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

FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the year ended December 31, 2016
Commission File Number 1-11758

Morgan Stanley

(Exact name of Registrant as specified in its charter)

Delaware	**1585 Broadway New York, NY 10036**	**36-3145972**	**(212) 761-4000**
(State or other jurisdiction of incorporation or organization)	(Address of principal executive offices, including zip code)	(I.R.S. Employer Identification No.)	(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of exchange on which registered
Common Stock, $0.01 par value	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Floating Rate Non-Cumulative Preferred Stock, Series A, $0.01 par value	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E, $0.01 par value	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F, $0.01 par value	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of 6.625% Non-Cumulative Preferred Stock, Series G, $0.01 par value	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I, $0.01 par value	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K, $0.01 par value	New York Stock Exchange
Global Medium-Term Notes, Series A, Fixed Rate Step-Up Senior Notes Due 2026 of Morgan Stanley Finance LLC (and Registrant's guarantee with respect thereto)	New York Stock Exchange
Market Vectors ETNs due March 31, 2020 (2 issuances); Market Vectors ETNs due April 30, 2020 (2 issuances)	NYSE Arca, Inc.
Morgan Stanley Cushing® MLP High Income Index ETNs due March 21, 2031	NYSE Arca, Inc.

Indicate by check mark if Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether 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 Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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 ☒
Accelerated Filer ☐
Non-Accelerated Filer ☐
(Do not check if a smaller reporting company)
Smaller reporting company ☐

Indicate by check mark whether Registrant is a shell company (as defined in Exchange Act Rule 12b-2). YES ☐ NO ☒

As of June 30, 2016, the aggregate market value of the common stock of Registrant held by non-affiliates of Registrant was approximately $47,247,843,093. This calculation does not reflect a determination that persons are affiliates for any other purposes.

As of January 31, 2017, there were 1,866,164,899 shares of Registrant's common stock, $0.01 par value, outstanding.

Documents Incorporated by Reference: Portions of Registrant's definitive proxy statement for its 2017 annual meeting of shareholders are incorporated by reference in Part III of this Form 10-K.

Morgan Stanley

ANNUAL REPORT ON FORM 10-K

for the year ended December 31, 2016

Table of Contents	Page
Part I	
Item 1. Business	1
Overview	1
Business Segments	1
Competition	1
Supervision and Regulation	2
Executive Officers of Morgan Stanley	10
Item 1A. Risk Factors	12
Item 1B. Unresolved Staff Comments	22
Item 2. Properties	22
Item 3. Legal Proceedings	23
Item 4. Mine Safety Disclosures	28
Part II	
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	29
Item 6. Selected Financial Data	31
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	32
Introduction	32
Executive Summary	33
Business Segments	37
Supplemental Financial Information and Disclosures	52
Accounting Development Updates	53
Critical Accounting Policies	54
Liquidity and Capital Resources	58
Item 7A. Quantitative and Qualitative Disclosures about Market Risk	75
Item 8. Financial Statements and Supplementary Data	94
Report of Independent Registered Public Accounting Firm	94
Consolidated Income Statements	95
Consolidated Comprehensive Income Statements	96
Consolidated Balance Sheets	97
Consolidated Statements of Changes in Total Equity	98
Consolidated Cash Flow Statements	99
Notes to Consolidated Financial Statements	100
1. Introduction and Basis of Presentation	100
2. Significant Accounting Policies	101
3. Fair Values	112
4. Derivative Instruments and Hedging Activities	129
5. Investment Securities	136
6. Collateralized Transactions	140
7. Loans and Allowance for Credit Losses	143
8. Equity Method Investments	147
9. Goodwill and Intangible Assets	148

Table of Contents	Page
10. Deposits	149
11. Borrowings and Other Secured Financings	149
12. Commitments, Guarantees and Contingencies	152
13. Variable Interest Entities and Securitization Activities	160
14. Regulatory Requirements	166
15. Total Equity	168
16. Earnings per Common Share	173
17. Interest Income and Interest Expense	173
18. Deferred Compensation Plans	173
19. Employee Benefit Plans	176
20. Income Taxes	182
21. Segment and Geographic Information	185
22. Parent Company	187
23. Quarterly Results (Unaudited)	190
24. Subsequent Events	190
Financial Data Supplement (Unaudited)	191
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	195
Item 9A. Controls and Procedures	195
Item 9B. Other Information	197
Part III	
Item 10. Directors, Executive Officers and Corporate Governance	197
Item 11. Executive Compensation	197
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	197
Item 13. Certain Relationships and Related Transactions, and Director Independence	197
Item 14. Principal Accountant Fees and Services	197
Part IV	
Item 15. Exhibits and Financial Statement Schedules	198
Item 16. Form 10-K Summary	198
Signatures	S-1
Exhibit Index	E-1

Forward-Looking Statements

We have included in or incorporated by reference into this report, and from time to time may make in our public filings, press releases or other public statements, certain statements, including (without limitation) those under "Legal Proceedings" in Part I, Item 3, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 and "Quantitative and Qualitative Disclosures about Market Risk" in Part II, Item 7A, that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. In addition, our management may make forward-looking statements to analysts, investors, representatives of the media and others. These forward-looking statements are not historical facts and represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and beyond our control.

The nature of our business makes predicting the future trends of our revenues, expenses and net income difficult. The risks and uncertainties involved in our businesses could affect the matters referred to in such statements, and it is possible that our actual results may differ, possibly materially, from the anticipated results indicated in these forward-looking statements. Important factors that could cause actual results to differ from those in the forward-looking statements include (without limitation):

- the effect of economic and political conditions and geopolitical events, including the United Kingdom's (the "U.K.") anticipated withdrawal from the European Union (the "E.U.");
- sovereign risk;
- the effect of market conditions, particularly in the global equity, fixed income, currency, credit and commodities markets, including corporate and mortgage (commercial and residential) lending and commercial real estate markets and energy markets;
- the impact of current, pending and future legislation (including with respect to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act")) or changes thereto, regulation (including capital, leverage, funding, liquidity and tax requirements), policies (including fiscal and monetary policies established by central banks and financial regulators, and changes to global trade policies), and other legal and regulatory actions in the United States of America ("U.S.") and worldwide;
- the level and volatility of equity, fixed income and commodity prices (including oil prices), interest rates, currency values and other market indices;
- the availability and cost of both credit and capital as well as the credit ratings assigned to our unsecured short-term and long-term debt;
- investor, consumer and business sentiment and confidence in the financial markets;
- the performance and results of our acquisitions, divestitures, joint ventures, strategic alliances or other strategic arrangements;
- our reputation and the general perception of the financial services industry;
- inflation, natural disasters, pandemics and acts of war or terrorism;
- the actions and initiatives of current and potential competitors as well as governments, central banks, regulators and self-regulatory organizations;
- the effectiveness of our risk management policies;
- technological changes instituted by us, our competitors or counterparties and technological risks, including cybersecurity, business continuity and related operational risks;
- our ability to provide innovative products and services and execute our strategic objectives; and
- other risks and uncertainties detailed under "Business—Competition" and "Business—Supervision and Regulation" in Part I, Item 1, "Risk Factors" in Part I, Item 1A and elsewhere throughout this report.

Accordingly, you are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date on which they are made. We undertake no obligation to update publicly or revise any forward-looking statements to reflect the impact of circumstances or events that arise after the dates they are made, whether as a result of new information, future events or otherwise except as required by applicable law. You should, however, consult further disclosures we may make in future filings of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and any amendments thereto or in future press releases or other public statements.

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 Morgan Stanley) 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, 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 our 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;
- Integrity Hotline information; and
- Environmental and Social Policies.

Our 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

Item 1. Business

Overview

We are a global financial services firm that, through our subsidiaries and affiliates, advises, and originates, trades, manages and distributes capital for, governments, institutions and individuals. We were originally incorporated under the laws of the State of Delaware in 1981, and our predecessor companies date back to 1924. We are a financial holding company ("FHC") regulated by the Board of Governors of the Federal Reserve System (the "Federal Reserve") under the Bank Holding Company Act of 1956, as amended (the "BHC Act"). We conduct our business from our headquarters in and around New York City, our regional offices and branches throughout the U.S. and our principal offices in London, Tokyo, Hong Kong and other world financial centers. As of December 31, 2016, we had 55,311 employees worldwide. Unless the context otherwise requires, the terms "Morgan Stanley," the "Firm," "us," "we," and "our" mean Morgan Stanley (the "Parent Company") together with its consolidated subsidiaries.

Financial information concerning us, our business segments and geographic regions for each of the 12 months ended December 31, 2016, December 31, 2015 and December 31, 2014 is included in the consolidated financial statements and the notes thereto in "Financial Statements and Supplementary Data" in Part II, Item 8.

Business Segments

We are a global financial services firm that maintains significant market positions in each of our business segments—Institutional Securities, Wealth Management and Investment Management. Through our subsidiaries and affiliates, we provide a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Additional information related to our business segments, respective clients, and products and services provided is included under "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7.

Competition

All aspects of our businesses are highly competitive, and we expect them to remain so. We compete in the U.S. and globally for clients, market share and human talent. Operating within the financial services industry on a global basis presents, among other things, technological, risk management, regulatory and other infrastructure challenges that require effective resource allocation in order for us to remain competitive. Our competitive position depends on our reputation and the quality and consistency of our long-term investment performance. Our ability to sustain or improve our competitive position also depends substantially on our ability to continue to attract and retain highly qualified employees while managing compensation and other costs. We compete with commercial banks, brokerage firms, insurance companies, electronic trading and clearing platforms, financial data repositories, sponsors of mutual funds, hedge funds and private equity funds, energy companies and other companies offering financial or ancillary services in the U.S., globally and through the internet. In addition, restrictive laws and regulations applicable to certain U.S. financial services institutions, such as Morgan Stanley, which may prohibit us from engaging in certain transactions and impose more stringent capital and liquidity requirements, can put us at a competitive disadvantage to competitors in certain businesses not subject to these same requirements. See also "—Supervision and Regulation" below and "Risk Factors" in Part I, Item 1A.

Institutional Securities and Wealth Management

Our competitive position for our Institutional Securities and Wealth Management business segments depends on innovation, execution capability and relative pricing. We compete directly in the U.S. and globally with other securities and financial services firms and broker-dealers and with others on a regional or product basis. Additionally, there is increased competition driven by established firms as well as the emergence of new firms and business models (including innovative uses of technology) competing for the same clients and assets or offering similar products and services.

Our ability to access capital at competitive rates (which is generally impacted by our credit ratings), to commit and to deploy capital efficiently, particularly in our capital-intensive underwriting and sales, trading, financing and market-making activities, also affects our competitive position. Corporate clients may request that we provide loans or lending commitments in connection with certain investment banking activities and such requests are expected to continue.

It is possible that competition may become even more intense as we continue to compete with financial institutions that may be larger, or better capitalized, or may have a stronger local presence and longer operating history in certain geographies or products. Many of these firms have the ability to offer a wide range of products and services that may enhance their competitive position and could result in pricing pressure on our businesses. In addition, our business is subject to extensive regulation in the U.S. and abroad, while certain of our competitors may be subject to less stringent legal and regulatory regimes than us, thereby putting us at a competitive disadvantage.

We continue to experience intense price competition in some of our businesses. In particular, the ability to execute securities trades electronically on exchanges and through other automated trading markets has increased the pressure on trading commissions and comparable fees. The trend toward direct access to automated, electronic markets will likely increase as additional trading moves to more automated platforms. It is also possible that we will experience competitive pressures in these and other areas in the future as some of our competitors seek to obtain market share by reducing prices (in the form of commissions or pricing).

