets, other amounts in other comprehensive income and investments in the capital instruments of unconsolidated financial institutions. Certain of these adjustments and deductions are also subject to transitional provisions.

In addition to the minimum risk-based capital ratio requirements, on a fully phased-in basis by 2019 , we will be subject to:

- A greater than 2.5\% Common Equity Tier 1 capital conservation buffer;
- The Common Equity Tier 1 global systemically important bank ("G-SIB") capital surcharge, currently at 3\%; and
- Up to a $2.5 \%$ Common Equity Tier 1 countercyclical capital buffer, currently set by banking regulators at zero (collectively, the "buffers").

In 2016, the phase-in amount for each of the buffers is $25 \%$ of the fully phased-in buffer requirement. Failure to maintain the buffers will result in restrictions on our ability to make capital distributions, including the payment of
dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers. For a further discussion of the G-SIB capital surcharge, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital ResourcesRegulatory Requirements-G-SIB Capital Surcharge" in Part II, Item 7 of the 2015 Form 10-K.

Risk-Weighted Assets. RWAs reflect both our on- and off-balance sheet risk as well as capital charges attributable to the risk of loss arising from the following:

- Credit risk: The failure of a borrower, counterparty or issuer to meet its financial obligation to us;
- Market risk: Adverse changes in the level of one or more market prices, rate, indices, implied volatilities, correlations or other market factors, such as market liquidity; and
- Operational risk: Inadequate or failed processes, people and systems or external events (e.g., fraud, theft, legal
and compliance risks, cyber attacks or damage to physical assets).

Our binding risk-based capital ratios for regulatory purposes are the lower of the capital ratios computed under (i) the standardized approaches for calculating credit risk RWAs and market risk RWAs (the "Standardized Approach"); and (ii) the applicable advanced approaches for calculating credit risk, market risk and operational risk RWAs (the "Advanced Approach"). At June 30, 2016, our binding ratios are based on the Advanced Approach transitional rules.

The methods for calculating each of our risk-based capital ratios will change through January 1, 2022 as aspects of the capital rules are phased in. These changes may result in differences in our reported capital ratios from one reporting period to the next that are independent of changes to our capital base, asset composition, off-balance sheet exposures or risk profile.

## Minimum Risk-Based Capital Ratios: Transitional Provisions



[^23]|  | At June 30, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Transitional |  |  |  | Fully Phased-In |  |  |  |
|  | Standardized |  | Advanced |  | Standardized |  | Advanced |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Risk-based capital: |  |  |  |  |  |  |  |  |
| Common Equity Tier 1 capital | \$ | 59,796 | \$ | 59,796 | \$ | 57,556 | \$ | 57,556 |
| Tier 1 capital |  | 66,782 |  | 66,782 |  | 65,274 |  | 65,274 |
| Total capital |  | 80,142 |  | 79,830 |  | 76,982 |  | 76,670 |
| Total RWAs |  | 342,504 |  | 355,982 |  | 352,692 |  | 366,781 |
| Common Equity Tier 1 capital ratio |  | 17.5\% |  | 16.8\% |  | 16.3\% |  | 15.7\% |
| Tier 1 capital ratio |  | 19.5\% |  | 18.8\% |  | 18.5\% |  | 17.8\% |
| Total capital ratio |  | 23.4\% |  | 22.4\% |  | 21.8\% |  | 20.9\% |
| Leverage-based capital: |  |  |  |  |  |  |  |  |
| Adjusted average assets(1) |  | 804,511 |  | N/A |  | 803,377 |  | N/A |
| Tier 1 leverage ratio(2) |  | 8.3\% |  | N/A |  | 8.1\% |  | N/A |
|  | At December 31, 2015 |  |  |  |  |  |  |  |
|  | Transitional |  |  |  | Fully Phased-In |  |  |  |
|  |  | dardized |  | Advanced |  | dardized |  | vanced |
|  | (dollars in millions) |  |  |  |  |  |  |  |
| Risk-based capital: |  |  |  |  |  |  |  |  |
| Common Equity Tier 1 capital | . \$ | 59,409 | \$ | 59,409 | \$ | 55,441 | \$ | 55,441 |
| Tier 1 capital |  | 66,722 |  | 66,722 |  | 63,000 |  | 63,000 |
| Total capital |  | 79,663 |  | 79,403 |  | 73,858 |  | 73,598 |
| Total RWAs |  | 362,920 |  | 384,162 |  | 373,421 |  | 395,277 |
| Common Equity Tier 1 capital ratio |  | 16.4\% |  | 15.5\% |  | 14.8\% |  | 14.0\% |
| Tier 1 capital ratio |  | 18.4\% |  | 17.4\% |  | 16.9\% |  | 15.9\% |
| Total capital ratio |  | 22.0\% |  | 20.7\% |  | 19.8\% |  | 18.6\% |
| Leverage-based capital: |  |  |  |  |  |  |  |  |
| Adjusted average assets(1) |  | 803,574 |  | N/A |  | 801,346 |  | N/A |
| Tier 1 leverage ratio(2) |  | 8.3\% |  | N/A |  | 7.9\% |  | N/A |

## N/A - Not Applicable

(1) Adjusted average assets represent the denominator of the Tier 1 leverage ratio and are composed of the average daily balance of consolidated on-balance sheet assets under U.S. GAAP during the calendar quarter, adjusted for disallowed goodwill, transitional intangible assets, certain deferred tax assets, certain investments in the capital instruments of unconsolidated financial institutions and other adjustments.
(2) The minimum Tier 1 leverage ratio requirement is $4.0 \%$.

The fully phased-in basis pro forma estimates in the previous tables are based on our current understanding of the capital rules and other factors, which may be subject to change as we receive additional clarification and implementation guidance from the Federal Reserve and as the interpretation of the regulation evolves over time. These fully phased-in pro forma estimates are non-GAAP financial measures that we consider to be useful measures for us, investors and analysts in evaluating compliance with new regulatory capital requirements that were not yet effective at June 30, 2016. These preliminary estimates are subject to risks and uncertainties that may cause actual results to differ materially and should not be taken as a projection of what our capital ratios, RWAs, earnings or other results will actually be at future dates. For a discussion of risks and uncertainties that may affect our future results, see "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K.

## Well-Capitalized Minimum Regulatory Capital Ratios for U.S. Bank Subsidiaries

|  | At June 30, 2016 |
| :---: | :---: |
| Common Equity Tier 1 risk-based capital ratio | 6.5\% |
| Tier 1 risk-based capital ratio | 8.0\% |
| Total risk-based capital ratio | 10.0\% |
| Tier 1 leverage ratio | 5.0\% |

For us to remain a financial holding company, our U.S. Bank Subsidiaries must qualify as well-capitalized by maintaining the minimum ratio requirements set forth in the previous table. The Federal Reserve has not yet revised the well-capitalized standard for financial holding companies to reflect the higher capital standards required for us under the capital rules. Assuming that the Federal Reserve would apply the same or very similar well-capitalized standards to financial holding companies, each of our
risk-based capital ratios and Tier 1 leverage ratio at June 30, 2016 would have exceeded the revised wellcapitalized standard. The Federal Reserve may require us to maintain risk- and leverage-based capital ratios
substantially in excess of mandated minimum levels, depending upon general economic conditions and a financial holding company's particular condition, risk profile and growth plans.

## Regulatory Capital Calculated under Advanced Approach Transitional Rules

|  | At June 30, 2016 |  | At December 31, 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Common Equity Tier 1 capital: |  |  |  |  |
| Common stock and surplus | \$ | 19,091 | \$ | 20,114 |
| Retained earnings |  | 51,410 |  | 49,204 |
| Accumulated other comprehensive income (loss) |  | (905) |  | $(1,656)$ |
| Regulatory adjustments and deductions: |  |  |  |  |
| Net goodwill |  | $(6,582)$ |  | $(6,582)$ |
| Net intangible assets (other than goodwill and mortgage servicing assets) |  | $(1,698)$ |  | $(1,192)$ |
| Credit spread premium over risk-free rate for derivative liabilities |  | (428) |  | (202) |
| Net deferred tax assets |  | (888) |  | (675) |
| Net after-tax debt valuation adjustments(1) |  | (20) |  | 156 |
| Adjustments related to accumulated other comprehensive income |  | 61 |  | 411 |
| Other adjustments and deductions |  | (245) |  | (169) |
| Total Common Equity Tier 1 capital | \$ | 59,796 | \$ | 59,409 |
| Additional Tier 1 capital: |  |  |  |  |
| Preferred stock | \$ | 7,520 | \$ | 7,520 |
| Trust preferred securities |  | - |  | 702 |
| Noncontrolling interests |  | 653 |  | 678 |
| Regulatory adjustments and deductions: |  |  |  |  |
| Net deferred tax assets |  | (592) |  | $(1,012)$ |
| Credit spread premium over risk-free rate for derivative liabilities |  | (286) |  | (303) |
| Net after-tax debt valuation adjustments(1) |  | (13) |  | 233 |
| Other adjustments and deductions |  | (156) |  | (253) |
| Additional Tier 1 capital | \$ | 7,126 | \$ | 7,565 |
| Deduction for investments in covered funds |  | (140) |  | (252) |
| Total Tier 1 capital | \$ | 66,782 | \$ | 66,722 |
| Tier 2 capital: |  |  |  |  |
| Subordinated debt | \$ | 11,120 | \$ | 10,404 |
| Trust preferred securities |  | 1,675 |  | 2,106 |
| Other qualifying amounts |  | 58 |  | 35 |
| Regulatory adjustments and deductions |  | 195 |  | 136 |
| Total Tier 2 capital | \$ | 13,048 | \$ | 12,681 |
| Total capital | \$ | 79,830 | \$ | 79,403 |

[^24] related to DVA, the aggregate balance of net after-tax valuation adjustments was reduced by $\$ 77$ million as of January 1, 2016.

|  | Six Months Ended June 30, 2016 |  |
| :---: | :---: | :---: |
|  | (dollars in millions) |  |
| Common Equity Tier 1 capital: |  |  |
| Common Equity Tier 1 capital at December 31, 2015 | \$ | 59,409 |
| Change related to the following items: |  |  |
| Value of shareholders' common equity |  | 1,934 |
| Net intangible assets (other than goodwill and mortgage servicing assets) |  | (506) |
| Credit spread premium over risk-free rate for derivative liabilities |  | (226) |
| Net deferred tax assets |  | (213) |
| Net after-tax debt valuation adjustments(1) |  | (176) |
| Adjustments related to accumulated other comprehensive income |  | (350) |
| Other deductions and adjustments |  | (76) |
| Common Equity Tier 1 capital at June 30, 2016 | \$ | 59,796 |
| Additional Tier 1 capital: |  |  |
| Additional Tier 1 capital at December 31, 2015 | \$ | 7,565 |
| Change related to the following items: |  |  |
| Trust preferred securities |  | (702) |
| Noncontrolling interests |  | (25) |
| Net deferred tax assets |  | 420 |
| Credit spread premium over risk-free rate for derivative liabilities |  | 17 |
| Net after-tax debt valuation adjustments(1) |  | (246) |
| Other adjustments and deductions |  | 97 |
| Additional Tier 1 capital at June 30, 2016 |  | 7,126 |
| Deduction for investments in covered funds at December 31, 2015 |  | (252) |
| Deduction for investments in covered funds |  | 112 |
| Deduction for investments in covered funds at June 30, 2016 |  | (140) |
| Tier 1 capital at June 30, 2016 | \$ | 66,782 |
| Tier 2 capital: |  |  |
| Tier 2 capital at December 31, 2015 | \$ | 12,681 |
| Change related to the following items: |  |  |
| Subordinated debt |  | 716 |
| Trust preferred securities |  | (431) |
| Noncontrolling interests |  | 23 |
| Other adjustments and deductions |  | 59 |
| Tier 2 capital at June 30, 2016 | \$ | 13,048 |
| Total capital at June 30, 2016 | \$ | $\underline{79,830}$ |

(1) In connection with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, related to DVA, the aggregate balance of net after-tax valuation adjustments was reduced by $\$ 77$ million as of January $1,2016$.

|  | Six Months Ended June 30, 2016(1) |  |
| :---: | :---: | :---: |
|  | (dollars in millions) |  |
| Credit risk RWAs: |  |  |
| Balance at December 31, 2015 | \$ | 173,586 |
| Change related to the following items: |  |  |
| Derivatives |  | 1,624 |
| Securities financing transactions |  | 1,239 |
| Other counterparty credit risk |  | 79 |
| Securitizations |  | $(3,246)$ |
| Credit valuation adjustment |  | 3,256 |
| Investment securities |  | 1,179 |
| Loans |  | $(7,943)$ |
| Cash |  | 1,148 |
| Equity investments |  | $(1,201)$ |
| Other credit risk(2) |  | $(1,366)$ |
| Total change in credit risk RWAs | \$ | $(5,231)$ |
| Balance at June 30, 2016 | \$ | 168,355 |
| Market risk RWAs: |  |  |
| Balance at December 31, 2015 | \$ | 71,476 |
| Change related to the following items: |  |  |
| Regulatory VaR |  | $(1,107)$ |
| Regulatory stressed VaR |  | $(5,436)$ |
| Incremental risk charge |  | (64) |
| Comprehensive risk measure |  | $(1,396)$ |
| Specific risk: |  |  |
| Non-securitizations |  | (577) |
| Securitizations |  | $(3,308)$ |
| Total change in market risk RWAs | \$ | $(11,888)$ |
| Balance at June 30, 2016 | \$ | 59,588 |
| Operational risk RWAs: |  |  |
| Balance at December 31, 2015 | \$ | 139,100 |
| Change in operational risk RWAs(3) |  | $(11,061)$ |
| Balance at June 30, 2016 | \$ | 128,039 |
| Total RWAs | \$ | 355,982 |

[^25]
## Supplementary Leverage Ratio

We and our U.S. Bank Subsidiaries are required to publicly disclose our supplementary leverage ratios, which will become effective as a capital standard on January 1, 2018. By January 1, 2018, we must also maintain a Tier 1 supplementary leverage capital buffer of at least $2 \%$ in addition to the $3 \%$ minimum supplementary leverage ratio (for a total of at least $5 \%$ ), in order to avoid limitations on capital distributions, including dividends and stock repurchases, and discretionary bonus payments to executive officers. In addition, beginning in 2018, our U.S. Bank Subsidiaries must maintain a supplementary leverage ratio of $6 \%$ to be considered well-capitalized.