Investment Management

Our ability to compete successfully in the asset management industry is affected by several factors, including our reputation, investment objectives, quality of investment professionals, performance of investment strategies or product offerings relative to peers and appropriate benchmark indices, advertising and sales promotion efforts, fee levels, the effectiveness of and access to distribution channels and investment pipelines, and the types and quality of products offered. Our investment products, including alternative investment products, may compete with investments offered by other investment managers with passive investment products or who may be subject to less stringent legal and regulatory regimes than us.

Supervision and Regulation

As a major financial services firm, we are subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges and by regulators and exchanges in each of the major markets where we conduct our business. Moreover, in response to the 2007-2008 financial crisis, legislators and regulators, both in the U.S. and worldwide, have adopted, continue to propose or are in the process of implementing a wide range of reforms that have resulted or that may in the future result in major changes to the way we are regulated and conduct our business. These reforms include the Dodd-Frank Act; risk-based capital, leverage and liquidity standards adopted or being developed by the Basel Committee on Banking Supervision (the “Basel Committee”), including Basel III, and the national implementation of those standards; capital planning and stress testing requirements; and new resolution regimes that are being developed in the U.S. and other jurisdictions. While certain portions of these reforms are effective, others are still subject to final rulemaking or transition periods.

We continue to monitor the changing political, tax and regulatory environment; it is likely that there will be further material changes in the way major financial institutions are regulated in both the U.S. and other markets in which we operate, although it remains difficult to predict the exact impact these changes will have on our business, financial condition, results of operations and cash flows for a particular future period.

Financial Holding Company

Consolidated Supervision. We have operated as a bank holding company and FHC under the BHC Act since September 2008. As a bank holding company, we are subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve. Under existing regulation, the Federal Reserve has heightened authority to examine, prescribe regulations and take action with respect to all of our subsidiaries. In particular, we are, or will become, subject to (among other things): significantly revised and expanded regulation and supervision; more intensive scrutiny of our businesses and plans for expansion of those businesses; new activities limitations; a systemic risk regime that imposes heightened capital and liquidity requirements; restrictions on activities and investments imposed by a section of the BHC Act added by the Dodd-Frank Act referred to as the “Volcker Rule”; and comprehensive derivatives regulation. In addition, the Consumer Financial Protection Bureau has primary rulemaking, enforcement and examination authority over us and our subsidiaries with respect to federal consumer protection laws, to the extent applicable.

Scope of Permitted Activities. The BHC Act limits the activities of bank holding companies and financial holding companies and grants the Federal Reserve authority to limit our ability to conduct activities. We must obtain the Federal Reserve’s approval before engaging in certain banking and other financial activities both in the U.S. and internationally. Since becoming a bank holding company, we have disposed of certain nonconforming assets and conformed certain activities to the requirements of the BHC Act.

The BHC Act grandfathers “activities related to the trading, sale or investment in commodities and underlying physical properties,” provided that we were engaged in “any of such activities as of September 30, 1997 in the United States” and provided that certain other conditions that are within our reasonable control are satisfied. We currently engage in our commodities activities pursuant to the BHC Act grandfather exemption as well as other authorities under the BHC Act.

Activities Restrictions under the Volcker Rule. The Volcker Rule prohibits “banking entities,” including the Firm and its affiliates, from engaging in certain “proprietary trading” activities, as defined in the Volcker Rule, subject to exemptions for underwriting, market-making-related activities, risk-mitigating hedging and certain other activities. The Volcker Rule also prohibits certain investments and relationships by banking entities with “covered funds,” with a number of

exemptions and exclusions. Banking entities were required to bring all of their activities and investments into conformance with the Volcker Rule by July 21, 2015, subject to certain extensions. For more information about the conformance periods applicable to certain covered funds, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Developments." In addition, the Volcker Rule requires banking entities to have comprehensive compliance programs reasonably designed to ensure and monitor compliance with the Volcker Rule.

The Volcker Rule also requires that deductions be made from a bank holding company's Tier 1 capital for certain permissible investments in covered funds. Beginning with the three months ended September 30, 2015, the required deductions are reflected in our relevant regulatory capital tiers and ratios. Given its complexity, the full impact of the Volcker Rule is still uncertain and will ultimately depend on the interpretation and implementation by the five regulatory agencies responsible for its oversight.

Capital Standards. The Federal Reserve establishes capital requirements for large bank holding companies and evaluates our compliance with such requirements. The Office of the Comptroller of the Currency (the "OCC") establishes similar capital requirements and standards for our U.S. bank subsidiaries, Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA") (collectively, "U.S. Bank Subsidiaries").

Regulatory Capital Framework. The Federal Reserve establishes capital requirements for large bank holding companies, including well-capitalized standards, and evaluates our compliance with such capital requirements. The 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 Act. After completion of certain transitional arrangements in the regulatory capital framework, we will be subject to various risk-based capital requirements, measured against our Common Equity Tier 1 capital, Tier 1 capital and Total capital bases, leverage-based capital requirements, including the Supplementary Leverage Ratio, and additional capital buffers above generally applicable minimum standards for bank holding companies.

The Basel Committee is in the process of considering revisions to various provisions of the capital framework that, if adopted by the U.S. banking agencies, could result in substantial changes to our regulatory capital framework.

Regulated Subsidiaries. In addition, many of our regulated subsidiaries are, or are expected to be in the future, subject to regulatory capital requirements, including regulated subsidiaries registered as "swap dealers" with the U.S. Commodity Futures Trading Commission (the "CFTC") or "security-based swap dealers" with the SEC (collectively, "Swaps Entities") or registered as broker-dealers or futures commission merchants. Specific regulatory capital requirements vary by regulated subsidiary, and in many cases these standards are not yet established or are subject to ongoing rulemakings that could substantially modify requirements.

Commodities-Related Capital Requirements. In September 2016, the Federal Reserve issued a proposed rulemaking that would increase risk-based capital requirements for certain commodities-related activities and commodities-related merchant banking investments of U.S. FHCs, including the Firm; impose new limitations on the physical commodity trading activities of certain U.S. FHCs; and enhance reporting requirements with respect to U.S. FHCs' commodities-related activities and investments. If adopted in its current form, the proposed rulemaking would result in increases in our risk-weighted assets ("RWAs") with respect to certain commodities-related investments and physical commodity holdings. However, we expect that the proposed rule, if finalized in its proposed form, would not have a material impact on our aggregate RWAs or risk-based capital ratios.

For more information about the specific capital requirements applicable to us and our U.S. Bank Subsidiaries, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements" in Part II, Item 7.

Capital Planning, Stress Tests and Capital Distributions. Pursuant to the Dodd-Frank Act, the Federal Reserve has adopted capital planning and stress test requirements for large bank holding companies, including Morgan Stanley. The Dodd-Frank Act also requires each of our U.S. Bank Subsidiaries to conduct an annual stress test. For more information about the capital planning and stress test requirements, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements" in Part II, Item 7.

In addition to capital planning requirements, the OCC, the Federal Reserve and the Federal Deposit Insurance Corporation ("FDIC") have the authority to prohibit or to limit the payment of dividends by the banking organizations they supervise, including the Firm and its U.S. Bank Subsidiaries, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. All of these

policies and other requirements could affect our ability to pay dividends and/or repurchase stock, or require us to provide capital assistance to our U.S. Bank Subsidiaries under circumstances which we would not otherwise decide to do so.

Liquidity Standards. In addition to capital regulations, the U.S. banking agencies and the Basel Committee have adopted, or are in the process of considering, liquidity standards. 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"). The Firm and its U.S. Bank Subsidiaries are subject to the LCR requirements issued by the U.S. banking regulators ("U.S. LCR") and would be subject to the NSFR requirements proposed by the U.S. banking regulators ("U.S. NSFR").

In addition to the U.S. LCR and U.S. NSFR, we and many of our regulated subsidiaries, including those registered as Swaps Entities with the CFTC or SEC, are, or are expected to be in the future, subject to other liquidity standards, including liquidity stress-testing and associated liquidity reserve requirements.

For more information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Liquidity Framework" in Part II, Item 7.

Systemic Risk Regime. The Dodd-Frank Act established a systemic risk regime to which bank holding companies with $50 billion or more in consolidated assets, such as Morgan Stanley, are subject. Under rules issued by the Federal Reserve to implement certain requirements of the Dodd-Frank Act's enhanced prudential standards, such bank holding companies must conduct internal liquidity stress tests, maintain unencumbered highly liquid assets to meet projected net cash outflows for 30 days over the range of liquidity stress scenarios used in internal stress tests, and comply with various liquidity risk management requirements. Institutions also must comply with a range of risk management and corporate governance requirements.

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. global systemically important banks ("G-SIBs"), including the Firm, 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 continue to evaluate the potential impact of the proposed rules.

In addition, the Federal Reserve has proposed rules that would create a new early remediation framework to address financial distress or material management weaknesses. The Federal Reserve also has the ability to establish additional prudential standards, including those regarding contingent capital, enhanced public disclosures and limits on short-term debt, including off-balance sheet exposures. For example, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Total Loss-Absorbing Capacity and Long-Term Debt Requirement" in Part II, Item 7.

Under the systemic risk regime, if the Federal Reserve or the Financial Stability Oversight Council determines that a bank holding company with $50 billion or more in consolidated assets poses a "grave threat" to U.S. financial stability, the institution may be, among other things, restricted in its ability to merge or offer financial products and required to terminate activities and dispose of assets.

See also "—Capital Standards" and "—Liquidity Standards" herein and "—Resolution and Recovery Planning" below.

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 a single point of entry ("SPOE") strategy. An SPOE strategy generally contemplates the provision of additional capital and liquidity by the Parent Company to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy after the Parent Company has filed for bankruptcy.

Further, we are required to submit an annual recovery plan to the Federal Reserve that outlines the steps that management could take over time to generate or conserve financial resources in times of prolonged financial stress.

Certain of our domestic and foreign subsidiaries are also subject to resolution and recovery planning requirements in the jurisdictions in which they operate. For example, MSBNA must submit to the FDIC an annual resolution plan that describes MSBNA's strategy for a rapid and orderly resolution in the event of material financial distress or failure of MSBNA. In September 2016, the OCC issued final guidelines that establish enforceable standards for recovery planning by national banks and certain other institutions with total consolidated assets of $50 billion or more, calculated on a rolling four-quarter average basis, including MSBNA. The guidelines were effective on January 1, 2017, and MSBNA must be in compliance by January 1, 2018.

In addition, under the Dodd-Frank Act, certain financial companies, including bank holding companies such as the Firm and certain of its covered subsidiaries, can be subjected to a resolution proceeding under the orderly liquidation authority in Title II of the Dodd-Frank Act with the FDIC being appointed as receiver, provided that certain procedures are met, including certain extraordinary financial distress and systemic risk determinations by the U.S. Treasury Secretary in consultation with the U.S. President. The orderly liquidation authority rulemaking is proceeding in stages, with some regulations now finalized and others not yet proposed. If we were subject to the orderly liquidation authority, the FDIC would have considerable powers, including: the power to remove directors and officers responsible for our failure and to appoint new directors and officers; the power to assign our assets and liabilities to a third party or bridge financial company without the need for creditor consent or prior court review; the ability to differentiate among our creditors, including by treating certain creditors within the same class better than others, subject to a minimum recovery right on the part of disfavored creditors to receive at least what they would have received in bankruptcy liquidation; and broad powers to administer the claims process to determine distributions from the assets of the receivership. The FDIC has been developing an SPOE strategy that could be used to implement the orderly liquidation authority.

Regulators have taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code, the orderly liquidation authority or other resolution regimes. For more information about our resolution plan-related submissions and associated regulatory actions, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Regulatory Requirements—Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Developments—Resolution and Recovery Planning" in Part II, Item 7.

Cyber Risk Management. As a general matter, the financial services industry faces increased regulatory focus regarding cyber risk management practices. In October 2016, the federal banking regulators issued an advance notice of proposed rulemaking regarding enhanced cyber risk management standards, which would apply to a wide range of large financial institutions and their third-party service providers, including the Firm. The proposed standards would expand existing cybersecurity regulations and guidance to focus on cyber risk governance and management; management of internal and external dependencies; and incident response, cyber resilience and situational awareness. In addition, the proposal contemplates more stringent standards for institutions with systems that are critical to the financial sector.

U.S. Bank Subsidiaries

U.S. Bank Subsidiaries. MSBNA, primarily a wholesale commercial bank, offers commercial lending and certain retail securities-based lending services in addition to deposit products, and also conducts certain foreign exchange activities.

MSPBNA offers certain mortgage and other secured lending products, including retail securities-based lending products, primarily for customers of our affiliate retail broker-dealer, Morgan Stanley Smith Barney LLC ("MSSB LLC"). MSPBNA also offers certain deposit products and prime brokerage custody services.

Both MSBNA and MSPBNA are FDIC-insured national banks subject to supervision, regulation and examination by the OCC. They are both subject to the OCC's risk governance guidelines, which establish heightened standards for a large national bank's risk governance framework and the oversight of that framework by the bank's board of directors.

Prompt Corrective Action. The Federal Deposit Insurance Corporation Improvement Act of 1991 provides a framework for regulation of depository institutions and their affiliates, including parent holding companies, by their federal banking regulators. Among other things, it requires the relevant federal banking regulator to take "prompt corrective action" ("PCA") with respect to a depository institution if that institution does not meet certain capital adequacy standards. Current PCA regulations generally apply only to insured banks and thrifts such as MSBNA or MSPBNA and not to their parent holding companies. The Federal Reserve is, however, authorized to take appropriate action at the holding company level, subject to certain limitations. Under the systemic risk regime, as described above, we also would become subject to an early remediation protocol in the event of financial distress. In addition, bank holding companies, such as Morgan Stanley, are required to serve as a source of strength to their U.S. bank subsidiaries and commit resources to support these subsidiaries in the event such subsidiaries are in financial distress.

Transactions with Affiliates. Our U.S. Bank Subsidiaries are subject to Sections 23A and 23B of the Federal Reserve Act, which impose restrictions on "covered transactions" with any affiliates. Covered transactions include any extension of credit to, purchase of assets from, and certain other transactions by insured banks with an affiliate. These restrictions limit the total amount of credit exposure that our U.S. Bank Subsidiaries may have to any one affiliate and to all affiliates. Other provisions set collateral requirements and require all such transactions to be made on market terms. Derivatives, securities borrowing and securities lending transactions between our U.S. Bank Subsidiaries and their affiliates are

subject to these restrictions. The Federal Reserve has indicated that it will propose a rulemaking to implement these more recent restrictions.

In addition, the Volcker Rule generally prohibits covered transactions between (i) us or any of our affiliates and (ii) covered funds for which we or any of our affiliates serves as the investment manager, investment adviser, commodity trading advisor or sponsor, or other covered funds organized and offered by us or any of our affiliates pursuant to specific exemptions in the Volcker Rule. See also "—Financial Holding Company—Activities Restriction under the Volcker Rule" above.

FDIC Regulation. An FDIC-insured depository institution is generally liable for any loss incurred or expected to be incurred by the FDIC in connection with the failure of an insured depository institution under common control by the same bank holding company. As commonly controlled FDIC-insured depository institutions, each of MSBNA and MSPBNA could be responsible for any loss to the FDIC from the failure of the other. In addition, both institutions are exposed to changes in the cost of FDIC insurance. Under the Dodd-Frank Act, some of the restoration of the FDIC's reserve fund must be paid for exclusively by large depository institutions, including MSBNA.

Institutional Securities and Wealth Management

Broker-Dealer and Investment Adviser Regulation. Our primary U.S. broker-dealer subsidiaries, Morgan Stanley & Co. LLC ("MS&Co.") and MSSB LLC, are registered broker-dealers with the SEC and in all 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands, and are members of various self-regulatory organizations, including the Financial Industry Regulatory Authority, Inc. ("FINRA"), and various securities exchanges and clearing organizations. Broker-dealers are subject to laws and regulations covering all aspects of the securities business, including sales and trading practices, securities offerings, publication of research reports, use of customers' funds and securities, capital structure, risk management controls in connection with market access, recordkeeping and retention, and the conduct of their directors, officers, representatives and other associated persons. Broker-dealers are also regulated by securities administrators in those states where they do business. Violations of the laws and regulations governing a broker-dealer's actions could result in censures, fines, the issuance of cease-and-desist orders, revocation of licenses or registrations, the suspension or expulsion from the securities industry of such broker-dealer or its officers or employees, or other similar consequences by both federal and state securities administrators. Our broker-dealer subsidiaries are also members of the Securities Investor Protection Corporation, which provides certain protections for customers of broker-dealers against losses in the event of the insolvency of a broker-dealer.

MSSB LLC is also a registered investment adviser with the SEC. MSSB LLC's relationship with its investment advisory clients is subject to the fiduciary and other obligations imposed on investment advisers under the Investment Advisers Act of 1940, and the rules and regulations promulgated thereunder as well as various state securities laws. These laws and regulations generally grant the SEC and other supervisory bodies broad administrative powers to address non-compliance, including the power to restrict or limit MSSB LLC from carrying on its investment advisory and other asset management activities. Other sanctions that may be imposed include the suspension of individual employees, limitations on engaging in certain activities for specified periods of time or for specified types of clients, the revocation of registrations, other censures and significant fines.

The Firm is subject to various regulations that affect broker-dealer sales practices and customer relationships. For example, under the Dodd-Frank Act, the SEC is authorized to impose a fiduciary duty rule applicable to broker-dealers when providing personalized investment advice about securities to retail customers, although the SEC has not yet acted on this authority.

As a separate matter, 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 and/or financial adviser is considered a fiduciary when providing certain recommendations to retirement investors and requires that such recommendations be in the best interests of clients. Subject to any potential delays, the new fiduciary standard for investment advice has a scheduled applicability date of April 10, 2017, with certain aspects subject to phased-in compliance, and with full compliance required by January 1, 2018. 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. However, these developments may impact the manner in which affected businesses are conducted, decrease profitability and increase potential litigation or enforcement risk.

Margin lending by broker-dealers is regulated by the Federal Reserve's restrictions on lending in connection with customer and proprietary purchases and short sales of securities, as well as securities borrowing and lending activities. Broker-dealers are also subject to maintenance and other margin requirements imposed under FINRA and other self-regulatory organization rules. In many cases, our broker-dealer subsidiaries' margin policies are more stringent than these rules.

As registered U.S. broker-dealers, certain of our subsidiaries are subject to the SEC's net capital rule and the net capital requirements of various exchanges, other regulatory author-

ities and self-regulatory organizations. These rules are generally designed to measure the broker-dealer subsidiary's general financial integrity and/or liquidity and require that at least a minimum amount of net and/or liquid assets be maintained by the subsidiary. See also "—Financial Holding Company—Consolidated Supervision" and "—Financial Holding Company—Liquidity Standards" above. Rules of FINRA and other self-regulatory organizations also impose limitations and requirements on the transfer of member organizations' assets.

Research. Both U.S. and non-U.S. regulators continue to focus on research conflicts of interest. Research-related regulations have been implemented in many jurisdictions, including in the U.S. where FINRA has adopted rules that cover both equity and debt. New and revised requirements resulting from these regulations and the global research settlement with U.S. federal and state regulators (to which we are a party) have necessitated the development or enhancement of corresponding policies and procedures.

Regulation of Futures Activities and Certain Commodities Activities. MS&Co., as a futures commission merchant, and MSSB LLC, as an introducing broker, are subject to net capital requirements of, and certain of their activities are regulated by, the CFTC, the National Futures Association (the "NFA"), CME Group, and various commodity futures exchanges. MS&Co. and MSSB LLC and certain of their affiliates are registered members of the NFA in various capacities. Rules and regulations of the CFTC, NFA and commodity futures exchanges address obligations related to, among other things, customer protections, the segregation of customer funds and the holding of secured amounts, the use by futures commission merchants of customer funds, recordkeeping and reporting obligations of futures commission merchants, and introducing brokers, risk disclosure, risk management and discretionary trading.

Our commodities activities are subject to extensive and evolving energy, commodities, environmental, health and safety, and other governmental laws and regulations in the U.S. and abroad. Intensified scrutiny of certain energy markets by U.S. federal, state and local authorities in the U.S. and abroad and by the public has resulted in increased regulatory and legal enforcement and remedial proceedings involving companies conducting the activities in which we are engaged. See also "—Financial Holding Company—Scope of Permitted Activities" and "—Capital Standards—Commodities-Related Capital Requirements" above.

Derivatives Regulation. Under the U.S. regulatory regime for "swaps" and "security-based swaps" (collectively, "Swaps") implemented pursuant to the Dodd-Frank Act, we are subject to regulations including, among others, public and regulatory reporting, central clearing and mandatory trading on regulated exchanges or execution facilities for certain types of Swaps. While the CFTC has completed the majority of its regulations in this area, most of which are in effect, the SEC has not yet adopted a number of its Swaps regulations. The Dodd-Frank Act also requires the registration of "swap dealers" with the CFTC and "security-based swap dealers" with the SEC. Certain of our subsidiaries have registered with the CFTC as swap dealers and will in the future be required to register with the SEC as security-based swap dealers. Such Swaps Entities are or will be subject to a comprehensive regulatory regime with new obligations for the Swaps activities for which they are registered, including capital requirements, margin requirements for uncleared Swaps and comprehensive business conduct rules. Each of the CFTC and the SEC have proposed rules to impose capital standards on Swaps Entities subject to their respective jurisdictions, which include our subsidiaries, but these rules have not yet been finalized.

The specific parameters of some of these requirements for Swaps have been and continue to be developed through the CFTC, SEC and bank regulator rulemakings. In 2015, the federal banking regulators and the CFTC separately issued final rules establishing uncleared Swap margin requirements for Swaps Entities subject to their respective regulation, including MSBNA, Morgan Stanley Capital Services LLC and Morgan Stanley & Co. International plc ("MSIP"), respectively. These final rules impose variation margin requirements under a phase-in compliance schedule that applied to the largest dealers as of September 1, 2016 and will apply to the remainder of in-scope market participants as of March 1, 2017. Similarly, the final rules phase-in initial margin requirements from September 1, 2016 through September 1, 2020, depending on the level of over-the-counter ("OTC") derivatives activity of the swap dealer and the relevant counterparty. Margin rules with the same or similar compliance dates have been adopted or are in the process of being finalized by regulators outside the U.S. and certain of our subsidiaries may be subject to such rules.

Although the full impact of global derivatives regulation on us remains unclear, we have already faced, and are expected to continue to face, increased costs and regulatory oversight due to the registration and regulatory requirements indicated above. Complying with the Swaps rules also has required, and is expected to in the future require, us to change our Swaps businesses and has required, and may in the future require, extensive systems and personnel changes. Compliance with Swaps-related regulatory capital requirements may require us to devote more capital to our Swaps business.