Pro Forma Supplementary Leverage Exposure and Ratio on a Transitional Basis

|  | $\begin{aligned} & \text { At June 30, } \\ & 2016 \end{aligned}$ |  | $\begin{aligned} & \text { ecember 31, } \\ & 2015 \end{aligned}$ |
| :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |
| Total assets | \$ 828,873 | \$ | 787,465 |
| Average total assets(1) | \$ 814,816 | \$ | 813,715 |
| Adjustments(2)(3) | 252,291 |  | 284,090 |
| Pro forma supplementary leverage exposure | \$1,067,107 | \$ | 1,097,805 |
| Pro forma supplementary leverage ratio | 6.3\% |  | 6.1\% |

(1) Computed as the average daily balance of consolidated total assets under U.S. GAAP during the calendar quarter.
(2) Computed as the arithmetic mean of the month-end balances over the calendar quarter.
(3) Adjustments are to: (i) incorporate derivative exposures, including adding the related potential future exposure (including for derivatives cleared for clients), grossing up cash collateral netting where qualifying criteria are not met, and adding the effective notional principal amount of sold credit protection offset by qualifying purchased credit protection; (ii) reflect the counterparty credit risk for repo-style transactions; (iii) add the credit equivalent amount for off-balance sheet exposures; and (iv) apply other adjustments to Tier 1 capital, including disallowed goodwill, transitional intangible assets, certain deferred tax assets and certain investments in the capital instruments of unconsolidated financial institutions.

Based on our current understanding of the rules and other factors, we estimate our pro forma fully phased-in supplementary leverage ratio to be approximately $6.1 \%$ and $5.8 \%$ at June 30, 2016 and December 31, 2015, respectively. This estimate utilizes a fully phased-in Tier 1 capital numerator and a fully phased-in denominator of approximately $\$ 1,066.0$ billion and $\$ 1,095.6$ billion at June 30, 2016 and December 31, 2015, respectively, which takes into consideration the Tier 1 capital deductions that would be applicable in 2018 after the phase-in period has ended.
U.S. Subsidiary Banks' Pro Forma Supplementary

Leverage Ratios on a Transitional Basis

|  | At June 30, 2016 |  | At December 31, 2015 |
| :--- | ---: | ---: | ---: | ---: |
|  |  | $8.0 \%$ | $7.3 \%$ |
| MSBNA $\ldots \ldots \ldots$ | $11.0 \%$ |  | $10.3 \%$ |

The pro forma supplementary leverage exposures and pro forma supplementary leverage ratios, both on transitional and fully phased-in bases, are non-GAAP financial measures that we consider to be useful measures for us, investors and analysts in evaluating prospective compliance with new regulatory capital requirements that have not yet become effective. Our estimates are subject to risks and uncertainties that may cause actual results to differ materially from estimates based on these regulations. Further, these expectations should not be taken as projections of what our supplementary leverage ratios, earnings, assets or exposures will actually be at future dates. For a discussion of risks and uncertainties that may affect our future results, see "Risk Factors" in Part I, Item 1A of the 2015 Form 10K.

## Total Loss-Absorbing Capacity and Long-Term Debt Requirements

The Federal Reserve has proposed a rule for top-tier bank holding companies of U.S. G-SIBs ("covered BHCs"), including the Parent, that establishes external total lossabsorbing capacity ("TLAC") and long-term debt ("LTD") requirements. The proposal contains various definitions and restrictions, such as requiring eligible LTD to be unsecured, have a remaining maturity of one year or more, and not have derivative-linked features, such as structured notes. The proposal would also impose restrictions on certain liabilities that covered BHCs may incur or have outstanding, including structured notes, as well as require all U.S. banking organizations supervised by the Federal Reserve with assets of at least $\$ 1$ billion to make certain deductions from capital for their investments in unsecured debt issued by covered BHCs. For a further discussion of TLAC and LTD requirements, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Regulatory Requirements-Total Loss-Absorbing Capacity and LongTerm Debt Requirements" in Part II, Item 7 of the 2015 Form 10-K. For discussions about the implication of the single point of entry ("SPOE") resolution strategy and the TLAC proposal, see "Business-Supervision and Regula-tion-Financial Holding Company-Resolution and Recovery Planning" in Part I, Item 1 and "Risk FactorsLegal, Regulatory and Compliance Risk" in Part I, Item 1A of the 2015 Form 10-K.

## Capital Plans and Stress Tests

Pursuant to the Dodd-Frank Act, the Federal Reserve has adopted capital planning and stress test requirements for large bank holding companies, including us, which form part of the Federal Reserve's annual Comprehensive Capital Analysis and Review ("CCAR") framework.

On April 5, 2016, we submitted our 2016 CCAR capital plan, and summary results of the Dodd-Frank Act and CCAR supervisory stress tests were published by the Federal Reserve in June. We exceeded all stressed capital ratio minimum requirements in the Federal Reserve severely adverse scenario, and our quantitative capital results improved from our prior year submission. In June

2016, we received a conditional non-objection from the Federal Reserve to our 2016 capital plan (see "Capital Management" herein). As required, we disclosed a summary of the result of our company-run stress tests on June 23, 2016. The Federal Reserve Board also asked us to submit an additional capital plan by December 29, 2016 addressing weaknesses identified in our capital planning process. Future capital distributions may be restricted if these identified weaknesses are not satisfactorily addressed when the Federal Reserve reviews our resubmitted capital plan. Pursuant to the conditional non-objection, we are able to execute the capital actions set forth in our 2016 capital plan, which include increasing our common stock dividend to $\$ 0.20$ per share beginning in the third quarter of 2016 and executing share repurchases of $\$ 3.5$ billion during the period July 1, 2016 through June 30, 2017. In addition, we must submit the results of our mid-cycle company-run stress test to the Federal Reserve by October 5, 2016 and disclose a summary of the results between October 5, 2016 and November 4, 2016.

The Dodd-Frank Act also requires each of our U.S. Bank Subsidiaries to conduct an annual stress test. MSBNA and MSPBNA submitted their 2016 annual company-run stress tests to the OCC on April 5, 2016 and published a summary of their stress test results on June 23, 2016.

For a further discussion of our capital plans and stress tests, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Regulatory Requirements-Capital Plans and Stress Tests" in Part II, Item 7 of the 2015 Form 10-K.

## Attribution of Average Common Equity according to the Required Capital Framework

Our required capital ("Required Capital") estimation is based on the Required Capital framework, an internal capital adequacy measure. Common equity attribution to the business segments is based on capital usage calculated by
the Required Capital framework, as well as each business segment's relative contribution to our total Required Capital. Required Capital is assessed for each business segment and further attributed to product lines. This process is intended to align capital with the risks in each business segment in order to allow senior management to evaluate returns on a risk-adjusted basis.

The Required Capital framework is a risk-based and leverage use-of-capital measure, which is compared with our regulatory capital to ensure that we maintain an amount of going concern capital after absorbing potential losses from stress events, where applicable, at a point in time. We define the difference between our total average common equity and the sum of the average common equity amounts allocated to our business segments as Parent equity. We generally hold Parent equity for prospective regulatory requirements, organic growth, acquisitions and other capital needs.

Effective January 1, 2016, the common equity estimation and attribution to the business segments are based on our fully phased-in regulatory capital, including supplementary leverage and stress losses (which results in more capital being attributed to the business segments), whereas prior periods were attributed based on transitional regulatory capital provisions. Also, beginning in 2016, the amount of capital allocated to the business segments will be set at the beginning of each year, and will remain fixed throughout the year, until the next annual reset. Differences between available and Required Capital will be reflected in Parent equity during the year. Periods prior to 2016 have not been recast under the new methodology.

The Required Capital framework is expected to evolve over time in response to changes in the business and regulatory environment and to incorporate enhancements in modeling techniques. We will continue to evaluate the framework with respect to the impact of future regulatory requirements, as appropriate.

Average Common Equity by Business Segment and Parent Equity

|  | $\begin{aligned} & \text { Three Months Ended(1) } \\ & \text { June 30, } \end{aligned}$ |  |  |  | $\begin{gathered} \text { Six Months Ended(1) } \\ \text { June 30, } \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
|  | (dollars in billions) |  |  |  |  |  |  |  |
| Institutional Securities | \$ | 43.2 | \$ | 35.3 | \$ | 43.2 | \$ | 36.1 |
| Wealth Management |  | 15.3 |  | 11.3 |  | 15.3 |  | 10.9 |
| Investment Management |  | 2.8 |  | 2.3 |  | 2.8 |  | 2.3 |
| Parent |  | 7.7 |  | 18.3 |  | 7.3 |  | 17.0 |
| Total | \$ | 69.0 | \$ | 67.2 | \$ | 68.6 | \$ | 66.3 |

(1) Amounts are calculated on a monthly basis. Average common equity is a non-GAAP financial measure that we consider to be a useful measure for us, investors and analysts to assess capital adequacy.

## Regulatory Developments

## Resolution and Recovery Planning

Pursuant to the Dodd-Frank Act, we are required to submit to the Federal Reserve and the FDIC an annual resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of our material financial distress or failure. Our preferred resolution strategy, which is set out in our 2015 resolution plan, is an SPOE strategy. On April 12, 2016, the Federal Reserve and the FDIC notified us of certain shortcomings in our 2015 resolution plan. The Federal Reserve, but not the FDIC, viewed one of the shortcomings as a deficiency, and there was not a joint determination that our 2015 resolution plan was not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code. We are required to respond with a status report on our actions to address the shortcomings and a public section that explains those actions by October 1, 2016. Our next full resolution plan submission will be on July 1, 2017. If the Federal Reserve and the FDIC were, at a later time, to jointly determine that our 2017 resolution plan is not credible or would not facilitate an orderly resolution, and if we were unable to address any deficiencies at that later time, we or any of our subsidiaries may be subjected to more stringent capital, leverage, or liquidity requirements or restrictions on our growth, activities, or operations, or, after a two-year period, we may be required to divest assets or operations.

In May 2016, the Federal Reserve proposed a rule that would impose contractual requirements on certain "qualified financial contracts" ("covered QFCs") to which U.S. G-SIBs, including us, and their subsidiaries ("covered entities") are parties. While national banks and savings associations are not "covered entities" under the proposed rule, the OCC is expected to propose a rule that would subject national banks, including our U.S. Bank Subsidiaries, to substantively identical requirements. Under the proposal, covered QFCs must expressly provide that transfer restrictions and default rights against a covered entity are limited to the same extent as provided under the Federal Deposit Insurance Act and Title II of the Dodd-Frank Act and their implementing regulations. In addition, covered QFCs may not permit the exercise of cross-default rights against a covered entity based on an affiliate's entry into insolvency, resolution or similar proceedings. If adopted as proposed, the requirements would take effect at the start of the first calendar quarter that begins at least one year after the final rule is issued. We are evaluating the potential impact of the proposal, which is subject to public comment and further rulemaking procedures.
For more information about resolution and recovery planning requirements and our activities in these areas, see "Business-Supervision and Regulation-Financial Holding Company-Resolution and Recovery Planning" in Part I, Item 1 of the 2015 Form 10-K.

## Single-Counterparty Credit Limits

In March 2016, the Federal Reserve re-proposed rules that would establish single-counterparty credit limits for large banking organizations ("covered companies"), with more stringent limits for the largest covered companies. U.S. GSIBs, including us, would be subject to a limit of $15 \%$ of Tier 1 capital for credit exposures to any "major counterparty" (defined as other U.S. G-SIBs, foreign G-SIBs and nonbank systemically important financial institutions supervised by the Federal Reserve) and to a limit of $25 \%$ of Tier 1 capital for credit exposures to any other unaffiliated counterparty. We are evaluating the potential impact of the proposed rules.

## Compensation Practices

In the second quarter of 2016, the federal regulatory agencies required under the Dodd-Frank Act to issue regulations relating to the compensation practices of covered financial institutions, including us, re-proposed rules that if implemented would require, among other things, the deferral of a percentage of certain incentive-based compensation for senior executives and certain other employees and, under certain circumstances, "clawback" of incentive-based compensation. We are evaluating the proposal, which is subject to public comment and further rulemaking procedures.

## Legacy Covered Funds under the Volcker Rule

The Volcker Rule prohibits certain investments and relationships by banking entities, such as us, with "covered funds," with a number of exemptions and exclusions. The Federal Reserve has extended the conformance period until July 21, 2017 for investments in, and relationships with, covered funds that were in place before December 31, 2013, referred to as "legacy covered funds." On July 7, 2016, the Federal Reserve stated that it will continue to consider whether to take action regarding the additional extended five-year transition period for certain legacy covered funds that are also illiquid funds and that it expects to provide more information in the near term as to how it will address applications by banking entities seeking the statutory extension for this limited category of legacy covered funds. We currently have investments in, and relationships with, legacy covered funds that are illiquid. We expect to be able to divest or conform many of our legacy covered fund investments and relationships by July 2017, but, for certain illiquid funds, we expect to request further conformance extensions.

## Proposed U.S. Department of the Treasury Regulations

On April 4, 2016, the U.S. Department of the Treasury released proposed regulations under Section 385 of the U.S. tax code addressing, among other things, the treatment of certain related-party indebtedness as equity for U.S. federal income tax purposes. The proposed regulations are
subject to change, and may or may not be issued as final in their current form. If adopted as proposed, the requirements would generally be effective for financial instruments issued after April 4, 2016. We are currently evaluating the potential adverse impact on our future effective tax rate of the proposed regulations.

## Off-Balance Sheet Arrangements

We enter into various off-balance sheet arrangements, including through unconsolidated special purpose entities ("SPEs") and lending-related financial instruments (e.g., guarantees and commitments), primarily in connection with the Institutional Securities and Investment Management business segments.

We utilize SPEs primarily in connection with securitization activities. For information on our securitization activities, see Note 12 to the consolidated financial statements in Item 1.

For information on our commitments, obligations under certain guarantee arrangements and indemnities, see Note 11 to the consolidated financial statements in Item 1. For further information on our lending commitments, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management-Credit Risk—Lending Activities" in Item 3.

## Effects of Inflation and Changes in Interest and Foreign Exchange Rates

For a discussion of the effects of inflation and changes in interest and foreign exchange rates on our business and financial results and strategies to mitigate potential exposures, see "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Effects of Inflation and Changes in Interest and Foreign Exchange Rates" in Part II, Item 7 of the 2015 Form 10-K.

## U.K. Referendum

On June 23, 2016, the U.K. electorate voted to leave the European Union (the "EU"). It is difficult to predict the future of the U.K.'s relationship with the EU, which uncertainty may increase the volatility in the global financial markets in the short- and medium-term. There are several alternative models of relationship that the U.K. might seek to negotiate with the EU, the timeframe for which is uncertain but could take two years or more. The regulatory framework applicable to financial institutions with significant operations in Europe, such as us, is expected to evolve and specific and meaningful information regarding the long-term consequences of the vote is expected to become clearer over time. We will continue to evaluate various courses of action in the context of the development of the U.K.'s withdrawal from the EU and the referendum's potential impact on our operations. For further information regarding our exposure to the U.K., see also "Quantitative and Qualitative Disclosures about Market Risk—Risk Management-Credit Risk-Country Risk Exposure" in Part I, Item 3.

## Item 3. Quantitative and Qualitative Disclosures about Market Risk

## Risk Management

Management believes effective risk management is vital to the success of our business activities. For a discussion of our risk management functions, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management" in Part II, Item 7A of the 2015 Form 10-K.

## Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, implied volatilities (the price volatility of the underlying instrument imputed from option prices), correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. Generally, we incur market risk as a result of trading, investing and client facilitation activities, principally within the Institutional Securities business segment where the substantial majority of our Value-at-Risk ("VaR") for market risk exposures is generated. In addition, we incur trading-related market risk within the Wealth Management business segment. The Institutional Securities and Wealth Management business segments incur nontrading interest rate risk primarily from lending and deposit taking activities. The Investment Management business segment primarily incurs non-trading market risk from investments in private equity and real estate funds. For a further discussion of market risk, see "Quantitative and Qualitative Disclosures about Market Risk-Risk Manage-ment-Market Risk" in Part II, Item 7A of the 2015 Form 10-K.

## VaR

We use the statistical technique known as VaR as one of the tools used to measure, monitor and review the market risk exposures of our trading portfolios. The Market Risk Department calculates and distributes daily VaR-based risk measures to various levels of management.

VaR Methodology, Assumptions and Limitations. For information regarding our VaR methodology, assumptions and limitations, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management-Market Risk-Sales and Trading and Related Activities-VaR Methodology, Assumptions and Limitations" in Part II, Item 7A of the 2015 Form 10-K.

We utilize the same VaR model for risk management purposes as well as for regulatory capital calculations as approved by our regulators.

The portfolio of positions used for our VaR for risk management purposes ("Management VaR") differs from that used for regulatory capital requirements ("Regulatory VaR"). Management VaR contains certain positions that are excluded from Regulatory VaR. Examples include counterparty Credit Valuation Adjustments ("CVA") and related hedges, as well as loans that are carried at fair value and associated hedges.

The following table presents the Management VaR for the Trading portfolio, on a period-end, quarterly average and quarterly high and low basis. To further enhance the transparency of the traded market risk, the Credit Portfolio VaR has been disclosed as a separate category from the Primary Risk Categories.

## Trading Risks

95\%/One-Day Management VaR

|  | 95\%/One-Day VaR for the Quarter Ended June 30, 2016 |  |  |  |  | 95\%/One-Day VaR for the Quarter Ended March 31, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Market Risk Category | Period End |  | Average | High | Low | Period End |  | Average |  | High |  | Low |  |
|  |  |  |  |  | (dollars |  | illions) |  |  |  |  |  |  |
| Interest rate and credit spread | \$ | 26 | 32 | 38 | 26 | \$ | 35 | \$ | 33 | \$ | 39 | \$ | 28 |
| Equity price |  | 20 | 17 | 43 | 13 |  | 16 |  | 18 |  | 26 |  | 14 |
| Foreign exchange rate |  | 10 | 7 | 12 | 6 |  | 7 |  | 7 |  | 11 |  | 5 |
| Commodity price |  | 9 | 10 | 12 | 9 |  | 11 |  | 11 |  | 13 |  | 10 |
| Less: Diversification benefit(1)(2) |  | (32) | (28) | N/A | N/A |  | (30) |  | (27) |  | N/A |  | N/A |
| Primary Risk Categories | \$ | 33 | 38 | 61 | 31 | \$ | 39 | \$ | 42 | \$ | 53 | \$ | 34 |
| Credit Portfolio |  | 22 | 20 | 23 | 18 |  | 19 |  | 16 |  | 20 |  | 12 |
| Less: Diversification benefit(1)(2) |  | (13) | (12) | N/A | N/A |  | (11) |  | (12) |  | N/A |  | N/A |
| Total Management VaR | \$ | 42 | 46 | 68 | 39 | \$ | 47 | \$ | 46 | \$ | 55 | \$ | 39 |

[^26]The average Total Management VaR for the quarter ended June 30, 2016 ("current quarter") was $\$ 46$ million, which was consistent with $\$ 46$ million for the quarter ended March 31, 2016 ("last quarter").

The average Management VaR for the Primary Risk Categories for the current quarter was $\$ 38$ million compared with $\$ 42$ million for the last quarter. The decrease was driven by an overall reduction in risk exposures across the Sales and Trading businesses.

Distribution of VaR Statistics and Net Revenues for the Current Quarter. One method of evaluating the reasonableness of our VaR model as a measure of our potential volatility of net revenues is to compare VaR with actual trading revenues. Assuming no intraday trading, for a 95\%/ one-day VaR, the expected number of times that trading losses should exceed VaR during the year is 13 , and, in general, if trading losses were to exceed VaR more than 21 times in a year, the adequacy of the VaR model
would be questioned. We evaluate the reasonableness of our VaR model by comparing the potential declines in portfolio values generated by the model with actual trading results for the Firm, as well as individual business units. For days where losses exceed the VaR statistic, we examine the drivers of trading losses to evaluate the VaR model's accuracy relative to realized trading results.

The distribution of VaR Statistics and Net Revenues is presented in the following histograms for the Total Trading populations.

Total Trading. As shown in the 95\%/One-Day Management VaR table, the average $95 \% /$ one-day Total Management VaR for the current quarter was $\$ 46$ million. The following histogram presents the distribution of the daily 95\%/one-day Total Management VaR for the current quarter, which was in a range between $\$ 40$ million and $\$ 50$ million for approximately $91 \%$ of trading days during the quarter.


The following histogram shows the distribution for the current quarter of daily net trading revenues, including profits and losses from Interest rate and credit spread, Equity price, Foreign exchange rate, Commodity price and Credit Portfolio positions and intraday trading activities, for our Trading businesses. Daily net trading revenues also include intraday trading activities but exclude certain items not captured in the VaR model, such as fees, commissions and net interest
income. Daily net trading revenues differ from the definition of revenues required for Regulatory VaR backtesting, which further excludes intraday trading. During the current quarter, we experienced net trading losses on 3 days, of which no day was in excess of the $95 \% /$ one-day Total Management VaR.


## Non-trading Risks

We believe that sensitivity analysis is an appropriate representation of our non-trading risks. Reflected below is this analysis covering substantially all of the non-trading risk in our portfolio.

Counterparty Exposure Related to Our Own Credit Spread. The credit spread risk sensitivity of the counterparty exposure related to our own credit spread corresponded to an increase in value of approximately $\$ 7$ million for each 1 basis point widening in our credit spread level at both June 30, 2016 and March 31, 2016.

Funding Liabilities. The credit spread risk sensitivity of our mark-to-market funding liabilities corresponded to an increase in value of approximately $\$ 15$ million and $\$ 13$ million for each 1 basis point widening in our credit spread level at June 30, 2016 and March 31, 2016, respectively.

Interest Rate Risk Sensitivity. The following table presents an analysis of selected instantaneous upward and downward parallel interest rate shocks on net interest income over the next 12 months for our U.S. Bank Subsidiaries. These shocks are applied to our 12-month forecast for our U.S. Bank Subsidiaries, which incorporates market expectations of interest rates and our forecasted business activity, including our deposit deployment strategy and asset-liability management hedges.
$\underline{\text { U.S. Bank Subsidiaries' Net Interest Income Sensitivity }}$ Analysis

|  | At June 30, 2016 |  | At March 31, 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | (dollars | n m |  |
| +200 basis points | \$ | (204) | \$ | (202) |
| +100 basis points |  | (21) |  | (79) |
| -100 basis points |  | (532) |  | (534) |

At June 30, 2016 and March 31, 2016, large instantaneous interest rates shocks had a negative impact to our U.S. Bank Subsidiaries' projected net interest income over the following 12 months due to composition of the banks' assets as well as expected deposit pricing behavior at higher levels of interest rates. We do not manage to any single rate scenario but rather manage net interest income in our U.S. Bank Subsidiaries to optimize across a range of possible outcomes. The sensitivity analysis assumes that we take no action in response to these scenarios and does not assume any change in other macroeconomic variables normally correlated with changes in interest rates.

Investments. We have exposure to public and private companies through direct investments as well as through funds that invest in these assets. These investments are predominantly equity positions with long investment horizons, a portion of which are for business facilitation purposes. The market risk related to these investments is measured by estimating the potential reduction in net income associated
with a $10 \%$ decline in investment values and related impact on performance fees.

| Fees |  |  |
| :---: | :---: | :---: |
|  | 10\% Sensitivity |  |
|  | $\begin{gathered} \hline \text { At } \\ \text { June 30, } 2016 \end{gathered}$ | $\text { March 31, } 2016$ |
|  | (dollars | millions) |
| Investments related to Investment |  |  |
| Management activities | \$ 375 | \$ 362 |
| Other investments: |  |  |
| Mitsubishi UFJ Morgan Stanley |  |  |
| Securities Co., Ltd. . . . . . | 175 | 159 |
| Other Firm investments | 162 | 169 |

Equity Market Sensitivity. In the Wealth Management and Investment Management business segments, certain fee-based revenue streams are driven by the value of clients' equity holdings. The overall level of revenues for these streams also depends on multiple additional factors that include, but are not limited to, the level and duration of the equity market decline, price volatility, the geographic and industry mix of client assets, the rate and magnitude of client investments and redemptions, and the impact of such market decline and price volatility on client behavior. Therefore, overall revenues do not correlate completely with changes in the equity markets.

## Credit Risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to us. We primarily incur credit risk exposure to institutions and individuals through our Institutional Securities and Wealth Management business segments. For a further discussion of our credit risks, see "Quantitative and Qualitative Disclosures about Market Risk-Risk Manage-ment-Credit Risk" in Part II, Item 7A of the 2015 Form $10-\mathrm{K}$. Also, see Notes 7 and 11 to the consolidated financial statements in Item 1 for additional information about our loans and lending commitments, respectively.