Non-U.S. Regulation. Our Institutional Securities businesses also are regulated extensively by non-U.S. regulators, including governments, securities exchanges, commodity exchanges, self-regulatory organizations, central banks and regulatory bodies, especially in those jurisdictions in which we maintain an office. In addition, certain Morgan Stanley subsidiaries are regulated as broker-dealers under the laws of the jurisdictions in which they operate. Subsidiaries engaged in banking and trust activities outside the U.S. are regulated by various government agencies in the particular jurisdiction where they are chartered, incorporated and/or conduct their business activity. For instance, the Prudential Regulation Authority ("PRA"), the Financial Conduct Authority ("FCA") and several securities and futures exchanges in the U.K., including the London Stock Exchange and ICE Futures Europe, regulate our activities in the U.K.; the Bundesanstalt für Finanzdienstleistungsaufsicht (the Federal Financial Supervisory Authority) and the Deutsche Börse AG regulate our activities in the Federal Republic of Germany; the Financial Services Agency, the Bank of Japan, the Japanese Securities Dealers Association and several Japanese securities and futures exchanges, regulate our activities in Japan; the Securities and Futures Commission of Hong Kong, the Hong Kong Monetary Authority and the Hong Kong Exchanges and Clearing Limited regulate our operations in Hong Kong; and the Monetary Authority of Singapore and the Singapore Exchange Limited regulate our business in Singapore.

Our largest non-U.S. entity, MSIP, is subject to extensive regulation and supervision by the PRA, which has broad legal authority to establish prudential and other standards applicable to MSIP that seek to ensure its safety and soundness and to minimize adverse effects on the stability of the U.K. financial system. MSIP is also regulated and supervised by the FCA with respect to business conduct matters.

Non-U.S. policymakers and regulators, including the European Commission and European Supervisory Authorities (among others, the European Banking Authority and the European Securities and Markets Authority), continue to propose and adopt numerous reforms, including those that may further impact the structure of banks, and to formulate regulatory standards and measures that will be of relevance and importance to our European operations. In November 2016, the European Commission published proposals that would require certain large, non-E.U. financial groups with two or more institutions established in the E.U., to establish a single E.U. intermediate holding company ("IHC"). The proposals would require E.U. banks and broker-dealers to be held below the E.U. IHC; until more specific regulations are proposed, it remains unclear which other E.U. entities would need to be held beneath the E.U. IHC. The E.U. IHC would be subject to: direct supervision and authorization by the European Central Bank or the relevant national E.U. regulator; the E.U. bank recovery and resolution regime under the E.U. Bank Recovery and Resolution Directive ("BRRD"); and capital, liquidity, leverage and other prudential standards on a consolidated basis. The proposals will now be considered by the European Parliament and the Council of the E.U. The final form of the proposals, as well as the date of their adoption, is not yet certain.

Regulators in the U.K., E.U. and other major jurisdictions have also finalized or are in the process of proposing or finalizing risk-based capital, leverage capital, liquidity, market-based reforms and other regulatory standards applicable to certain of our subsidiaries that operate in those jurisdictions. For instance, European Market Infrastructure Regulation introduces new requirements regarding the central clearing and reporting of derivatives, as well as margin requirements for uncleared derivatives. The Markets in Financial Instrument Regulation and a revision of the Markets in Financial Instruments Directive (together, "MiFID II"), which is now scheduled to take effect on January 3, 2018, will also introduce comprehensive and new trading and market infrastructure reforms in the E.U., including new trading venues, enhancements to pre- and post-trading transparency, and additional investor protection requirements, among others. Although the full impact of these changes remains unclear, complying with MiFID II is expected to require extensive changes to our operations, including systems and controls.

Regulators in the U.K., E.U. and other major jurisdictions have also finalized or are in the process of proposing or finalizing recovery and resolution planning frameworks and related regulatory requirements that will apply to certain of our subsidiaries that operate in those jurisdictions. For instance, the BRRD has established a recovery and resolution framework for E.U. credit institutions and investment firms, including MSIP. E.U. Member States were required to apply provisions implementing the BRRD as of January 1, 2015, subject to certain exemptions. In addition, certain jurisdictions, including the U.K. and other E.U. jurisdictions, have implemented, or are in the process of implementing, changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity organized in such jurisdiction by writing down certain unsecured liabilities or converting certain unsecured liabilities into equity.

Investment Management

Many of the subsidiaries engaged in our asset management activities are registered as investment advisers with the SEC. Many aspects of our asset management activities are subject to federal and state laws and regulations primarily intended to benefit the investor or client. These laws and regulations generally grant supervisory agencies and bodies broad administrative powers, including the power to limit or restrict us

from carrying on our asset management activities in the event that we fail to comply with such laws and regulations. Sanctions that may be imposed for such failure include the suspension of individual employees, limitations on our engaging in various asset management activities for specified periods of time or specified types of clients, the revocation of registrations, other censures and significant fines. In order to facilitate our asset management business, we own a registered U.S. broker-dealer, Morgan Stanley Distribution, Inc., which acts as distributor to the Morgan Stanley mutual funds and as placement agent to certain private investment funds managed by our Investment Management business segment. In addition, certain of our affiliates are registered as commodity trading advisors and/or commodity pool operators, or are operating under certain exemptions from such registration pursuant to CFTC rules and other guidance, and have certain responsibilities with respect to each pool they advise. Violations of the rules of the CFTC, the NFA or the commodity exchanges could result in remedial actions, including fines, registration restrictions or terminations, trading prohibitions or revocations of commodity exchange memberships. See also "—Institutional Securities and Wealth Management—Broker-Dealer and Investment Adviser Regulation," "—Institutional Securities and Wealth Management—Regulation of Futures Activities and Certain Commodities Activities," "—Institutional Securities and Wealth Management—Derivatives Regulation" and "—Institutional Securities and Wealth Management—Non-U.S. Regulation" above for a discussion of other regulations that impact our Investment Management business, including, among other things, the Department of Labor's conflict of interest rule and MiFID II.

As a result of the passage of the Dodd-Frank Act, our asset management activities are subject to certain additional laws and regulations, including, but not limited to, additional reporting and recordkeeping requirements (including with respect to clients that are private funds) and restrictions on sponsoring or investing in, or maintaining certain other relationships with, "covered funds," as defined in the Volcker Rule, subject to certain limited exemptions. Many of these requirements may increase the expenses associated with our asset management activities and/or reduce the investment returns we are able to generate for our asset management clients. See also "—Financial Holding Company—Activities Restrictions under the Volcker Rule" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Developments."

Our Investment Management business is also regulated outside the U.S. For example, the FCA is the primary regulator of our business in the U.K.; the Financial Services Agency regulates our business in Japan; the Securities and Futures Commission of Hong Kong regulates our business in Hong Kong; and the Monetary Authority of Singapore regulates our business in Singapore. See also "—Institutional Securities and Wealth Management—Non-U.S. Regulation" herein.

Financial Crimes Program

Our Financial Crimes program is coordinated on an enterprise-wide basis and supports our financial crime prevention efforts across all regions and business units with responsibility for governance, oversight and execution of our Anti-Money Laundering ("AML"), economic sanctions ("Sanctions") and anti-corruption programs.

In the U.S., the Bank Secrecy Act, as amended by the USA PATRIOT Act of 2001, imposes significant obligations on financial institutions to detect and deter money laundering and terrorist financing activity, including requiring banks, bank holding companies and their subsidiaries, broker-dealers, futures commission merchants, introducing brokers and mutual funds to implement AML programs, verify the identity of customers that maintain accounts, and monitor and report suspicious activity to appropriate law enforcement or regulatory authorities. Outside the U.S., applicable laws, rules and regulations similarly require designated types of financial institutions to implement AML programs. We have implemented policies, procedures and internal controls that are designed to comply with all applicable AML laws and regulations. Regarding Sanctions, we have implemented policies, procedures and internal controls that are designed to comply with the regulations and economic sanctions programs administered by the U.S. Treasury's Office of Foreign Assets Control ("OFAC"), which target foreign countries, entities and individuals based on external threats to U.S. foreign policy, national security or economic interests, and to comply, as applicable, similar sanctions programs imposed by foreign governments or global or regional multilateral organizations such as the United Nations Security Council and the E.U. Council.

We are also subject to applicable anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, in the jurisdictions in which we operate. Anti-corruption laws generally prohibit offering, promising, giving or authorizing others to give anything of value, either directly or indirectly, to a government official or private party in order to influence official action or otherwise gain an unfair business advantage, such as to obtain or retain business. We have implemented policies, procedures and internal controls that are designed to comply with such laws, rules and regulations.

Protection of Client Information

Many aspects of our businesses are subject to legal requirements concerning the use and protection of certain customer information, including those adopted pursuant to the Gramm-Leach-Bliley Act and the Fair and Accurate Credit Transactions Act of 2003 in the U.S., the E.U. Data Protection Directive and various laws in Asia, including the Japanese Personal Information (Protection) Law, the Hong Kong Personal Data (Protection) Ordinance and the Australian Privacy Act. We have adopted measures designed to comply with these and related applicable requirements in all relevant jurisdictions.

Compensation Practices and Other Regulation

Our compensation practices are subject to oversight by the Federal Reserve and, with respect to some of our subsidiaries and employees, by other financial regulatory bodies worldwide. In particular, we are subject to the Federal Reserve's guidance that is designed to help ensure that incentive compensation paid by banking organizations does not encourage imprudent risk taking that threatens the organizations' safety and soundness. The scope and content of the Federal Reserve's policies on executive compensation are continuing to develop and may change based on findings from its peer review process, and we expect that these policies will evolve over a number of years.

We are subject to the compensation-related provisions of the Dodd-Frank Act, which may impact our compensation practices. In 2016, pursuant to the Dodd-Frank Act, certain federal regulatory agencies reproposed a rule, which, if implemented as written, 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. In addition, pursuant to the Dodd-Frank Act, in 2015, the SEC proposed rules that would direct stock exchanges to require listed companies to implement clawback policies to recover incentive-based compensation from current or former executive officers in the event of certain financial restatements and would also require companies to disclose their clawback policies and their actions under those policies. We continue to evaluate the proposed rules, both of which are subject to further rulemaking procedures.

Our compensation practices may also be impacted by regulations in other jurisdictions. Our compensation practices with respect to certain employees whose activities have a material impact on the risk profile of our E.U. operations are subject to the Capital Requirements Directive IV (the "CRD IV") and related E.U. and Member State regulations, including, among others, a cap on the ratio of variable remuneration to fixed remuneration and clawback arrangements in relation to variable remuneration paid in the past. In the U.K., the remuneration of certain employees of banks and other firms is governed by the Remuneration Code of the FCA and by the PRA Rulebook (Remuneration Part), including provisions that implement the CRD IV, as well as additional U.K. requirements.

For a discussion of certain risks relating to our regulatory environment, see "Risk Factors" in Part I, Item 1A.

Executive Officers of Morgan Stanley

The executive officers of Morgan Stanley and their ages and titles as of February 27, 2017 are set forth below. Business experience for the past five years is provided in accordance with SEC rules.

Jeffrey S. Brodsky (52). Executive Vice President and Chief Human Resources Officer of Morgan Stanley (since January 2016). Vice President and Global Head of Human Resources (January 2011 to December 2015). Co-Head of Human Resources (January 2010 to December 2011). Head of Morgan Stanley Smith Barney Human Resources (June 2009 to January 2010).