## Lending Activities

We provide loans and lending commitments to a variety of customers, from large corporate and institutional clients to high net worth individuals. In addition, we purchase loans in the secondary market. In the consolidated balance sheets, these loans and lending commitments are carried at either fair value with changes in fair value recorded in earnings; held for investment, which are recorded at amortized cost; or held for sale, which are recorded at lower of cost or fair value. Loans held for investment and loans held for sale are classified in Loans, and loans held at fair value are classified in Trading assets in the consolidated balance sheets. See Notes 3, 7 and 11 to the consolidated financial statements in Item 1 for further information.

|  | At June 30, 2016 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Institutional Securities |  | Wealth <br> Management |  | Total |  |
|  | (dollars in millions) |  |  |  |  |  |
| Corporate loans | \$ | 15,938 | \$ | 8,248 | \$ | 24,186 |
| Consumer loans |  | - |  | 23,337 |  | 23,337 |
| Residential real estate loans |  | - |  | 22,668 |  | 22,668 |
| Wholesale real estate loans |  | 7,415 |  | - |  | 7,415 |
| Loans held for investment, gross of allowance |  | 23,353 |  | 54,253 |  | 77,606 |
| Allowance for loan losses |  | (291) |  | (32) |  | (323) |
| Loans held for investment, net of allowance |  | 23,062 |  | 54,221 |  | 77,283 |
| Corporate loans |  | 14,447 |  | - |  | 14,447 |
| Consumer loans |  | - |  | - |  | - |
| Residential real estate loans |  | 38 |  | 46 |  | 84 |
| Wholesale real estate loans |  | 1,351 |  | - |  | 1,351 |
| Loans held for sale |  | 15,836 |  | 46 |  | 15,882 |
| Corporate loans |  | 7,114 |  | - |  | 7,114 |
| Residential real estate loans |  | 1,721 |  | - |  | 1,721 |
| Wholesale real estate loans |  | 462 |  | - |  | 462 |
| Loans held at fair value |  | 9,297 |  | - |  | 9,297 |
| Total loans(1) |  | 48,195 |  | 54,267 |  | 102,462 |
| Lending commitments(2)(3) |  | 88,057 |  | 7,003 |  | 95,060 |
| Total loans and lending commitments(2)(3) | \$ | 136,252 | \$ | 61,270 | \$ | 197,522 |


|  | At December 31, 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Institutional Securities |  | Wealth Management |  | Total |  |
|  | \$ | 16,452 | dollars in millions |  | \$ | 23554 |
| Consumer loans |  | 16,452 |  | 21,528 | \$ | 21,528 |
| Residential real estate loans |  |  |  | 20,863 |  | 20,863 |
| Wholesale real estate loans |  | 6,839 |  |  |  | 6,839 |
| Loans held for investment, gross of allowance |  | 23,291 |  | 49,493 |  | 72,784 |
| Allowance for loan losses |  | (195) |  | (30) |  | (225) |
| Loans held for investment, net of allowance |  | 23,096 |  | 49,463 |  | 72,559 |
| Corporate loans |  | 11,924 |  |  |  | 11,924 |
| Residential real estate loans |  | 45 |  | 59 |  | 104 |
| Wholesale real estate loans |  | 1,172 |  |  |  | 1,172 |
| Loans held for sale |  | 13,141 |  | 59 |  | 13,200 |
| Corporate loans |  | 7,286 |  | - |  | 7,286 |
| Residential real estate loans |  | 1,885 |  | - |  | 1,885 |
| Wholesale real estate loans |  | 1,447 |  | - |  | 1,447 |
| Loans held at fair value |  | 10,618 |  | - |  | 10,618 |
| Total loans(1) |  | 46,855 |  | 49,522 |  | 96,377 |
| Lending commitments(2)(3) |  | 95,572 |  | 5,821 |  | 101,393 |
| Total loans and lending commitments(2)(3) | \$ | 142,427 | \$ | 55,343 | \$ | 197,770 |

[^27]Our credit exposure from our loans and lending commitments is measured in accordance with our internal risk management standards. Risk factors considered in determining the aggregate allowance for loan and commitment losses include the borrower's financial strength, seniority of the loan, collateral type, volatility of collateral value, debt cushion, loan-to-value ratio, debt service ratio, covenants and counterparty type. At June 30, 2016 and December 31, 2015, the allowance for loan losses related to loans that were accounted for as held for investment was $\$ 323$ million and $\$ 225$ million, respectively, and the allowance for commitment losses related to lending commitments that were accounted for as held for investment was $\$ 187$ million and $\$ 185$ million, respectively. The aggregate allowance for loan and commitment losses increased over the six months ended June 30, 2016 primarily due to specific reserves on exposures to counterparties in the energy sector and other select downgrades. See "Institutional Securities Lending Exposure Related to the Energy Industry" herein and Note 7 to the consolidated financial statements in Item 1 for further information.

Institutional Securities Lending Activities. In connection with certain of our Institutional Securities business segment activities, we provide loans and lending commitments to a diverse group of corporate and other institutional clients. These activities include corporate lending, commercial and
residential mortgage lending, asset-backed lending, corporate loans purchased in the secondary market, financing extended to equities and commodities customers, and loans to municipalities. These loans and lending commitments may have varying terms; may be senior or subordinated; may be secured or unsecured; are generally contingent upon representations, warranties and contractual conditions applicable to the borrower; and may be syndicated, traded or hedged by us.

Institutional Securities loans and lending commitments are mainly related to relationship-based and event-driven lending to select corporate clients. Relationship-based loans and lending commitments are used for general corporate purposes, working capital and liquidity purposes by our Investment Banking clients and typically consist of revolving lines of credit, letter of credit facilities and term loans. In connection with the relationship-based lending activities, we had hedges (which included single-name, sector and index hedges) with a notional amount of $\$ 18.4$ billion and $\$ 12.0$ billion at June 30, 2016 and December 31, 2015, respectively. Event-driven loans and lending commitments are associated with a particular event or transaction, such as to support client merger, acquisition, recapitalization and project finance activities. Event-driven loans and lending commitments typically consist of revolving lines of credit, term loans and bridge loans.

Institutional Securities Loans and Lending Commitments by Credit Rating(1)

|  | At June 30, 2016 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Years to Maturity |  |  |  |  |  |  |  | Total |  |
|  | Less than 1 |  | 1-3 |  | 3-5 |  | Over 5 |  |  |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |  |
| AAA | \$ | 263 | \$ | - | \$ | 50 | \$ | - | \$ | 313 |
| AA |  | 3,478 |  | 758 |  | 4,375 |  | - |  | 8,611 |
| A |  | 2,169 |  | 6,517 |  | 10,610 |  | 1,104 |  | 20,400 |
| BBB |  | 11,094 |  | 15,909 |  | 23,997 |  | 844 |  | 51,844 |
| Investment grade |  | 17,004 |  | 23,184 |  | 39,032 |  | 1,948 |  | 81,168 |
| Non-investment grade |  | 8,040 |  | 17,529 |  | 18,520 |  | 7,134 |  | 51,223 |
| Unrated(2) |  | 933 |  | 591 |  | 94 |  | 2,243 |  | 3,861 |
| Total | \$ | 25,977 | \$ | 41,304 | \$ | 57,646 | \$ | 11,325 | \$ | 136,252 |


|  | At December 31, 2015 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Years to Maturity |  |  |  |  |  |  |  | Total |  |
|  | Less than 1 |  | 1-3 |  | 3-5 |  | Over 5 |  |  |  |
|  |  |  | (dollars in millions) |  |  |  |  |  |  |  |
| AAA | \$ | 287 | \$ | 24 | \$ | 50 | \$ | - | \$ | 361 |
| AA |  | 5,022 |  | 2,553 |  | 3,735 |  | 63 |  | 11,373 |
| A |  | 3,996 |  | 5,726 |  | 11,993 |  | 1,222 |  | 22,937 |
| BBB |  | 5,089 |  | 16,720 |  | 23,248 |  | 4,086 |  | 49,143 |
| Investment grade |  | 14,394 |  | 25,023 |  | 39,026 |  | 5,371 |  | 83,814 |
| Non-investment grade |  | 7,768 |  | 15,863 |  | 22,818 |  | 7,779 |  | 54,228 |
| Unrated(2) |  | 930 |  | 1,091 |  | 246 |  | 2,118 |  | 4,385 |
| Total | \$ | 23,092 | \$ | 41,977 | \$ | 62,090 | \$ | 15,268 | \$ | 142,427 |

(1) Obligor credit ratings are determined by the Credit Risk Management Department.
(2) Unrated loans and lending commitments are primarily trading positions that are measured at fair value and risk managed as a component of Market Risk. For a further discussion of our Market Risk, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Market Risk" in Part II, Item 7A of the 2015 Form 10-K.

At both June 30, 2016 and December 31, 2015, the aggregate amount of investment grade loans was $\$ 15.8$ billion, respectively, the aggregate amount of non-investment grade loans was $\$ 28.7$ billion and $\$ 26.9$ billion, respectively, and the aggregate amount of unrated loans was $\$ 3.7$ billion and $\$ 4.2$ billion, respectively.

## Event-Driven Loans and Lending Commitments

|  | $\begin{aligned} & \text { At June 30, } \\ & 2016 \end{aligned}$ |  | $\underset{\substack{\text { December 31, } \\ 2015}}{\text { At },}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in billions) |  |  |  |
| Event-driven loans | \$ | 9.6 | \$ | 5.4 |
| Event-driven lending commitments |  | 13.1 |  | 17.8 |
| Total | \$ | 22.7 | \$ | 23.2 |

Event-driven loans and
lending commitments to non-investment grade borrowers ............. \$ 13.0 \$ 13.5

Maturity Profile of Event-driven Loans and Lending Commitments

|  | $\underset{2016}{\text { At June }} \mathbf{3 0}$ | $\begin{gathered} \text { At December 31, } \\ 2015 \end{gathered}$ |
| :---: | :---: | :---: |
| Less than 1 year | 36\% | 24\% |
| 1-3 years | 20\% | 21\% |
| 3-5 years | 17\% | 24\% |
| Over 5 years | 27\% | 31\% |

At June 30, 2016, approximately $98 \%$ of the Institutional Securities business segment loans held for investment were current, while approximately $2 \%$ were on nonaccrual status, and at December 31, 2015, approximately $99 \%$ of the Institutional Securities business segment loans held for investment were current, while approximately $1 \%$ were on nonaccrual status because the loans were past due for a period of 90 days or more or payment of principal or interest was in doubt.

| Industry(1) | $\begin{gathered} \text { At June 30, } \\ 2016 \\ \hline \end{gathered}$ |  | $\begin{gathered} \text { At December 31, } \\ 2015 \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Real estate | \$ | 17,524 | \$ | 17,847 |
| Healthcare |  | 16,891 |  | 12,677 |
| Energy |  | 13,512 |  | 15,921 |
| Consumer discretionary |  | 13,128 |  | 12,098 |
| Utilities |  | 12,646 |  | 12,631 |
| Industrials |  | 10,349 |  | 10,018 |
| Information technology |  | 8,269 |  | 11,122 |
| Consumer staples |  | 8,053 |  | 8,597 |
| Funds, exchanges and other financial services(2) |  | 8,052 |  | 11,649 |
| Materials |  | 6,698 |  | 6,440 |
| Mortgage finance |  | 6,399 |  | 8,260 |
| Telecommunications services |  | 4,245 |  | 4,403 |
| Insurance |  | 3,793 |  | 4,682 |
| Consumer finance |  | 2,768 |  | 977 |
| Special purpose vehicles |  | 1,914 |  | 3,482 |
| Other |  | 2,011 |  | 1,623 |
| Total | \$ | 136,252 | \$ | 142,427 |

(1) Industry categories are based on the Global Industry Classification Standard ${ }^{\circledR}$.
(2) Includes mutual funds, pension funds, private equity and real estate funds, exchanges and clearinghouses, and diversified financial services.

## Institutional Securities Lending Exposures Related to the

 Energy Industry. At June 30, 2016, Institutional Securities' loans and lending commitments related to the energy industry were $\$ 13.5$ billion, of which approximately $64 \%$ are accounted for as held for investment and $36 \%$ are accounted for as either held for sale or at fair value. Additionally, approximately $59 \%$ of the total energy industry loans and lending commitments were to investment grade counterparties. At June 30, 2016, the energy industry portfolio included $\$ 1.7$ billion in loans and $\$ 1.9$ billion in lending commitments to Oil and Gas Exploration and Production ("E\&P") companies. The E\&P lending commitments were primarily to investment grade counterparties. The E\&P loans were substantially all to non-investment grade counterparties, which are generally subject to periodic borrowing base reassessments based on the value of the underlying oil and gas reserves pledged as collateral. In limited situations, we may extend the period related to borrowing base reassessments typically in conjunction with taking certain risk mitigating actions with the borrower. Over the six months ended June 30, 2016, we increased the allowance for loan and commitment losses on held for investment energy exposures and incurred mark-to-market losses on fair value energy loans. See "Credit RiskLending Activities" herein for further information. To the extent commodities prices, or oil prices, remain at quarter-end levels, or deteriorate further, we may incur additional lending losses.

At December 31, 2015, Institutional Securities' loans and lending commitments related to the energy industry were $\$ 15.9$ billion. Approximately $60 \%$ of these energy industry loans and lending commitments were to investment grade counterparties. At December 31, 2015, the energy industry portfolio included $\$ 1.7$ billion in loans and $\$ 2.7$ billion in lending commitments to E\&P companies. The E\&P loans were substantially all to non-investment grade counterparties which are subject to semi-annual borrowing base reassessments based on the value of the underlying oil and gas reserves pledged as collateral. The E\&P lending commitments were primarily to investment grade counterparties.

Institutional Securities Margin Lending. In addition to the activities noted above, Institutional Securities provides margin lending, which allows the client to borrow against the value of qualifying securities. At June 30, 2016 and December 31, 2015, the amounts related to margin lending were $\$ 8.7$ billion and $\$ 10.6$ billion, respectively, which were classified within Customer and other receivables in the consolidated balance sheets.

Wealth Management Lending Activities. The principal Wealth Management lending activities include securities-based lending and residential real estate loans.

Securities-based lending provided to our retail clients is primarily conducted through our Portfolio Loan Account ("PLA") and Liquidity Access Line ("LAL") platforms which had an outstanding loan balance of $\$ 27.1$ billion and $\$ 24.9$ billion at June 30, 2016 and December 31, 2015, respectively. For more information about our securities-based lending and residential real estate loans, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management-Credit RiskLending Activities" in Part II, Item 7A of the 2015 Form 10-K.

For the current quarter, loans and lending commitments associated with the Wealth Management business segment lending activities increased by approximately $5.3 \%$, mainly due to growth in LAL and residential real estate loans.

## Wealth Management Lending Activities by Remaining Contractual Maturity



At June 30, 2016 and December 31, 2015, approximately $99.9 \%$ of the Wealth Management business segment loans held for investment were current, while approximately $0.1 \%$ were on nonaccrual status because the loans were past due for a period of 90 days or more or payment of principal or interest was in doubt.

The Wealth Management business segment also provides margin lending to clients and had an outstanding balance of $\$ 14.5$ billion and $\$ 14.7$ billion at June 30, 2016 and December 31, 2015, respectively, which were classified within Customer and other receivables within the consolidated balance sheets.

In addition, the Wealth Management business segment has employee loans that are granted primarily in conjunction with programs established by us to retain and recruit certain employees. These loans are recorded in Customer and other receivables in the consolidated balance sheets. These loans are full recourse, generally require periodic payments and have repayment terms ranging from 1 to 12 years. We establish an allowance for loan amounts we do not consider recoverable, which is recorded in Compensation and benefits expense.

## Credit Exposure—Derivatives

We incur credit risk as a dealer in OTC derivatives. Credit risk with respect to derivative instruments arises from the failure of a counterparty to perform according to the terms of the contract. In connection with our OTC derivative activities, we generally enter into master netting agreements and collateral arrangements with counterparties. These agreements provide us with the ability to demand collateral, as well as to liquidate collateral and offset receivables and payables covered under the same master netting agreement in the event of counterparty default. We manage our trading positions by employing a variety of risk mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). For credit exposure information on our OTC derivative products, see Note 4 to the consolidated financial statements in Item 1. For a discussion of our credit exposure to derivative contracts, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk—Credit Exposure—Derivatives" in Part II, Item 7A of the 2015 Form 10-K.

## Credit Derivative Portfolio by Counterparty Type

The fair values shown herein are before the application of contractual netting or collateral. For additional credit exposure information on our credit derivative portfolio, see Note 4 to the consolidated financial statements in Item 1.

|  | At June 30, 2016 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Values(1) |  |  |  |  | Notionals |  |  |  |
|  | Receivable | Payable |  | Net |  | Protection Purchased |  | $\begin{aligned} & \hline \text { Protection } \\ & \text { Sold } \end{aligned}$ |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |
| Banks and securities firms | \$ 11,974 |  | \$ 12,705 |  | \$ (731) | \$ | 435,374 | \$ | 388,776 |
| Insurance and other financial institutions | 4,424 |  | 5,013 |  | (589) |  | 165,290 |  | 175,372 |
| Non-financial entities | 63 |  | 103 |  | (40) |  | 5,196 |  | 3,142 |
| Total | \$ 16,461 |  | \$ 17,821 |  | \$ (1,360) | \$ | 605,860 | \$ | 567,290 |
|  | At December 31, 2015 |  |  |  |  |  |  |  |  |
|  | Fair Values(1) |  |  |  |  | Notionals |  |  |  |
|  | Receivable | Payable |  | Net |  | Protection Purchased |  | $\underline{\text { Protection Sold }}$ |  |
|  | (dollars in millions) |  |  |  |  |  |  |  |  |
| Banks and securities firms | \$ 16,962 | \$ | 17,295 | \$ | (333) | \$ | 533,557 | \$ | 491,267 |
| Insurance and other financial institutions | 5,842 |  | 6,247 |  | (405) |  | 189,439 |  | 194,723 |
| Non-financial entities | 115 |  | 123 |  | (8) |  | 5,932 |  | 3,529 |
| Total | \$ 22,919 | \$ | 23,665 | \$ | (746) | \$ | 728,928 | \$ | 689,519 |

[^28]| Industry(1) | $\begin{aligned} & \text { At June 30, } \\ & 2016 \end{aligned}$ |  | $\begin{aligned} & \text { At December 31, } \\ & 2015 \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (dollars in millions) |  |  |  |
| Utilities | \$ | 4,315 | \$ | 3,428 |
| Banks and securities firms |  | 4,266 |  | 1,672 |
| Funds, exchanges and other financial services(2) |  | 2,869 |  | 2,029 |
| Industrials |  | 1,929 |  | 2,304 |
| Regional governments |  | 1,568 |  | 1,163 |
| Healthcare |  | 1,400 |  | 1,041 |
| Sovereign governments |  | 1,017 |  | 524 |
| Not-for-profit organizations |  | 979 |  | 794 |
| Special purpose vehicles |  | 958 |  | 718 |
| Consumer discretionary |  | 646 |  | 725 |
| Insurance |  | 534 |  | 380 |
| Energy |  | 529 |  | 396 |
| Consumer staples |  | 473 |  | 506 |
| Materials |  | 446 |  | 473 |
| Information technology |  | 380 |  | 294 |
| Other |  | 351 |  | 177 |
| Total(3) | \$ | 22,660 | \$ | 16,624 |

(1) Industry categories are based on the Global Industry Classification Standard ${ }^{\circledR}$
(2) Amounts include mutual funds, pension funds, private equity and real estate funds, exchanges and clearinghouses, and diversified financial services.
(3) For further information on derivative instruments and hedging activities, see Note 4 to the consolidated financial statements in Item 1.

## Other

In addition to the activities noted above, there are other credit risks managed by the Credit Risk Management Department and various business areas within the Institutional Securities business segment. We participate in securitization activities whereby we extend short-term or longterm funding to clients through loans and lending commitments that are secured by the assets of the borrower and generally provide for over-collateralization, including commercial real estate loans, loans secured by loan pools, commercial company loans, and secured lines of revolving credit. Credit risk with respect to these loans and lending commitments arises from the failure of a borrower to perform according to the terms of the loan agreement or a decline in the underlying collateral value. See Note 12 to the consolidated financial statements in Item 1 for information about our securitization activities. In addition, a collateral management group monitors collateral levels against requirements and oversees the administration of the collateral function. See Note 6 to the consolidated financial statements in Item 1 for additional information about our collateralized transactions.

## Country Risk Exposure

Country risk exposure is the risk that events in, or that affect, a foreign country (any country other than the U.S.) might adversely affect us. We actively manage country risk exposure through a comprehensive risk management
framework that combines credit and market fundamentals and allows us to effectively identify, monitor and limit country risk. Country risk exposure before and after hedging is monitored and managed. For a further discussion of our country risk exposure see, "Quantitative and Qualitative Disclosures about Market Risk—Risk ManagementCountry Risk Exposure" in Part II, Item 7A of the 2015 Form 10-K.

Our sovereign exposures consist of financial instruments entered into with sovereign and local governments. Our non-sovereign exposures consist of exposures to primarily corporations and financial institutions. The following table shows our 10 largest non-U.S. country risk net exposures at June 30, 2016. Index credit derivatives are included in the country risk exposure table. Each reference entity within an index is allocated to that reference entity's country of risk. Index exposures are allocated to the underlying reference entities in proportion to the notional weighting of each reference entity in the index, adjusted for any fair value receivable/payable for that reference entity. Where credit risk crosses multiple jurisdictions, for example, a CDS purchased from an issuer in a specific country that references bonds issued by an entity in a different country, the fair value of the CDS is reflected in the Net Counterparty Exposure column based on the country of the CDS issuer. Further, the notional amount of the CDS adjusted for the fair value of the receivable/payable is reflected in the Net Inventory column based on the country of the underlying reference entity.

| Country | Net Inventory(1) |  | Net Counterparty Exposure(2)(3) |  | Loans |  | Lending Commitments |  | Exposure Before Hedges |  | Hedges(4) |  | Net Exposure(5) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | millions) |  |  |  |  |  |  |
| United Kingdom: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns . | \$ | (200) | \$ | 22 | \$ | - | \$ | - | \$ | (178) | \$ | (163) | \$ | (341) |
| Non-sovereigns . |  | 580 |  | 10,381 |  | 2,684 |  | 5,786 |  | 19,431 |  | $(2,026)$ |  | 17,405 |
| Subtotal | \$ | 380 | \$ | 10,403 | \$ | 2,684 | \$ | 5,786 | \$ | 19,253 | \$ | $(2,189)$ | \$ | 17,064 |
| Brazil: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 4,848 | \$ | - | \$ | - | \$ | - | \$ | 4,848 | \$ | (11) | \$ | 4,837 |
| Non-sovereigns |  | 24 |  | 307 |  | 1,123 |  | 33 |  | 1,487 |  | (863) |  | 624 |
| Subtotal | \$ | 4,872 | \$ | 307 | \$ | 1,123 | \$ | 33 | \$ | 6,335 | \$ | (874) | \$ | 5,461 |
| Germany: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 1,254 | \$ | 770 | \$ | - | \$ | - | \$ | 2,024 | \$ | $(1,239)$ | \$ | 785 |
| Non-sovereigns . |  | 399 |  | 2,005 |  | 308 |  | 3,467 |  | 6,179 |  | $(1,795)$ |  | 4,384 |
| Subtotal | \$ | 1,653 | \$ | 2,775 | \$ | 308 | \$ | 3,467 | \$ | 8,203 | \$ | $(3,034)$ | \$ | 5,169 |
| Japan: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 1,967 | \$ | 154 | \$ | - | \$ | - | \$ | 2,121 | \$ | (82) | \$ | 2,039 |
| Non-sovereigns |  | 452 |  | 2,480 |  | 231 |  | - |  | 3,163 |  | (153) |  | 3,010 |
| Subtotal | \$ | 2,419 | \$ | 2,634 | \$ | 231 | \$ | - | \$ | 5,284 | \$ | (235) | \$ | 5,049 |
| Italy: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 1,457 | \$ | 19 | \$ | - | \$ | - | \$ | 1,476 | \$ | 44 | \$ | 1,520 |
| Non-sovereigns |  | 361 |  | 575 |  | 11 |  | 914 |  | 1,861 |  | (254) |  | 1,607 |
| Subtotal | \$ | 1,818 | \$ | 594 | \$ | 11 | \$ | 914 | \$ | 3,337 | \$ | (210) | \$ | 3,127 |
| Singapore: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 1,873 | \$ | 165 | \$ | - | \$ | - | \$ | 2,038 | \$ | - | \$ | 2,038 |
| Non-sovereigns |  | 19 |  | 200 |  | 42 |  | 30 |  | 291 |  | - |  | 291 |
| Subtotal | \$ | 1,892 | \$ | 365 | \$ | 42 | \$ | 30 | \$ | 2,329 | \$ | - | \$ | 2,329 |
| Canada: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 26 | \$ | 69 | \$ | - | \$ | - | \$ | 95 | \$ | - | \$ | 95 |
| Non-sovereigns . |  | (51) |  | 873 |  | 148 |  | 1,570 |  | 2,540 |  | (341) |  | 2,199 |
| Subtotal | \$ | (25) | \$ | 942 | \$ | 148 | \$ | 1,570 | \$ | 2,635 | \$ | (341) | \$ | 2,294 |
| China: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | 135 | \$ | 230 | \$ | - | \$ | - | \$ | 365 | \$ | (542) | \$ | (177) |
| Non-sovereigns . |  | 880 |  | 276 |  | 990 |  | 275 |  | 2,421 |  | (74) |  | 2,347 |
| Subtotal | \$ | 1,015 | \$ | 506 | \$ | 990 | \$ | 275 | \$ | 2,786 | \$ | (616) | \$ | 2,170 |
| Netherlands: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns | \$ | (87) | \$ | - | \$ | - | \$ | - | \$ | (87) | \$ | (9) | \$ | (96) |
| Non-sovereigns . |  | 391 |  | 747 |  | 385 |  | 1,065 |  | 2,588 |  | (399) |  | 2,189 |
| Subtotal | \$ | 304 | \$ | 747 | \$ | 385 | \$ | 1,065 | \$ | 2,501 | \$ | (408) | \$ | 2,093 |
| United Arab Emirates: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sovereigns . . . . | \$ | (21) | \$ | 1,491 | \$ | - | \$ | - | \$ | 1,470 | \$ | (35) | \$ | 1,435 |
| Non-sovereigns . |  | (22) |  | 328 |  | 47 |  | 83 |  | 436 |  | (15) |  | 421 |
| Subtotal | \$ | (43) | \$ | 1,819 | \$ | 47 | \$ | 83 | \$ | 1,906 | \$ | (50) | \$ | 1,856 |

[^29](2) Net counterparty exposure (i.e., repurchase transactions, securities lending and OTC derivatives) takes into consideration legally enforceable master netting agreements and collateral
(3) At June 30, 2016, the benefit of collateral received against counterparty credit exposure was $\$ 15.6$ billion in the U.K., with $97 \%$ of collateral consisting of cash, government obligations of the U.K., U.S. and Italy, and $\$ 14.0$ billion in Germany with $99 \%$ of collateral consisting of cash and government obligations of France, Belgium and Germany. The benefit of collateral received against counterparty credit exposure in the other countries totaled approximately $\$ 12.9$ billion, with collateral primarily consisting of cash and government obligations of Japan, the U.S. and Brazil. These amounts do not include collateral received on secured financing transactions.
(4) Amounts represent CDS hedges (purchased and sold) on net counterparty exposure and lending executed by trading desks responsible for hedging counterparty and lending credit risk exposures for us. Amounts are based on the CDS notional amount assuming zero recovery adjusted for any fair value receivable or payable.
(5) In addition, at June 30, 2016, we had exposure to these countries for overnight deposits with banks of approximately $\$ 11.9$ billion.