James P. Gorman (58). Chairman of the Board of Directors and Chief Executive Officer of Morgan Stanley (since January 2012). President and Chief Executive Officer (January 2010 through December 2011) and member of the Board of Directors (since January 2010). Co-President (December 2007 to December 2009) and Co-Head of Strategic Planning (October 2007 to December 2009). President and Chief Operating Officer of Wealth Management (February 2006 to April 2008).

Eric F. Grossman (50). Executive Vice President and Chief Legal Officer of Morgan Stanley (since January 2012). Global Head of Legal (September 2010 to January 2012). Global Head of Litigation (January 2006 to September 2010) and General Counsel of the Americas (May 2009 to September 2010). General Counsel of Wealth Management (November 2008 to September 2010). Partner at the law firm of Davis Polk & Wardwell LLP (June 2001 to December 2005).

Keishi Hotsuki (54). Executive Vice President (since May 2014) and Chief Risk Officer of Morgan Stanley (since May 2011). Interim Chief Risk Officer (January 2011 to May 2011) and Head of Market Risk Department (March 2008 to April 2014). Director of Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (since May 2010). Global Head of Market Risk Management at Merrill Lynch (June 2005 to September 2007).

Colm Kelleher (59). President of Morgan Stanley (since January 2016). Executive Vice President (October 2007 to January 2016). President of Institutional Securities (January 2013 to January 2016). Head of International (January 2011 to January 2016). Co-President of Institutional Securities (January 2010 to December 2012). Chief Financial Officer and Co-Head of Strategic Planning (October 2007 to December 2009). Head of Global Capital Markets (February 2006 to October 2007). Co-Head of Fixed Income Europe (May 2004 to February 2006).

Jonathan M. Pruzan (48). Executive Vice President and Chief Financial Officer of Morgan Stanley (since May 2015). Co-Head of Global Financial Institutions Group (January 2010 to April 2015). Co-Head of North American Financial Institutions Group M&A (September 2007 to December 2009). Head of the U.S. Bank Group (April 2005 to August 2007).

Daniel A. Simkowitz (51). Head of Investment Management of Morgan Stanley (since October 2015). Co-Head of Global Capital Markets (March 2013 to September 2015). Chairman of Global Capital Markets (November 2009 to March 2013). Managing Director in Global Capital Markets (December 2000 to November 2009).

Item 1A. Risk Factors

For a discussion of the risks and uncertainties that may affect our future results and strategic objectives, see “Forward-Looking Statements” immediately preceding Part I, Item 1 and “Return on Equity Target” and “Effects of Inflation and Changes in Interest and Foreign Exchange Rates” under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7.

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 owned by us. For more information on how we monitor and manage market risk, see “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Market Risk” in Part II, Item 7A.

Our results of operations may be materially affected by market fluctuations and by global and economic conditions and other factors, including changes in asset values.

Our results of operations have been in the past and may, in the future, be materially affected by market fluctuations due to global financial markets, economic conditions, changes to the global trade policies and other factors, including the level and volatility of equity, fixed income and commodity prices (including oil prices), interest rates, currency values and other market indices. The results of our Institutional Securities business segment, particularly results relating to our involvement in primary and secondary markets for all types of financial products, are subject to substantial market fluctuations due to a variety of factors that we cannot control or predict with great certainty. These fluctuations impact results by causing variations in new business flows and in the fair value of securities and other financial products. Fluctuations also occur due to the level of global market activity, which, among other things, affects the size, number and timing of investment banking client assignments and transactions and the realization of returns from our principal investments. During periods of unfavorable market or economic conditions, the level of individual investor participation in the global markets, as well as the level of client assets, may also decrease, which would negatively impact the results of our Wealth Management business segment. In addition, fluctuations in global market activity could impact the flow of investment capital into or from assets under management or supervision and the way customers allocate capital among money market, equity, fixed income or other investment alternatives, which could negatively impact our Investment Management business segment.

The value of our financial instruments may be materially affected by market fluctuations. Market volatility, illiquid market conditions and disruptions in the credit markets make it extremely difficult to value certain of our financial instruments, particularly during periods of market displacement. Subsequent valuations in future periods, in light of factors then prevailing, may result in significant changes in the values of these instruments and may adversely impact historical or prospective performance-based fees (also known as incentive fees or carried interest) in respect of certain business. In addition, at the time of any sales and settlements of these financial instruments, the price we ultimately realize will depend on the demand and liquidity in the market at that time and may be materially lower than their current fair value. Any of these factors could cause a decline in the value of our financial instruments, which may have an adverse effect on our results of operations in future periods.

In addition, financial markets are susceptible to severe events evidenced by rapid depreciation in asset values accompanied by a reduction in asset liquidity. Under these extreme conditions, hedging and other risk management strategies may not be as effective at mitigating trading losses as they would be under more normal market conditions. Moreover, under these conditions, market participants are particularly exposed to trading strategies employed by many market participants simultaneously and on a large scale. Our risk management and monitoring processes seek to quantify and mitigate risk to more extreme market moves. However, severe market events have historically been difficult to predict and we could realize significant losses if extreme market events were to occur.

Holding large and concentrated positions may expose us to losses.

Concentration of risk may reduce revenues or result in losses in our market-making, investing, block trading, underwriting and lending businesses in the event of unfavorable market movements, or when market conditions are more favorable for our competitors. We commit substantial amounts of capital to these businesses, which often results in our taking large positions in the securities of, or making large loans to, a particular issuer or issuers in a particular industry, country or region. For further information regarding our country risk exposure, see also “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk—Country Risk Exposure” in Item 7A.

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. For more information on how we monitor and manage credit risk, see “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk” in Part II, Item 7A.

We are exposed to the risk that third parties that are indebted to us will not perform their obligations.

We incur significant credit risk exposure through our Institutional Securities business segment. This risk may arise from a variety of business activities, including but not limited to extending credit to clients through various lending commitments; entering into swap or other derivative contracts under which counterparties have obligations to make payments to us; providing short or long-term funding that is secured by physical or financial collateral whose value may at times be insufficient to fully cover the loan repayment amount; posting margin and/or collateral and other commitments to clearing houses, clearing agencies, exchanges, banks, securities firms and other financial counterparties; and investing and trading in securities and loan pools whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

We also incur credit risk in our Wealth Management business segment lending to mainly individual investors, including, but not limited to, margin and securities-based loans collateralized by securities, residential mortgage loans and home equity lines of credit.

While we believe current valuations and reserves adequately address our perceived levels of risk, adverse economic conditions may negatively impact our clients and our current credit exposures. In addition, as a clearing member of several central counterparties, we finance our customer positions and we could be held responsible for the defaults or misconduct of our customers. Although we regularly review our credit exposures, default risk may arise from events or circumstances that are difficult to detect or foresee.

A default by a large financial institution could adversely affect financial markets.

The commercial soundness of many financial institutions may be closely interrelated as a result of credit, trading, clearing or other relationships among the institutions. For example, increased centralization of trading activities through particular clearing houses, central agents or exchanges as required by provisions of the Dodd-Frank Act may increase our concentration of risk with respect to these entities. As a result, concerns about, or a default or threatened default by, one institution could lead to significant market-wide liquidity and credit problems, losses or defaults by other institutions. This is sometimes referred to as “systemic risk” and may adversely affect financial intermediaries, such as clearing houses, clearing agencies, exchanges, banks and securities firms, with which we interact on a daily basis, and therefore could adversely affect us. See also “Systemic Risk Regime” under “Business—Supervision and Regulation—Financial Holding Company” in Part I, Item 1.

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or systems, human factors 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). Legal, regulatory and compliance risk is included in the scope of operational risk and is discussed below under “Legal, Regulatory and Compliance Risk.” For more information on how we monitor and manage operational risk, see “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Operational Risk” in Part II, Item 7A.

We are subject to operational risks, including a failure, breach or other disruption of our operational or security systems, that could adversely affect our businesses or reputation.

Our businesses are highly dependent on our ability to process and report, on a daily basis, a large number of transactions across numerous and diverse markets in many currencies. In some of our businesses, the transactions we process are complex. In addition, we may introduce new products or services or change processes or reporting, including in connection with new regulatory requirements, resulting in new operational risk that we may not fully appreciate or identify. The trend toward direct access to automated, electronic markets and the move to more automated trading platforms has resulted in using increasingly complex technology that relies on the continued effectiveness of the programming code and integrity of the data to process the trades. We perform the functions required to operate our different businesses either by ourselves or through agreements with third parties. We rely on the ability of our employees, our internal systems and systems at technology centers operated by unaffiliated third parties to process a high volume of transactions. Additionally, we are subject to complex and evolving laws and regulations governing privacy and data protection, which may differ, and potentially conflict, in various jurisdictions.

As a major participant in the global capital markets, we maintain extensive controls to reduce the risk of incorrect valuation or risk management of our trading positions due to flaws in data, models, electronic trading systems or processes or due to fraud. Nevertheless, such risk cannot be completely eliminated.

We also face the risk of operational failure or termination of any of the clearing agents, exchanges, clearing houses or other financial intermediaries we use to facilitate our lending. securities and derivatives transactions. In the event of a breakdown or improper operation of our or a third party's systems or improper or unauthorized action by third parties or our employees, we could suffer financial loss, an impairment to our liquidity, a disruption of our businesses, regulatory sanctions or damage to our reputation. In addition, the interconnectivity of multiple financial institutions with central agents, exchanges and clearing houses, and the increased importance of these entities, increases the risk that an operational failure at one institution or entity may cause an industry-wide operational failure that could materially impact our ability to conduct business.

Despite the business contingency plans we have in place, there can be no assurance that such plans will fully mitigate all potential business continuity risks to us. Our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports our business and the communities where we are located, which are concentrated in the New York metropolitan area, London, Hong Kong and Tokyo as well as Mumbai, Budapest, Glasgow and Baltimore. This may include a disruption involving physical site access, cyber incidents, terrorist activities, disease pandemics, catastrophic events, natural disasters, extreme weather events, electrical outage, environmental hazard, computer servers, communications or other services we use, our employees or third parties with whom we conduct business.

Although we devote significant resources to maintaining and upgrading our systems and networks with measures such as intrusion prevention and detection systems, monitoring firewalls and network traffic to safeguard critical business applications, and supervising third party providers that have access to our systems, there is no guarantee that these measures or any other measures can provide absolute security given the techniques used in cyber attacks are complex and frequently change, and may not be able to be anticipated. Like other financial services firms, the Firm and its third party providers continue to be the subject of attempted unauthorized access, mishandling or misuse of information, computer viruses or malware, cyber attacks designed to obtain confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage, denial of service attacks and other events. These threats may derive from human error, fraud or malice on the part of our employees or third parties, including third party providers, or may result from accidental technological failure. Additional challenges are posed by external extremist parties, including foreign state actors, in some circumstances as a means to promote political ends. Any of these parties may also attempt to fraudulently induce employees, customers, clients, third parties or other users of our systems to disclose sensitive information in order to gain access to our data or that of our customers or clients. There can be no assurance that such unauthorized access or cyber incidents will not occur in the future, and they could occur more frequently and on a more significant scale.

If one or more of these events occur, it could result in a security impact on our systems and jeopardize our or our clients', partners' or counterparties' personal, confidential, proprietary or other information processed and stored in, and transmitted through, our and our third party providers' computer systems. Furthermore, such events could cause interruptions or malfunctions in our, our clients', partners', counterparties' or third parties' operations, which could result in reputational damage with our clients and the market, client dissatisfaction, additional costs to us (such as repairing systems or adding new personnel or protection technologies), regulatory investigations, litigation or enforcement, or regulatory fines or penalties, all or any of which could adversely affect our business, financial condition or results of operations.