Country Risk Exposure Related to the United Kingdom. At June 30, 2016, our country risk exposures in the U.K. included net exposures of $\$ 17,064$ million (shown in the previous table) and overnight deposits of $\$ 4,774$ million. The $\$ 17,405$ million (shown in the previous table) of exposures to non-sovereigns were diversified across both names and sectors. Of this exposure, $\$ 14,884$ million is to investment grade counterparties, with the largest single component ( $\$ 4,483$ million) to exchanges and clearing houses.

Country Risk Exposure Related to Brazil. At June 30, 2016, our country risk exposures in Brazil included net exposures of $\$ 5,461$ million (shown in the previous table). Our sovereign net exposures in Brazil were principally in the form of local currency government bonds held onshore to support client activity. The $\$ 624$ million (shown in the previous table) of exposures to non-sovereigns were diversified across both names and sectors.

Country Risk Exposure Related to China. At June 30, 2016, our country risk exposures in China included net exposures of $\$ 2,170$ million (shown in the previous table) and overnight deposits with international banks of $\$ 391$ million. The $\$ 2,347$ million (shown in the previous table) of exposures to non-sovereigns were diversified across both names and sectors and were primarily concentrated in high-quality positions with negligible direct exposure to onshore equities.

## Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes, people and systems or from external events (e.g., fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets). We may incur operational risk across the full scope of our business activities, including revenue-generating activities (e.g., sales and trading) and support and control groups (e.g., information technology and trade processing). On March 4, 2016, the Basel Committee on Banking Supervision updated its proposal for calculating operational risk regulatory capital. Under the proposal, which would eliminate the use of an internal model-based approach, required levels of operational risk
regulatory capital would generally be determined under a standardized approach based primarily on a financial statement-based measure of operational risk exposure and adjustments based on the particular institution's historic operational loss record. We are evaluating the potential impact of the proposal, which is subject to public comment and further rulemaking procedures. For a further discussion about our operational risk, see "Quantitative and Qualitative Disclosures about Market Risk-Risk ManagementOperational Risk" in Part II, Item 7A, of the 2015 Form 10-K.

## Liquidity and Funding Risk

Liquidity and funding risk refers to the risk that we will be unable to finance our operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity and funding risk also encompasses our ability to meet our financial obligations without experiencing significant business disruption or reputational damage that may threaten our viability as a going concern. For a further discussion about our operational risk, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Manage-ment-Liquidity and Funding Risk" in Part II, Item 7A, of the 2015 Form 10-K.

## Legal and Compliance Risk

Legal and compliance risk includes the risk of legal or regulatory sanctions, material financial loss, including fines, penalties, judgments, damages and/or settlements, or loss to reputation that we may suffer as a result of failure to comply with laws, regulations, rules, related self-regulatory organization standards and codes of conduct applicable to our business activities. This risk also includes contractual and commercial risk, such as the risk that a counterparty's performance obligations will be unenforceable. It also includes compliance with anti-money laundering and terrorist financing rules and regulations. For a further discussion about our operational risk, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Manage-ment-Legal and Compliance Risk" in Part II, Item 7A, of the 2015 Form 10-K.

## Item 4. Controls and Procedures

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

No change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) occurred during the period covered by this report that materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

## FINANCIAL DATA SUPPLEMENT (Unaudited) Average Balances and Interest Rates and Net Interest Income

|  |  | Three Months Ended June 30, 2016 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Average } \\ & \text { Daily } \\ & \text { Balance } \end{aligned}$ | Interest |  | $\begin{gathered} \hline \text { Annualized } \\ \text { Average } \\ \text { Rate } \end{gathered}$ |
|  |  |  | oll | millions) |  |
| Assets |  |  |  |  |  |
| Interest earning assets: |  |  |  |  |  |
| Trading assets(1): |  |  |  |  |  |
| U.S. | . | 100,731 | \$ | 459 | 1.8 \% |
| Non-U.S. |  | 101,631 |  | 67 | 0.3 |
| Investment securities: |  |  |  |  |  |
| U.S. |  | 78,233 |  | 237 | 1.2 |
| Loans: |  |  |  |  |  |
| U.S. |  | 88,908 |  | 674 | 3.0 |
| Non-U.S. |  | 436 |  | 6 | 5.3 |
| Interest bearing deposits with banks: |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . |  | 27,821 |  | 38 | 0.6 |
| Non-U.S. |  | 1,429 |  | 14 | 3.8 |
| Securities purchased under agreements to resell and Securities borrowed(2): |  |  |  |  |  |
| U.S. |  | 157,223 |  | (64) | (0.2) |
| Non-U.S. |  | 82,863 |  | (56) | (0.3) |
| Customer receivables and Other(3): |  |  |  |  |  |
| U.S. |  | 46,144 |  | 233 | 2.0 |
| Non-U.S. |  | 21,655 |  | 59 | 1.1 |
| Total | \$ | 707,074 | \$ | 1,667 | 0.9 \% |
| Non-interest earning assets |  | 107,742 |  |  |  |
| Total assets | \$ | 814,816 |  |  |  |
| Liabilities and Equity Interest bearing liabilities: Deposits: |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| U.S. | \$ | 152,792 | \$ | 10 | - \% |
| Non-U.S. |  | 2,043 |  | 5 | 1.0 |
| Short-term borrowings(4): |  |  |  |  |  |
| U.S. |  | 467 |  | - | 0.2 |
| Non-U.S. |  | 651 |  | 7 | 4.6 |
| Long-term borrowings(4): |  |  |  |  |  |
| U.S. |  | 154,745 |  | 835 | 2.2 |
| Non-U.S. |  | 8,198 |  | 9 | 0.4 |
| Trading liabilities(1): |  |  |  |  |  |
| U.S. |  | 31,410 |  | - | - |
| Non-U.S. |  | 51,385 |  | - | - |
| Securities sold under agreements to repurchase and Securities loaned(5): |  |  |  |  |  |
| U.S. |  | 31,412 |  | 141 | 1.8 |
| Non-U.S. |  | 31,729 |  | 118 | 1.5 |
| Customer payables and Other(6): |  |  |  |  |  |
| U.S. |  | 124,463 |  | (335) | (1.1) |
| Non-U.S. |  | 61,729 |  | (36) | (0.2) |
| Total | \$ | 651,024 | \$ | 754 | 0.5 |
| Non-interest bearing liabilities and equity |  | 163,792 |  |  |  |
| Total liabilities and equity | \$ | 814,816 |  |  |  |
| Net interest income and net interest rate spread |  |  | \$ | 913 | 0.4 \% |

## FINANCIAL DATA SUPPLEMENT (Unaudited)-(Continued) <br> Average Balances and Interest Rates and Net Interest Income

|  | Three Months Ended June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Average } \\ \text { Daily } \\ \text { Balance } \end{gathered}$ |  | Interest |  | $\begin{gathered} \hline \text { Annualized } \\ \text { Average } \\ \text { Rate } \end{gathered}$ |
|  |  |  | dol | millions) |  |
| Assets |  |  |  |  |  |
| Interest earning assets: |  |  |  |  |  |
| Trading assets(1): |  |  |  |  |  |
| U.S. | . \$ | 86,632 | \$ | 466 | 2.2 \% |
| Non-U.S. |  | 134,452 |  | 89 | 0.3 |
| Investment securities: |  |  |  |  |  |
| U.S. |  | 71,668 |  | 238 | 1.3 |
| Loans: |  |  |  |  |  |
| U.S. |  | 72,960 |  | 526 | 2.9 |
| Non-U.S. |  | 239 |  | 3 | 5.1 |
| Interest bearing deposits with banks: |  |  |  |  |  |
| U.S. |  | 17,637 |  | 14 | 0.3 |
| Non-U.S. |  | 946 |  | 8 | 3.4 |
| Securities purchased under agreements to resell and Securities borrowed(2): |  |  |  |  |  |
| U.S. |  | 174,981 |  | (182) | (0.4) |
| Non-U.S. |  | 76,904 |  | (18) | (0.1) |
| Customer receivables and Other(3): |  |  |  |  |  |
| U.S. |  | 54,343 |  | 99 | 0.7 |
| Non-U.S. |  | 31,137 |  | 143 | 1.9 |
| Total | \$ | 721,899 | \$ | 1,386 | 0.8 \% |
| Non-interest earning assets |  | 125,866 |  |  |  |
| Total assets | \$ | 847,765 |  |  |  |
| Liabilities and Equity |  |  |  |  |  |
| Interest bearing liabilities: |  |  |  |  |  |
| Deposits: |  |  |  |  |  |
| U.S. | . \$ | 134,566 | \$ | 16 | - \% |
| Non-U.S. |  | 1,884 |  | 1 | 0.2 |
| Short-term borrowings(4): |  |  |  |  |  |
| U.S. |  | 1,157 |  | - | - |
| Non-U.S. |  | 1,361 |  | 5 | 1.5 |
| Long-term borrowings(4): |  |  |  |  |  |
| U.S. |  | 149,950 |  | 907 | 2.5 |
| Non-U.S. |  | 7,441 |  | 8 | 0.4 |
| Trading liabilities(1): |  |  |  |  |  |
| U.S. |  | 19,703 |  | - | - |
| Non-U.S. |  | 66,074 |  | - | - |
| Securities sold under agreements to repurchase and Securities loaned(5): |  |  |  |  |  |
| U.S. |  | 59,501 |  | 94 | 0.6 |
| Non-U.S. |  | 40,621 |  | 141 | 1.4 |
| Customer payables and Other(6): |  |  |  |  |  |
| U.S. |  | 53,206 |  | (483) | (3.7) |
| Non-U.S. |  | 124,827 |  | (1) | - |
| Total | . | 660,291 | \$ | 688 | 0.4 |
| Non-interest bearing liabilities and equity |  | 187,474 |  |  |  |
| Total liabilities and equity . | \$ | 847,765 |  |  |  |
| Net interest income and net interest rate spread |  |  | \$ | 698 | 0.4 \% |

## FINANCIAL DATA SUPPLEMENT (Unaudited)-(Continued) <br> Average Balances and Interest Rates and Net Interest Income

|  | Six Months Ended June 30, 2016 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average Daily Balance |  | Interest |  | $\begin{gathered} \hline \text { Annualized } \\ \text { Average } \\ \text { Rate } \\ \hline \end{gathered}$ |
|  |  |  |  | millions) |  |
| Assets |  |  |  |  |  |
| Interest earning assets: |  |  |  |  |  |
| Trading assets(1): |  |  |  |  |  |
| U.S. | \$ | 100,057 | \$ | 957 | 1.9 \% |
| Non-U.S. |  | 96,801 |  | 152 | 0.3 |
| Investment securities: |  |  |  |  |  |
| U.S. |  | 76,999 |  | 473 | 1.2 |
| Loans: |  |  |  |  |  |
| U.S. |  | 87,529 |  | 1,315 | 3.0 |
| Non-U.S. |  | 450 |  | 12 | 5.4 |
| Interest bearing deposits with banks: |  |  |  |  |  |
| U.S. |  | 29,289 |  | 80 | 0.5 |
| Non-U.S. |  | 1,225 |  | 25 | 4.1 |
| Securities purchased under agreements to resell and Securities borrowed(2): |  |  |  |  |  |
| U.S. |  | 154,488 |  | (126) | (0.2) |
| Non-U.S. |  | 84,499 |  | (72) | (0.2) |
| Customer receivables and Other(3): |  |  |  |  |  |
| U.S. |  | 47,400 |  | 468 | 2.0 |
| Non-U.S. |  | 22,092 |  | 130 | 1.2 |
| Total | \$ | 700,829 | \$ | 3,414 | 1.0 \% |
| Non-interest earning assets |  | 108,150 |  |  |  |
| Total assets | \$ | 808,979 |  |  |  |
| Liabilities and Equity |  |  |  |  |  |
| Interest bearing liabilities: |  |  |  |  |  |
| Deposits: |  |  |  |  |  |
| U.S. | \$ | 154,540 | \$ | 27 | - \% |
| Non-U.S. |  | 2,353 |  | 10 | 0.9 |
| Short-term borrowings(4): |  |  |  |  |  |
| U.S. |  | 633 |  | 1 | 0.3 |
| Non-U.S. |  | 621 |  | 13 | 4.3 |
| Long-term borrowings(4): |  |  |  |  |  |
| U.S. |  | 153,073 |  | 1,786 | 2.4 |
| Non-U.S. |  | 7,732 |  | 18 | 0.5 |
| Trading liabilities(1): |  |  |  |  |  |
| U.S. |  | 31,735 |  | - | - |
| Non-U.S. |  | 49,756 |  | - | - |
| Securities sold under agreements to repurchase and Securities loaned(5): |  |  |  |  |  |
| U.S. |  | 31,635 |  | 271 | 1.7 |
| Non-U.S. |  | 28,144 |  | 242 | 1.7 |
| Customer payables and Other(6): |  |  |  |  |  |
| U.S. |  | 123,511 |  | (704) | (1.1) |
| Non-U.S. |  | 61,218 |  | (62) | (0.2) |
| Total | \$ | 644,951 | \$ | 1,602 | 0.5 |
| Non-interest bearing liabilities and equity |  | 164,028 |  |  |  |
| Total liabilities and equity | \$ | 808,979 |  |  |  |
| Net interest income and net interest rate spread |  |  | \$ | 1,812 | 0.5 \% |

## FINANCIAL DATA SUPPLEMENT (Unaudited)-(Continued) <br> Average Balances and Interest Rates and Net Interest Income

|  | Six Months Ended June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | AverageDailyBalance |  | Interest |  | $\begin{gathered} \hline \text { Annualized } \\ \text { Average } \\ \text { Rate } \\ \hline \end{gathered}$ |
|  |  |  |  | millions) |  |
| Assets |  |  |  |  |  |
| Interest earning assets: |  |  |  |  |  |
| Trading assets(1): |  |  |  |  |  |
| U.S. | \$ | 88,677 | \$ | 947 | 2.2 \% |
| Non-U.S. |  | 125,895 |  | 202 | 0.3 |
| Investment securities: |  |  |  |  |  |
| U.S. |  | 71,495 |  | 438 | 1.2 |
| Loans: |  |  |  |  |  |
| U.S. |  | 69,845 |  | 995 | 2.9 |
| Non-U.S. |  | 258 |  | 9 | 7.1 |
| Interest bearing deposits with banks: |  |  |  |  |  |
| U.S. |  | 19,659 |  | 31 | 0.3 |
| Non-U.S. |  | 1,032 |  | 14 | 2.8 |
| Securities purchased under agreements to resell and Securities borrowed(2): |  |  |  |  |  |
| U.S. |  | 166,354 |  | (336) | (0.4) |
| Non-U.S. |  | 84,918 |  | 31 | 0.1 |
| Customer receivables and Other(3): |  |  |  |  |  |
| U.S. |  | 59,859 |  | 270 | 0.9 |
| Non-U.S. |  | 26,379 |  | 269 | 2.1 |
| Total | \$ | 714,371 | \$ | 2,870 | 0.8 \% |
| Non-interest earning assets |  | 128,876 |  |  |  |
| Total assets | \$ | 843,247 |  |  |  |
| Liabilities and Equity |  |  |  |  |  |
| Interest bearing liabilities: |  |  |  |  |  |
| Deposits: |  |  |  |  |  |
| U.S. | \$ | 133,728 | \$ | 33 | 0.1 \% |
| Non-U.S. |  | 1,646 |  | 2 | 0.2 |
| Short-term borrowings(4): |  |  |  |  |  |
| U.S. . ........ |  | 1,158 |  | - | - |
| Non-U.S. |  | 1,137 |  | 9 | 1.6 |
| Long-term borrowings(4): |  |  |  |  |  |
| U.S. . . . |  | 148,980 |  | 1,824 | 2.5 |
| Non-U.S. |  | 7,892 |  | 17 | 0.4 |
| Trading liabilities(1): |  |  |  |  |  |
| U.S. ... |  | 19,820 |  | - | - |
| Securities sold under agreements to repurchase and Securities loaned(5): |  |  |  |  |  |
|  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . |  | 64,010 |  | 225 | 0.7 |
| Non-U.S. |  | 36,598 |  | 318 | 1.8 |
| Customer payables and Other(6): |  |  |  |  |  |
| U.S. ............... |  | 57,825 |  | (864) | (3.0) |
| Non-U.S. |  | 120,318 |  | 12 | - |
| Total | \$ | 655,694 | \$ | 1,576 | 0.5 |
| Non-interest bearing liabilities and equity |  | 187,553 |  |  |  |
| Total liabilities and equity . | \$ | 843,247 |  |  |  |
| Net interest income and net interest rate sprea |  |  | \$ | 1,294 | 0.3 \% |

[^30]
# FINANCIAL DATA SUPPLEMENT (Unaudited)—(Continued) <br> Rate/Volume Analysis 

$\underline{\text { Effect of Net Interest Income of Volume and Rate Changes }}$

|  | Three Months Ended June 30, 2016 versus Three Months Ended June 30, 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Increase (decrease) due to change in: |  |  |  | Net Change |  |
|  | Volume |  | Rate |  |  |  |
|  |  |  |  | illions) |  |  |
| Interest earning assets |  |  |  |  |  |  |
| Trading Assets: |  |  |  |  |  |  |
| U.S. | \$ | 76 | \$ | (83) | \$ | (7) |
| Non-U.S. |  | (22) |  | - |  | (22) |
| Investment securities: |  |  |  |  |  |  |
| U.S. |  | 22 |  | (23) |  | (1) |
| Loans: |  |  |  |  |  |  |
| U.S. |  | 115 |  | 33 |  | 148 |
| Non-U.S. |  | 2 |  | 1 |  | 3 |
| Interest bearing deposits with banks: |  |  |  |  |  |  |
| U.S. |  | 8 |  | 16 |  | 24 |
| Non-U.S. |  | 4 |  | 2 |  | 6 |
| Securities purchased under agreements to resell and Securities borrowed: |  |  |  |  |  |  |
| U.S. |  | 18 |  | 100 |  | 118 |
| Non-U.S. |  | (1) |  | (37) |  | (38) |
| Customer receivables and Other: |  |  |  |  |  |  |
| U.S. |  | (15) |  | 149 |  | 134 |
| Non-U.S. |  | (44) |  | (40) |  | (84) |
| Change in interest income | \$ | 163 | \$ | 118 | \$ | 281 |
| Interest bearing liabilities |  |  |  |  |  |  |
| Deposits: |  |  |  |  |  |  |
| U.S. | \$ | 2 | \$ | (8) | \$ | (6) |
| Non-U.S. |  | - |  | 4 |  | 4 |
| Short-term borrowings: |  |  |  |  |  |  |
| U.S. |  | - |  | - |  | - |
| Non-U.S. |  | (3) |  | 5 |  | 2 |
| Long-term borrowings: |  |  |  |  |  |  |
| U.S. |  | 29 |  | (101) |  | (72) |
| Non-U.S. |  | 1 |  | - |  | 1 |
| Securities sold under agreements to repurchase and Securities loaned: |  |  |  |  |  |  |
| U.S. |  | (44) |  | 91 |  | 47 |
| Non-U.S. |  | (31) |  | 8 |  | (23) |
| Customer payables and Other: |  |  |  |  |  |  |
| U.S. |  | (647) |  | 795 |  | 148 |
| Non-U.S. |  | 1 |  | (36) |  | (35) |
| Change in interest expense | \$ | (692) | \$ | 758 | \$ | 66 |
| Change in net interest income | \$ | 855 | \$ | (640) | \$ | 215 |

## FINANCIAL DATA SUPPLEMENT (Unaudited)-(Continued) Rate/Volume Analysis

|  | Six Months Ended June 30, 2016 versus Six Months Ended June 30, 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Increase (decrease) due to change in: |  |  |  | Net Change |  |
|  | Volume |  | Rate |  |  |  |
|  |  |  |  | millions) |  |  |
| Interest earning assets |  |  |  |  |  |  |
| Trading assets: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | \$ |  | \$ | (112) | \$ | 10 |
| Non-U.S. |  | (47) |  | (3) |  | (50) |
| Investment securities: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | 34 |  | 1 |  | 35 |
| Loans: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | 252 |  | 68 |  | 320 |
| Non-U.S. |  | 7 |  | (4) |  | 3 |
| Interest bearing deposits with banks: |  |  |  |  |  |  |
| U.S. |  | 15 |  | 34 |  | 49 |
| Non-U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | 3 |  | 8 |  | 11 |
| Securities purchased under agreements to resell and Securities borrowed: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | 24 |  | 186 |  | 210 |
| Non-U.S. . . . . . . |  | - |  | (103) |  | (103) |
| Customer receivables and Other: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | (56) |  | 254 |  | 198 |
| Non-U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | (44) |  | (95) |  | (139) |
| Change in interest income | \$ | 310 | \$ | 234 | \$ | 544 |
| Interest bearing liabilities |  |  |  |  |  |  |
| Deposits: |  |  |  |  |  |  |
| U.S. | \$ | 5 | \$ | (11) | \$ | (6) |
| Non-U.S. |  | 1 |  | 7 |  | 8 |
| Short-term borrowings: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | - |  | 1 |  | 1 |
| Non-U.S. |  | (4) |  | 8 |  | 4 |
| Long-term borrowings: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . |  | 50 |  | (88) |  | (38) |
| Non-U.S. |  | - |  | 1 |  | 1 |
| Securities sold under agreements to repurchase and Securities loaned: |  |  |  |  |  |  |
| U.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  | (114) |  | 160 |  | 46 |
| Non-U.S. . . . . . . |  | (73) |  | (3) |  | (76) |
| Customer payables and Other: |  |  |  |  |  |  |
| U.S. |  | (981) |  | 1,141 |  | 160 |
| Non-U.S. |  | (6) |  | (68) |  | (74) |
| Change in interest expense | \$ | $(1,122)$ | \$ | 1,148 | \$ | 26 |
| Change in net interest income . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | \$ | $\underline{\text { 1,432 }}$ | \$ | $\underline{ }$ | \$ | 518 |

## Part II-Other Information

## Item 1. Legal Proceedings

The following new matters and developments have occurred since previously reporting certain matters in the Firm's Annual Report on Form 10-K for the year ended December 31, 2015 (the "Form 10-K") and the Firm's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2016 (the "First Quarter Form 10-Q"). See also the disclosures set forth under "Legal Proceedings" in Part I, Item 3 of the Form 10-K and Part II, Item 1 of the First Quarter Form 10-Q.

## Residential Mortgage and Credit Crisis Related Matters

## Civil Litigation

On April 29, 2016, in Royal Park Investments SA/NV v. Merrill Lynch et al., the Firm filed a motion to dismiss the amended complaint.

On May 23, 2016, the parties in HSH Nordbank AG, et al. v. Morgan Stanley et al. reached an agreement in principle to settle the litigation.

On June 14, 2016, in Wilmington Trust Company $v$. Morgan Stanley Mortgage Capital Holdings LLC et al., the court granted in part and denied in part the Firm's motion to dismiss.

On July 20, 2016, the Firm filed a demurrer in California v. Morgan Stanley, et al.

On July 27, 2016, in The Charles Schwab Corp. v. BNP Paribas Securities Corp., et al., the Firm reached an agreement with the plaintiff to settle the litigation.

## Other Litigation

On July 11, 2016, the Firm received an invitation to respond to a proposed claim ("Proposed Claim") by the public prosecutor for Court of Accounts for the Republic of Italy. The Proposed Claim relates to certain derivative transactions between the Republic of Italy and the Firm. The transactions were originally entered into between 1999 and 2005, and were terminated in December 2011 and January 2012. The Proposed Claim alleges, inter alia, that the Firm was acting as an agent of the Republic of Italy, that some or all of the derivative transactions were improper and that the termination of the transactions was also improper. The Proposed Claim indicates that, if a proceeding is initiated against the Firm, the public prosecutor would be asserting administrative claims against the Firm for Euro 2.879 billion. The Firm does not agree with the Proposed Claim and intends to present its defenses to the public prosecutor.

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

The following table sets forth the information with respect to purchases made by or on behalf of the Firm of its common stock during the quarterly period ended June 30, 2016.

## Issuer Purchases of Equity Securities <br> (dollars in millions, except per share amounts)

| Period | Total Number of Shares Purchased |  | Average Price Paid Per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans of Programs(1) |  | Dollar ares that t be Under or ms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month \#1 (April 1, 2016-April 30, 2016) |  |  |  |  |  |  |
| Share Repurchase Program(2) | 3,670,865 | \$ | 27.15 | 3,670,865 | \$ | 525 |
| Employee transactions(3) | 1,068,030 | \$ | 26.05 | - - |  | - |
| Month \#2 (May 1, 2016-May 31, 2016) |  |  |  |  |  |  |
| Share Repurchase Program(2) | 11,623,406 | \$ | 26.71 | 11,623,406 | \$ | 215 |
| Employee transactions(3) | 13,059 | \$ | 27.24 | - |  |  |
| Month \#3 (June 1, 2016-June 30, 2016) |  |  |  |  |  |  |
| Share Repurchase Program(2) | 8,188,782 | \$ | 26.25 | 8,188,782 | \$ | 3,500 |
| Employee transactions(3) | 16,489 | \$ | 27.12 | - |  | - |
| Quarter ended at June 30, 2016 |  |  |  |  |  |  |
| Share Repurchase Program(2) | 23,483,053 | \$ | 26.61 | 23,483,053 | \$ | 3,500 |
| Employee transactions(3) | 1,097,578 | \$ | 26.08 | - |  | - |

[^31]
## Item 6. Exhibits

An exhibit index has been filed as part of this Report on Page E-1.

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MORGAN STANLEY
(Registrant)

| By: | /s/ JONATHAN PRUZAN |
| :--- | :---: |
| Jonathan Pruzan <br> Executive Vice President and <br> Chief Financial Officer |  |
| By: | /s/ PAUL C. WIRTH |
| Paul C. Wirth |  |
| Deputy Chief Financial Officer |  |

Date: August 3, 2016

## EXHIBIT INDEX

## MORGAN STANLEY

## Quarter Ended June 30, 2016

Exhibit No. Description
10.1 Directors' Equity Capital Accumulation Plan as amended and restated as of August 1, 2016.
10.2 Morgan Stanley Schedule of Non-Employee Directors Annual Compensation, effective as of August 1, 2016.

12 Statement Re: Computation of Ratio of Earnings to Fixed Charges and Computation of Earnings to Fixed Charges and Preferred Stock Dividends.