Given our global footprint and the high volume of transactions we process, the large number of clients, partners and counterparties with which we do business, and the increasing sophistication of cyber attacks, a cyber attack could occur and persist for an extended period of time without detection. We expect that any investigation of a cyber attack would be inherently unpredictable and that it would take time before the completion of any investigation and before there is availability of full and reliable information. During such time we would not necessarily know the extent of the harm or how best to remediate it, and certain errors or actions could be repeated or compounded before they are discovered and remediated, all or any of which would further increase the costs and consequences of a cyber attack.

While many of our agreements with partners and third party vendors include indemnification provisions, we may not be able to recover sufficiently, or at all, under such provisions to adequately offset any losses. In addition, although we maintain insurance coverage that may, subject to policy terms and conditions, cover certain aspects of cyber risks, such insurance coverage may be insufficient to cover all losses.

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 our assets. Liquidity and funding risk encompasses the risk that our financial condition or overall soundness is adversely affected by an inability or perceived inability to meet our financial obligations in a timely manner. It also includes the associated funding risks triggered by the market or idiosyncratic stress events that may cause unexpected changes in funding needs or an inability to raise new funding. For more information on how we monitor and manage liquidity and funding risk, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" in Part II, Item 7 and "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Liquidity and Funding Risk" in Part II, Item 7A.

Liquidity is essential to our businesses and we rely on external sources to finance a significant portion of our operations.

Liquidity is essential to our businesses. Our liquidity could be negatively affected by our inability to raise funding in the long-term or short-term debt capital markets or our inability to access the secured lending markets. Factors that we cannot control, such as disruption of the financial markets or negative views about the financial services industry generally, including concerns regarding fiscal matters in the U.S. and other geographic areas, could impair our ability to raise funding.

In addition, our ability to raise funding could be impaired if investors or lenders develop a negative perception of our long-term or short-term financial prospects due to factors such as an incurrence of large trading losses, a downgrade by the rating agencies, a decline in the level of our business activity, or if regulatory authorities take significant action against us or our industry, or we discover significant employee misconduct or illegal activity. If we are unable to raise funding using the methods described above, we would likely need to finance or liquidate unencumbered assets, such as our investment portfolios or trading assets, to meet maturing liabilities. We may be unable to sell some of our assets or we may have to sell assets at a discount to market value, either of which could adversely affect our results of operations, cash flows and financial condition.

Our borrowing costs and access to the debt capital markets depend on our credit ratings.

The cost and availability of unsecured financing generally are impacted by our short-term and long-term credit ratings. The rating agencies continue to monitor certain issuer specific factors that are important to the determination of our credit ratings, including governance, the level and quality of earnings, capital adequacy, liquidity and funding, risk appetite and management, asset quality, strategic direction, and business mix. Additionally, the rating agencies will look at other industry-wide factors such as regulatory or legislative changes, including, for example, regulatory changes, macroeconomic environment, and perceived levels of third party support, and it is possible that they could downgrade our ratings and those of similar institutions.

Our credit ratings also can have a significant impact on certain trading revenues, particularly in those businesses where longer term counterparty performance is a key consideration, such as OTC and other derivative transactions, including credit derivatives and interest rate swaps. In connection with certain OTC trading agreements and certain other agreements associated with our Institutional Securities business segment, we may be required to provide additional collateral to, or immediately settle any outstanding liability balance with, certain counterparties in the event of a credit ratings downgrade. Termination of our trading and other agreements could cause us to sustain losses and impair our liquidity by requiring us to find other sources of financing or to make significant cash payments or securities movements. The additional collateral or termination payments which may occur 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 Services, Inc. and S&P Global Ratings. See also "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Credit Ratings—Incremental Collateral or Terminating Payments upon Potential Future Rating Downgrade" in Part II, Item 7.

We are a holding company and depend on payments from our subsidiaries.

The Parent Company has no operations and depends on dividends, distributions and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations. Regulatory, tax restrictions or elections and other legal restrictions may limit our ability to transfer funds freely, either to or from our subsidiaries. In particular, many of our subsidiaries, including our broker-dealer subsidiaries, are subject to laws, regulations and self-regulatory organization rules that limit, as well as authorize regulatory bodies to block or reduce, the flow of funds to the Parent Company, or that prohibit such transfers or dividends altogether in certain circumstances, including steps to "ring fence" entities by regulators outside of the U.S. to protect clients and creditors of such entities in the event of

financial difficulties involving such entities. These laws, regulations and rules may hinder our ability to access funds that we may need to make payments on our obligations. Furthermore, as a bank holding company, we may become subject to a prohibition or to limitations on our ability to pay dividends or repurchase our common stock. The OCC, the Federal Reserve and the FDIC have the authority, and under certain circumstances the duty, to prohibit or to limit the payment of dividends by the banking organizations they supervise, including the Firm and its U.S. Bank Subsidiaries.

Our liquidity and financial condition have in the past been, and in the future could be, adversely affected by U.S. and international markets and economic conditions.

Our ability to raise funding in the long-term or short-term debt capital markets or the equity markets, or to access secured lending markets, has in the past been, and could in the future be, adversely affected by conditions in the U.S. and international markets and economies. Global market and economic conditions have been particularly disrupted and volatile in the last several years and may be in the future. In particular, our cost and availability of funding in the past have been, and may in the future be, adversely affected by illiquid credit markets and wider credit spreads. Significant turbulence in the U.S., the E.U. and other international markets and economies could adversely affect our liquidity and financial condition and the willingness of certain counterparties and customers to do business with us.

Legal, Regulatory and Compliance Risk

Legal, regulatory 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 we may suffer as a result of our 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 AML, anti-corruption and terrorist financing rules and regulations. For more information on how we monitor and manage legal, regulatory and compliance risk, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Legal and Compliance Risk" in Part II, Item 7A.

The financial services industry is subject to extensive regulation, and changes in regulation will impact our business.

Like other major financial services firms, we are subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges and by regulators and exchanges in each of the major markets where we conduct our business. These laws and regulations significantly affect the way we do business and can restrict the scope of our existing businesses and limit our ability to expand our product offerings and pursue certain investments.

The regulation of major financial firms, including the Firm, as well as of the markets in which we operate, is extensive and subject to ongoing change. We are, or will become, subject to (among other things) wide-ranging regulation and supervision, intensive scrutiny of our businesses and any plans for expansion of those businesses, limitations on new activities, a systemic risk regime that imposes heightened capital and liquidity requirements and other enhanced prudential standards, resolution regimes and resolution planning requirements, new requirements for maintaining minimum amounts of external total loss-absorbing capacity and external long-term debt, restrictions on activities and investments imposed by the Volcker Rule, comprehensive derivatives regulation, tax regulations, antitrust laws, trade and transaction reporting obligations, and broadened fiduciary obligations. In some areas, regulatory standards have not yet been finalized, are subject to final rulemaking or transition periods or may otherwise be revised in whole or in part. Ongoing implementation of, or changes in, laws and regulations could materially impact the profitability of our businesses and the value of assets we hold, expose us to additional costs, require changes to business practices or force us to discontinue businesses, adversely affect our ability to pay dividends and repurchase our stock, or require us to raise capital, including in ways that may adversely impact our shareholders or creditors. In addition, regulatory requirements that are being imposed by foreign policymakers and regulators may be inconsistent or conflict with regulations that we are subject to in the U.S. and may adversely affect us. We expect legal and regulatory requirements to be subject to ongoing change for the foreseeable future, which may result in significant new costs to comply with new or revised requirements as well as to monitor for compliance on an ongoing basis.

The application of regulatory requirements and strategies in the United States or other jurisdictions to facilitate the orderly resolution of large financial institutions may pose a greater risk of loss for our security holders, and subject us to other restrictions.

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 material financial distress or failure. If the Federal Reserve and the FDIC were to jointly determine that our annual resolution plan submission was not credible or would not facilitate an orderly resolution, and if we were unable to address any defi-

ciencies identified by the regulators, we or any of our subsidiaries may be subject 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 addition, provided that certain procedures are met, we can be subject to a resolution proceeding under the orderly liquidation authority under Title II of the Dodd-Frank Act with the FDIC being appointed as receiver. The FDIC's power under the orderly liquidation authority to disregard the priority of creditor claims and treat similarly situated creditors differently in certain circumstances, subject to certain limitations, could adversely impact holders of our unsecured debt. See "Business—Supervision and Regulation" in Part I, Item 1 and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements" in Part II, Item 7.

Further, because both our resolution plan contemplates a an SPOE strategy under the U.S. Bankruptcy Code and the FDIC has proposed an SPOE strategy through which it may apply its orderly liquidation authority powers, we believe that the application of an SPOE strategy is the reasonably likely outcome if either our resolution plan were implemented or a resolution proceeding were commenced under the orderly liquidation authority. An SPOE strategy generally contemplates the provision of additional capital and liquidity by the Parent Company to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy, and the Parent Company expects to enter into an amended and restated secured support agreement with its material subsidiaries pursuant to which it would provide such capital and liquidity.

Under the amended and restated support agreement, upon the occurrence of a resolution scenario, including one in which an SPOE strategy is used, the Parent Company will be obligated to contribute or loan on a subordinated basis all of its material assets, other than shares in subsidiaries of the Parent Company and certain intercompany payables, to provide capital and liquidity, as applicable, to its material subsidiaries. The obligations of the Parent Company under the amended and restated support agreement will be secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company). As a result, claims of our material subsidiaries against the assets of the Parent Company (other than shares in subsidiaries of the Parent Company) will be effectively senior to unsecured obligations of the Parent Company. Such unsecured obligations would be at risk of absorbing losses of the Parent Company and its subsidiaries. Although an SPOE strategy, whether applied pursuant to our resolution plan or in a resolution proceeding under the orderly liquidation authority, is intended to result in better outcomes for creditors overall, there is no guarantee that the application of an SPOE strategy, including the provision of support to the Parent Company's material subsidiaries pursuant to the amended and restated secured support agreement, will not result in greater losses for holders of our securities compared to a different resolution strategy for the firm.

Regulators have taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code, the orderly liquidation authority or other resolution regimes. For example, the Federal Reserve has issued a final rule that requires top-tier bank holding companies of U.S. G-SIBs, including Morgan Stanley, to maintain minimum amounts of equity and eligible long-term debt ("total loss-absorbing capacity" or "TLAC") in order to ensure that such institutions have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of debt to equity or otherwise by imposing losses on eligible TLAC where the SPOE strategy is used. The combined implication of the SPOE resolution strategy and the TLAC final rule is that our losses will be imposed on the holders of eligible long-term debt and other forms of eligible TLAC issued by the Parent Company before any losses are imposed on the holders of the debt securities of our operating subsidiaries or before putting U.S. taxpayers at risk.

In addition, certain jurisdictions, including the U.K. and other E.U. jurisdictions, have implemented, or are in the process of implementing, changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity organized in such jurisdiction by writing down certain unsecured liabilities or converting certain unsecured liabilities into equity. Such "bail-in" powers are intended to enable the recapitalization of a failing institution by allocating losses to its shareholders and unsecured creditors. Non-U.S. regulators are also considering requirements that certain subsidiaries of large financial institutions maintain minimum amounts of total loss-absorbing capacity that would pass losses up from the subsidiaries to the Parent Company and, ultimately, to security holders of the Parent Company in the event of failure.

We may be prevented from paying dividends or taking other capital actions because of regulatory constraints or revised regulatory capital standards.

We are subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve, which requires us to submit, on an annual basis, a capital plan describing proposed dividend payments to shareholders,

proposed repurchases of our outstanding securities, and other proposed capital actions that we intend to take. The Federal Reserve may object to, or otherwise require us to modify, such plan, or may object or require modifications to a resubmitted capital plan, any of which would adversely affect shareholders. In addition, beyond review of the plan, the Federal Reserve may impose other restrictions or conditions on us that prevent us from paying or increasing dividends, repurchasing securities or taking other capital actions that would benefit shareholders. Finally, the Federal Reserve may change regulatory capital standards to impose higher requirements that restrict our ability to take capital actions, or may modify or impose other regulatory standards that increase our operating expenses and reduce our ability to take capital actions.

The financial services industry faces substantial litigation and is subject to extensive regulatory and law enforcement investigations, and we may face damage to our reputation and legal liability.

As a global financial services firm, we face the risk of investigations and proceedings by governmental and self-regulatory organizations in all countries in which we conduct our business. Investigations and proceedings initiated by these authorities may result in adverse judgments, settlements, fines, penalties, injunctions or other relief. In addition to the monetary consequences, these measures could, for example, impact our ability to engage in, or impose limitations on, certain of our businesses. The number of these investigations and proceedings, as well as the amount of penalties and fines sought, has increased substantially in recent years with regard to many firms in the financial services industry, including the Firm, and certain U.S. and international governmental entities have increasingly brought criminal actions against, or have sought criminal convictions, pleas or deferred prosecution agreements from, financial institutions. Significant regulatory or law enforcement action against us could materially adversely affect our business, financial condition or results of operations or cause us significant reputational harm, which could seriously harm our business. The Dodd-Frank Act also provides compensation to whistleblowers who present the SEC or CFTC with information related to securities or commodities law violations that leads to a successful enforcement action. As a result of this compensation, it is possible we could face an increased number of investigations by the SEC or CFTC.

We have been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions, and other litigation, as well as investigations or proceedings brought by regulatory agencies, arising in connection with our activities as a global diversified financial services institution. Certain of the actual or threatened legal or regulatory actions include claims for substantial compensatory and/or punitive damages, claims for indeterminate amounts of damages, or may result in penalties, fines, or other results adverse to us. In some cases, the issuers that would otherwise be the primary defendants in such cases are bankrupt or are in financial distress. In other cases, including antitrust litigation, we may be subject to claims for joint and several liability with other defendants for treble damages or other relief related to alleged conspiracies involving other institutions. Like any large corporation, we are also subject to risk from potential employee misconduct, including non-compliance with policies and improper use or disclosure of confidential information, or improper sales practices or conduct.

We may be responsible for representations and warranties associated with residential and commercial real estate loans and may incur losses in excess of our reserves.

We originate loans secured by commercial and residential properties. Further, we securitize and trade in a wide range of commercial and residential real estate and real estate-related whole loans, mortgages and other real estate and commercial assets and products, including residential and commercial mortgage-backed securities. In connection with these activities, we have provided, or otherwise agreed to be responsible for, certain representations and warranties. Under certain circumstances, we may be required to repurchase such assets or make other payments related to such assets if such representations and warranties were breached. We have also made representations and warranties in connection with our role as an originator of certain commercial mortgage loans that we securitized in commercial mortgage-backed securities. For additional information, see also Note 12 to the consolidated financial statements in Part II, Item 8.

We currently have several legal proceedings related to claims for alleged breaches of representations and warranties. If there are decisions adverse to us in those legal proceedings, we may incur losses substantially in excess of our reserves. In addition, our reserves are based, in part, on certain factual and legal assumptions. If those assumptions are incorrect and need to be revised, we may need to adjust our reserves substantially.

Our commodities activities and investments subject us to extensive regulation, and environmental risks and regulation that may expose us to significant costs and liabilities.

In connection with the commodities activities in our Institutional Securities business segment, we engage in the storage, transportation, marketing and execution of transactions in several commodities, including metals, natural gas, electric power, emission credits, and other commodity products. In

addition, we are an electricity power marketer in the U.S. and own a minority interest in Heidmar Holdings LLC, which owns a group of companies that provide international marine transportation and U.S. marine logistics services. As a result of these activities, we are subject to extensive energy, commodities, environmental, health and safety and other governmental laws and regulations. Further, through these activities we are exposed to regulatory, physical and certain indirect risks associated with climate change.

Although we have attempted to mitigate our environmental risks by, among other measures, selling or ceasing most of our prior petroleum storage and transportation activities, adopting appropriate policies and procedures, and implementing emergency response programs, these actions may not prove adequate to address every contingency. In addition, insurance covering some of these risks may not be available, and the proceeds, if any, from insurance recovery may not be adequate to cover liabilities with respect to particular incidents. As a result, our financial condition, results of operations and cash flows may be adversely affected by these events.

During the past several years, intensified scrutiny of certain energy markets by federal, state and local authorities in the U.S. and abroad and the public has resulted in increased regulatory and legal enforcement, litigation and remedial proceedings involving companies conducting the activities in which we are engaged. In addition, new regulation of OTC derivatives markets in the U.S. and similar legislation proposed or adopted abroad will impose significant new costs and impose new requirements on our commodities derivatives activities. We may incur substantial costs or loss of revenue in complying with current or future laws and regulations and our overall businesses and reputation may be adversely affected by the current legal environment. In addition, failure to comply with these laws and regulations may result in substantial civil and criminal fines and penalties. See also “Financial Holding Company—Capital Standards—Commodities-Related Capital Requirements” under “Business—Supervision and Regulation” in Part I, Item 1.

A failure to address conflicts of interest appropriately could adversely affect our businesses and reputation.

As a global financial services firm that provides products and services to a large and diversified group of clients, including corporations, governments, financial institutions and individuals, we face potential conflicts of interest in the normal course of business. For example, potential conflicts can occur when there is a divergence of interests between us and a client, among clients, between an employee on the one hand and us or a client on the other, or situations in which we may be a creditor of a client. We have policies, procedures and controls that are designed to identify and address potential conflicts of interest. However, identifying and mitigating potential conflicts of interest can be complex and challenging, and can become the focus of media and regulatory scrutiny. Indeed, actions that merely appear to create a conflict can put our reputation at risk even if the likelihood of an actual conflict has been mitigated. It is possible that potential conflicts could give rise to litigation or enforcement actions, which may lead to our clients being less willing to enter into transactions in which a conflict may occur and could adversely affect our businesses and reputation.

Our regulators have the ability to scrutinize our activities for potential conflicts of interest, including through detailed examinations of specific transactions. For example, our status as a bank holding company supervised by the Federal Reserve subjects us to direct Federal Reserve scrutiny with respect to transactions between our U.S. Bank Subsidiaries and their affiliates. Further, the Volcker Rule subjects us to regulatory scrutiny regarding certain transactions between us and our clients.

Risk Management

Our risk management strategies, models and processes may not be fully effective in mitigating our risk exposures in all market environments or against all types of risk.

We have devoted significant resources to develop our risk management capabilities and expect to continue to do so in the future. Nonetheless, our risk management strategies, models and processes, including our use of various risk models for assessing market exposures and hedging strategies, stress testing and other analysis, may not be fully effective in mitigating our risk exposure in all market environments or against all types of risk, including risks that are unidentified or unanticipated. As our businesses change and grow, and the markets in which we operate evolve, our risk management strategies, models and processes may not always adapt with those changes. Some of our methods of managing risk are based upon our use of observed historical market behavior and management’s judgment. As a result, these methods may not predict future risk exposures, which could be significantly greater than the historical measures indicate. In addition, many models we use are based on assumptions or inputs regarding correlations among prices of various asset classes or other market indicators and therefore cannot anticipate sudden, unanticipated or unidentified market or economic movements, which could cause us to incur losses.

Management of market, credit, liquidity, operational, legal, regulatory and compliance risks requires, among other things, policies and procedures to record properly and verify a large number of transactions and events, and these policies and procedures may not be fully effective. Our trading risk management strategies and techniques also seek to balance our ability to profit from trading positions with our exposure to potential losses. While we employ a broad and diversified set of risk monitoring and risk mitigation techniques, those techniques and the judgments that accompany their application cannot anticipate every economic and financial outcome or the timing of such outcomes. For example, to the extent that our trading or investing activities involve less liquid trading markets or are otherwise subject to restrictions on sales or hedging, we may not be able to reduce our positions and therefore reduce our risk associated with such positions. We may, therefore, incur losses in the course of our trading or investing activities. For more information on how we monitor and manage market and certain other risks and related strategies, models and processes, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Market Risk" in Part II, Item 7A.

Competitive Environment

We face strong competition from other financial services firms, which could lead to pricing pressures that could materially adversely affect our revenue and profitability.

The financial services industry and all aspects of our businesses are intensely competitive, and we expect them to remain so. We compete with commercial banks, brokerage firms, insurance companies, electronic trading and clearing platforms, financial data repositories, sponsors of mutual funds, hedge funds, energy companies and other companies offering financial or ancillary services in the U.S., globally and through the internet. We compete on the basis of several factors, including transaction execution, capital or access to capital, products and services, innovation, technology, reputation, risk appetite and price. Over time, certain sectors of the financial services industry have become more concentrated, as institutions involved in a broad range of financial services have left businesses, been acquired by or merged into other firms, or have declared bankruptcy. Such changes could result in our remaining competitors gaining greater capital and other resources, such as the ability to offer a broader range of products and services and geographic diversity, or new competitors may emerge. We have experienced and may continue to experience pricing pressures as a result of these factors and as some of our competitors seek to obtain market share by reducing prices. In addition, certain of our competitors may be subject to different, and, in some cases, less stringent, legal and regulatory regimes, than we are, thereby putting us at a competitive disadvantage. For more information regarding the competitive environment in which we operate, see "Business—Competition" and "Business—Supervision and Regulation" in Part I, Item 1.

Automated trading markets may adversely affect our business and may increase competition.

We have experienced intense price competition in some of our businesses in recent years. In particular, the ability to execute securities, derivatives and other financial instrument trades electronically on exchanges, swap execution facilities, and other automated trading platforms has increased the pressure on bid-offer spreads, commissions, markups or comparable fees. The trend toward direct access to automated, electronic markets will likely continue and will likely increase as additional markets move to more automated trading platforms. We have experienced and it is likely that we will continue to experience competitive pressures in these and other areas in the future as some of our competitors may seek to obtain market share by reducing bid-offer spreads, commissions, markups or comparable fees.

Our ability to retain and attract qualified employees is critical to the success of our business and the failure to do so may materially adversely affect our performance.

Our people are our most important resource and competition for qualified employees is intense. If we are unable to continue to attract and retain highly qualified employees, or do so at rates or in forms necessary to maintain our competitive position, or if compensation costs required to attract and retain employees become more expensive, our performance, including our competitive position, could be materially adversely affected. The financial industry has experienced and may continue to experience more stringent regulation of employee compensation, including limitations relating to incentive-based compensation, clawback requirements and special taxation, which could have an adverse effect on our ability to hire or retain the most qualified employees.

International Risk

We are subject to numerous political, economic, legal, tax, operational, franchise and other risks as a result of our international operations which could adversely impact our businesses in many ways.