15 Letter of awareness from Deloitte \& Touche LLP, dated August 3, 2016, concerning unaudited interim financial information.
31.1 Rule 13a-14(a) Certification of Chief Executive Officer.
31.2 Rule 13a-14(a) Certification of Chief Financial Officer.
32.1 Section 1350 Certification of Chief Executive Officer.
32.2 Section 1350 Certification of Chief Financial Officer.

101 Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Statements of IncomeThree Months and Six Months Ended June 30, 2016 and 2015, (ii) the Consolidated Statements of Comprehensive Income-Three Months and Six Months Ended June 30, 2016 and 2015, (iii) the Consolidated Balance Sheets-June 30, 2016 and December 31, 2015, (iv) the Consolidated Statements of Changes in Total Equity-Six Months Ended June 30, 2016 and 2015, (v) the Consolidated Statements of Cash Flows-Six Months Ended June 30, 2016 and 2015, and (vi) Notes to Consolidated Financial Statements (unaudited).


[^0]:    (1) Amounts include Provision for (benefit from) income taxes of \$(59) million and \$(54) million in the quarter ended June 30, 2016 ("current quarter") and the quarter ended June 30, 2015 ("prior year quarter"), respectively, and $\$(\mathbf{1 7 4})$ million and $\$ 120$ million in the six months ended June 30 , 2016 ("current year period") and the six months ended June 30, 2015 ("prior year period"), respectively.
    (2) Amounts include Provision for (benefit from) income taxes of $\mathbf{\$ 8 4}$ million and $\$(137)$ million in the current quarter and prior year quarter, respectively, and $\$ 314$ million and $\$(16)$ million in the current year period and prior year period, respectively.
    (3) Debt valuation adjustments ("DVA") represent the change in the fair value resulting from fluctuations in the Firm's credit spreads and other credit factors related to liabilities carried at fair value, primarily certain Long-term and Short-term borrowings. Amounts include Provision for (benefit from) income taxes of $\mathbf{\$ 8 0}$ million and $\mathbf{\$ 2 0 0}$ million in the current quarter and current year period, respectively. See Notes 2 and 14 for further information.

[^1]:    (1) Loan originations and consolidations of VIEs are included in purchases.
    (2) Net derivative and other contracts represent Trading assets-Derivative and other contracts, net of Trading liabilities-Derivative and other contracts. For further information on derivative instruments and hedging activities, see Note 4.

[^2]:    (1) Gains (losses) are mainly attributable to changes in foreign currency rates or interest rates or movements in the reference price or index for short-term and longterm borrowings before the impact of related hedges. In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, unrealized DVA gains of $\$ 225$ million and $\$ 548$ million are recorded within OCI in the consolidated statements of comprehensive income and not included in this table for the current quarter and current year period, respectively. See Notes 2 and 14 for further information.
    (2) Gains (losses) recorded in Trading revenues for the prior year quarter and prior year period are attributable to DVA and the respective remainder is attributable to changes in foreign currency rates or interest rates or movements in the reference price or index for structured notes before the impact of related hedges.

[^3]:    HTM-Held to maturity
    (1) Accrued interest, fees, and dividend receivables and payables where carrying value approximates fair value have been excluded.
    (2) Amounts include all loans measured at fair value on a non-recurring basis.

[^4]:    (1) Amounts include $\$ 1,481$ million related to bilateral arrangements between the Firm and other parties where upon the downgrade of one party, the downgraded party must deliver collateral to the other party. These bilateral downgrade arrangements are used by the Firm to manage

[^5]:    (1) U.S. agency securities consist mainly of agency-issued debt, agency mortgage pass-through pool securities and collateralized mortgage obligations.
    (2) FFELP-Federal Family Education Loan Program. Amounts are backed by a guarantee from the U.S. Department of Education of at least $95 \%$ of the principal balance and interest on such loans.

[^6]:    (1) Amounts are presented on a gross basis, prior to netting in the consolidated balance sheets.

[^7]:    (1) Amounts include loans that are made to non-U.S. borrowers of $\$ 8,104$ million and $\$ 9,789$ million at June 30, 2016 and December 31, 2015, respectively.
    (2) Loans at fixed interest rates and floating or adjustable interest rates were $\$ 10,102$ million and $\$ 83,063$ million, respectively, at June 30 , 2016 and $\$ 8,471$ million and $\$ 77,288$ million, respectively, at December 31, 2015.

[^8]:    (1) At June 30, 2016 and December 31, 2015, no allowance was outstanding for these loans as the present value of the expected future cash flows (or, alternatively, the observable market price of the loan or the fair value of the collateral held) equaled or exceeded the carrying value.
    (2) The impaired loans unpaid principal balance differs from the aggregate amount of impaired loan balances with and without allowance due to various factors, including charge-offs and net deferred loan fees or costs.

[^9]:    (1) The Firm recorded provisions of $\$ 16$ million and $\$ 4$ million for loan losses for the current quarter and prior year quarter, respectively
    (2) Amount includes the impact related to the transfer to loans held for sale and foreign currency translation adjustments.
    (3) Loan balances are gross of the allowance for loan losses, and lending commitments are gross of the allowance for lending commitments.
    (4) The Firm recorded a release of $\$ 13$ million and $\$ 29$ million for commitments for the current quarter and prior year quarter, respectively.

[^10]:    (1) Carrying amounts of derivative contracts are shown on a gross basis prior to cash collateral or counterparty netting. For further information on derivative contracts, see Note 4.
    (2) These amounts include certain issued standby letters of credit participated to third parties totaling $\$ 0.7$ billion due to the nature of the Firm's obligations under these arrangements.

[^11]:    (1) The value of assets is determined based on the fair value of the liabilities of and the interests owned by the Firm in such VIEs, because the fair values for the liabilities and interests owned are more observable.
    (2) Other primarily includes certain operating entities, investment funds and structured transactions

[^12]:    (1) Amounts include CLO transactions managed by unrelated third parties
    (2) Amounts include assets transferred by unrelated transferors.

[^13]:    (1) Series C is comprised of the issuance of $1,160,791$ shares of Series C Preferred Stock to MUFG for an aggregate purchase price of $\$ 911$ million, less the redemption of 640,909 shares of Series C Preferred Stock of $\$ 503$ million, which were converted to common shares of approximately $\$ 705$ million.

[^14]:    (1) Restricted stock units ("RSUs") that are considered participating securities are treated as a separate class of securities in the computation of basic EPS, and, therefore, such RSUs are not included as incremental shares in the diluted EPS computations. The diluted EPS computations also do not include weighted average antidilutive RSUs and antidilutive stock options of 14 million shares and 12 million shares for the current quarter and prior year quarter, respectively, and 15 million shares and 12 million shares for the current year period and prior year period, respectively.

[^15]:    (1) Interest income and expense are recorded within the consolidated statements of income depending on the nature of the instrument and related market conventions. When interest is included as a component of the instrument's fair value, interest is included within Trading revenues or Investments revenues. Otherwise, it is included within Interest income or Interest expense.
    (2) Interest expense on Trading liabilities is reported as a reduction to Interest income on Trading assets.
    (3) Includes fees paid on Securities borrowed.
    (4) Includes interest from customer receivables and other interest earning assets.
    (5) Includes fees received on Securities loaned.
    (6) Includes fees received from prime brokerage customers for stock loan transactions incurred to cover customers' short positions.

[^16]:    (1) Corporate assets have been fully allocated to the business segments.

[^17]:    N/M—Not Meaningful

[^18]:    (1) In accordance with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities, unrealized DVA gains (losses) in the current quarter and current year period are recorded within OCI in the consolidated statements of comprehensive income. In the prior year quarter and prior year period, the DVA gains (losses) were recorded within Trading revenues in the consolidated statements of income. See Notes 2 and 14 to the consolidated financial statements in Item 1 for further information.

[^19]:    N/M - Not Meaningful

[^20]:    (1) Fee-based client assets represent the amount of assets in client accounts where the basis of payment for services is a fee calculated on those assets.
    (2) Client liabilities include securities-based and tailored lending, home loans and margin lending.
    (3) Annualized revenues per representative equal the Wealth Management business segment's annualized revenues divided by the average representative headcount.
    (4) Client assets per representative equal total period-end client assets divided by period-end representative headcount.
    (5) Fee-based asset flows include net new fee-based assets, net account transfers, dividends, interest and client fees and exclude cash management-related activity.

[^21]:    bps—Basis points
    (1) Includes non-custody account values reflecting prior quarter-end balances due to a lag in the reporting of asset values by third-party custodians.

[^22]:    (1) Other assets primarily includes Cash deposited with clearing organizations or segregated under federal and other regulations or requirements; Other investments; Premises, equipment and software costs; Goodwill; Intangible assets and deferred tax assets.

[^23]:    (1) These ratios assume the requirements for the G-SIB capital surcharge ( $3.0 \%$ ) and countercyclical capital buffer (zero) remain at current levels.

[^24]:    (1) In connection with the early adoption of a provision of the accounting update Recognition and Measurement of Financial Assets and Financial Liabilities,

[^25]:    VaR-Value-at-Risk
    (1) The RWAs for each category in the table reflect both on- and off-balance sheet exposures, where appropriate.
    (2) Amount reflects assets not in a defined category, non-material portfolios of exposures and unsettled transactions
    (3) Amount reflects a reduction in the internal loss data related to litigation utilized in the operational risk capital model.

[^26]:    N/A-Not Applicable
    (1) Diversification benefit equals the difference between the total Management VaR and the sum of the component VaRs. This benefit arises because the simulated one-day losses for each of the components occur on different days; similar diversification benefits also are taken into account within each component.
    (2) The high and low VaR values for the total Management VaR and each of the component VaRs might have occurred on different days during the quarter, and therefore, the diversification benefit is not an applicable measure.

[^27]:    (1) Amounts exclude $\$ 23.2$ billion and $\$ 25.3$ billion related to margin loans and $\$ 4.9$ billion related to employee loans at June 30, 2016 and December 31, 2015, respectively. See Notes 6 and 7 to the consolidated financial statements in Item 1 for further information
    (2) Lending commitments represent the notional amount of legally binding obligations to provide funding to clients for all lending transactions. Since commitments associated with these business activities may expire unused or may not be utilized to full capacity, they do not necessarily reflect the actual future cash funding requirements.
    (3) For syndications led by us, the lending commitments accepted by the borrower but not yet closed are net of the amounts agreed to by counterparties that will participate in the syndication. For syndications that we participate in and do not lead, lending commitments accepted by the borrower but not yet closed include only the amount that we expect will be allocated from the lead, syndicate bank. Due to the nature of our obligations under the commitments, these amounts include certain commitments participated to third parties.

[^28]:    (1) Our CDS are classified in either Level 2 or Level 3 of the fair value hierarchy. Approximately $2 \%$ and $3 \%$ of receivable fair values and $8 \%$ and $6 \%$ of payable fair values represented Level 3 amounts at June 30, 2016 and December 31, 2015, respectively (see Note 3 to the consolidated financial statements in Item 1).

[^29]:    (1) Net inventory represents exposure to both long and short single-name and index positions (i.e., bonds and equities at fair value and CDS based on a notional amount assuming zero recovery adjusted for any fair value receivable or payable). As a market maker, we may transact in these CDS positions to facilitate client trading. At June 30, 2016, gross purchased protection, gross written protection, and net exposures related to single-name and index credit derivatives for those countries were $\$(99.4)$ billion, $\$ 98.0$ billion and $\$(1.4)$ billion, respectively. For a further description of the triggers for purchased credit protection and whether those triggers may limit the effectiveness of our hedges, see "Credit Exposure-Derivatives" herein.

[^30]:    (1) Interest expense on Trading liabilities is reported as a reduction of Interest income on Trading assets.
    (2) Includes fees paid on Securities borrowed.
    (3) Includes interest from customer receivables and other interest earning assets.
    (4) The Firm also issues structured notes that have coupon or repayment terms linked to the performance of debt or equity securities, indices, currencies or commodities, which are recorded within Trading revenues (see Note 3 to the consolidated financial statements in Item 1).
    (5) Includes fees received on Securities loaned.
    (6) Includes fees received from prime brokerage customers for stock loan transactions incurred to cover customers' short positions.

[^31]:    (1) Share purchases under publicly announced programs are made pursuant to open-market purchases, Rule 10b5-1 plans or privately negotiated transactions (including with employee benefit plans) as market conditions warrant and at prices the Firm deems appropriate and may be suspended at any time.
    (2) The Firm's Board of Directors has authorized the repurchase of the Firm's outstanding stock under a share repurchase program (the "Share Repurchase Program"). The Share Repurchase Program is a program for capital management purposes that considers, among other things, business segment capital needs, as well as equity-based compensation and benefit plan requirements. The Share Repurchase Program has no set expiration or termination date. Share repurchases by the Firm are subject to regulatory approval. In June 2016, the Firm received a conditional non-objection from the Federal Reserve to its 2016 capital plan, which included a share repurchase of up to $\$ 3.5$ billion of the Firm's outstanding common stock during the period beginning July 1, 2016 through June $30,2017$. During the current quarter, the Firm repurchased approximately $\$ 625$ million of the Firm's outstanding common stock as part of its Share Repurchase Program. For further information, see "Liquidity and Capital Resources-Capital Management" in Part I, Item 2.
    (3) Includes shares acquired by the Firm in satisfaction of the tax withholding obligations on stock-based awards and the exercise of stock options granted under the Firm's stock-based compensation plans.