We are subject to political, economic, legal, tax, operational, franchise and other risks that are inherent in operating in many countries, including risks of possible nationalization, expropriation, price controls, capital controls, exchange controls, increased taxes and levies, and other restrictive governmental actions, as well as the outbreak of hostilities or political and governmental instability. In many countries, the

laws and regulations applicable to the securities and financial services industries are uncertain and evolving, and it may be difficult for us to determine the exact requirements of local laws in every market. Our inability to remain in compliance with local laws in a particular market could have a significant and negative effect not only on our business in that market but also on our reputation generally. We are also subject to the enhanced risk that transactions we structure might not be legally enforceable in all cases.

Various emerging market countries have experienced severe political, economic or financial disruptions, including significant devaluations of their currencies, defaults or potential defaults on sovereign debt, capital and currency exchange controls, high rates of inflation and low or negative growth rates in their economies. Crime and corruption, as well as issues of security and personal safety, also exist in certain of these countries. These conditions could adversely impact our businesses and increase volatility in financial markets generally.

The emergence of a disease pandemic or other widespread health emergency, or concerns over the possibility of such an emergency as well as natural disasters, terrorist activities or military actions, could create economic and financial disruptions in emerging markets and other areas throughout the world, and could lead to operational difficulties (including travel limitations) that could impair our ability to manage our businesses around the world.

As a U.S. company, we are required to comply with the economic sanctions and embargo programs administered by OFAC and similar multi-national bodies and governmental agencies worldwide, as well as applicable anti-corruption laws in the jurisdictions in which we operate, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. A violation of a sanction, embargo program, or anti-corruption law could subject us, and individual employees, to a regulatory enforcement action as well as significant civil and criminal penalties.

The U.K.'s anticipated withdrawal from the E.U. could adversely affect us.

On June 23, 2016, the U.K. electorate voted to leave the E.U. It is difficult to predict the future of the U.K.'s relationship with the E.U., which uncertainty may increase the volatility in the global financial markets in the short- and medium-term. The U.K. Prime Minister has confirmed the U.K. will invoke Article 50 of the Lisbon Treaty by no later than the end of March 2017, subject to the passing of necessary legislation by the U.K. Parliament. This will trigger a two-year period, subject to extension, during which the U.K. government is expected to negotiate its withdrawal agreement with the E.U. Absent any changes to this time schedule, the U.K. is expected to leave the E.U. in early 2019. The terms and conditions of the anticipated withdrawal from the E.U., and which of the several alternative models of relationship that the U.K. might seek to negotiate with the E.U., remain uncertain. However, the U.K. government has stated that the U.K. will leave the E.U. single market and will seek a phased period of implementation for the new relationship that may cover the legal and regulatory framework applicable to financial institutions with significant operations in Europe, such as the Firm. Potential effects of the U.K. exit from the E.U. and potential mitigation actions may vary considerably depending on the timing of withdrawal and the nature of any transition or successor arrangements. Any future limitations on providing financial services into the E.U. from our U.K. operations could require us to make potentially significant changes to our operations in the U.K. and Europe and our legal structure there, which could have an adverse effect on our business and financial results.

Acquisition, Divestiture and Joint Venture Risk

We may be unable to fully capture the expected value from acquisitions, divestitures, joint ventures, minority stakes or strategic alliances.

In connection with past or future acquisitions, divestitures, joint ventures, minority stakes or strategic alliances (including with Mitsubishi UFJ Financial Group, Inc.), we face numerous risks and uncertainties combining, transferring, separating or integrating the relevant businesses and systems, including the need to combine or separate accounting and data processing systems and management controls and to integrate relationships with clients, trading counterparties and business partners. In the case of joint ventures and minority stakes, we are subject to additional risks and uncertainties because we may be dependent upon, and subject to liability, losses or reputational damage relating to systems, controls and personnel that are not under our control.

In addition, conflicts or disagreements between us and any of our joint venture partners may negatively impact the benefits to be achieved by the relevant joint venture.

There is no assurance that any of our acquisitions or divestitures will be successfully integrated or disaggregated or yield all of the positive benefits anticipated. If we are not able to integrate or disaggregate successfully our past and future acquisitions or dispositions, there is a risk that our results of operations, financial condition and cash flows may be materially and adversely affected.

Certain of our business initiatives, including expansions of existing businesses, may bring us into contact, directly or

indirectly, with individuals and entities that are not within our traditional client and counterparty base and may expose us to new asset classes and new markets. These business activities expose us to new and enhanced risks, greater regulatory scrutiny of these activities, increased credit-related, sovereign and operational risks, and reputational concerns regarding the manner in which these assets are being operated or held.

For more information regarding the regulatory environment in which we operate, see also "Business—Supervision and Regulation" in Part I, Item 1.

Item 1B. Unresolved Staff Comments

We, like other well-known seasoned issuers, from time to time receive written comments from the staff of the SEC regarding our periodic or current reports under the Exchange Act. There are no comments that remain unresolved that we received not less than 180 days before the end of the year to which this report relates that we believe are material.

Item 2. Properties

We have offices, operations and data centers located around the world. Our properties that are not owned are leased on terms and for durations that are reflective of commercial standards in the communities where these properties are located. We believe the facilities we own or occupy are adequate for the purposes for which they are currently used and are well maintained. Our principal offices include the following properties:

Location	Owned/ Leased	Lease Expiration	Approximate Square Footage as of December 31, 2016[1]
U.S. Locations			
1585 Broadway New York, New York *(Global Headquarters and Institutional Securities Headquarters)*	Owned	N/A	1,335,500 square feet
2000 Westchester Avenue Purchase, New York *(Wealth Management Headquarters)*	Owned	N/A	626,100 square feet
522 Fifth Avenue New York, New York *(Investment Management Headquarters)*	Owned	N/A	564,900 square feet
International Locations			
20 Bank Street London *(London Headquarters)*	Leased	2038	546,500 square feet
1 Austin Road West Kowloon *(Hong Kong Headquarters)*	Leased	2019	499,900 square feet
Otemachi Financial City South Tower Otemachi, Chiyoda-ku *(Tokyo Headquarters)*	Leased	2028	245,600 square feet

1. The indicated total aggregate square footage leased does not include space leased by our branch offices.

Item 3. Legal Proceedings

In addition to the matters described below, 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.

The Firm is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding the Firm's business, and involving, among other matters, sales and trading activities, financial products or offerings sponsored, underwritten or sold by the Firm, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief.

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. The Firm cannot predict with certainty if, how or when such proceedings or investigations will be resolved or what the eventual settlement, fine, penalty or other relief, if any, may be, particularly for proceedings and investigations where the factual record is being developed or contested or where plaintiffs or government 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 loss can be reasonably estimated for a proceeding or investigation. Subject to the foregoing, the Firm believes, based on current knowledge and after consultation with counsel, that the outcome of such proceedings and investigations will not have a material adverse effect on the consolidated financial condition of the Firm, although the outcome of such proceedings or investigations could be material to the Firm's operating results and cash flows for a particular period depending on, among other things, the level of the Firm's revenues or income for such period.

Over the last several years, the level of litigation and investigatory activity (both formal and informal) by government and self-regulatory agencies has increased materially in the financial services industry. As a result, the Firm expects that it will continue to be the subject of elevated claims for damages and other relief and, while the Firm has identified below certain proceedings that the Firm believes to be material, individually or collectively, there can be no assurance that additional material losses will not be incurred from claims that have not yet been asserted or are not yet determined to be material.

Residential Mortgage and Credit Crisis Related Matters

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.

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 styled *Morgan Stanley Mortgage Loan Trust 2006-4SL, et al. v. 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 $303 million, breached various representations and warran-

ties. 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 defendants' motion to dismiss the complaint. On December 2, 2016, the Firm moved for summary judgment and the plaintiffs moved for partial summary judgment.

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. On August 16, 2016, the Firm moved for summary judgment and the plaintiffs moved for partial summary judgment.

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. 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 entered September 30, 2014, the court granted in part and denied in part the Firm's motion to dismiss the amended complaint, which the plaintiff appealed. On August 11, 2016, the Appellate Division, First Department reversed in part the trial court's order that granted the Firm's motion to dismiss. On December 13, 2016, the Appellate Division granted the Firm's motion for leave to appeal to the New York Court of Appeals. The Firm filed its opening letter brief with the Court of Appeals on February 6, 2017.

On December 14, 2012, Royal Park Investments SA/NV filed a complaint against the Firm, certain affiliates, and other defendants in the Supreme Court of NY, styled *Royal Park Investments SA/NV v. Merrill Lynch et al.* On October 24, 2013, plaintiff filed a new complaint against the Firm in the Supreme Court of NY, styled *Royal Park Investments SA/NV v. Morgan Stanley et al.*, alleging that defendants made material misrepresentations and omissions in the sale to plaintiff of certain 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 was approximately $597 million. The complaint raises common law claims of fraud, fraudulent inducement, negligent misrepresentation, and aiding and abetting fraud and seeks, among other things, compensatory and punitive damages. The plaintiff filed an amended complaint on December 1, 2015. On April 29, 2016, the Firm filed a motion to dismiss the amended complaint.

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.

On May 3, 2013, plaintiffs in *Deutsche Zentral-Genossenschaftsbank 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 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 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 defendants' motion to dismiss the complaint. The Firm perfected its appeal from that decision on June 12, 2015.

On May 17, 2013, plaintiff in *IKB International S.A. in Liquidation, et al. v. Morgan Stanley, et al.* filed a complaint against the Firm and certain affiliates in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to plaintiff of certain 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 was approximately $132 million. The complaint alleges causes of action against the Firm for common law fraud, fraudulent concealment, aiding and abetting fraud, and negligent misrepresentation, and seeks, among other things, compensatory and punitive damages. On October 29, 2014, the court granted in part and denied in part the Firm's motion to dismiss. All claims regarding four certificates were dismissed. After these dismissals, the remaining amount of certificates allegedly issued by the Firm or sold to plaintiff by the Firm was approximately $116 million. On August 11, 2016, the Appellate Division, First Department affirmed the trial court's order denying in part the Firm's motion to dismiss the complaint.

On July 2, 2013, Deutsche Bank, in its capacity as trustee, became the named plaintiff in *Federal Housing Finance Agency, as Conservator for the Federal Home Loan Mortgage Corporation, on behalf of the Trustee of the Morgan Stanley ABS Capital I Inc. Trust, Series 2007-NC1 (MSAC 2007-NC1) v. Morgan Stanley ABS Capital I Inc.*, and filed a complaint in the Supreme Court of NY under the caption *Deutsche Bank National Trust Company, as Trustee for the Morgan Stanley ABS Capital I Inc. Trust, Series 2007-NC1 v. Morgan Stanley ABS Capital I, Inc.* On February 3, 2014, the plaintiff filed an amended complaint, which asserts claims for breach of contract and breach of the implied covenant of good faith and fair dealing and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $1.25 billion, breached various representations and warranties. The amended complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, unspecified damages, rescission and interest. On April 12, 2016, the court granted in part and denied in part the Firm's motion to dismiss the amended complaint, dismissing all claims except a single claim, regarding which the motion was denied without prejudice. On January 17, 2017, the First Department affirmed the lower court's April 12, 2016 order.

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, 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 November 24, 2014, the court granted in part and denied in part the Firm's motion to dismiss the complaint.

On August 26, 2013, a complaint was filed against the Firm and certain affiliates in the Supreme Court of NY, styled *Phoenix Light SF Limited et al v. Morgan Stanley et al.*, which was amended on April 23, 2015. The amended complaint alleges that defendants made untrue statements and material omissions in the sale to plaintiffs, or their assignors, of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly issued by the Firm and/or sold to plaintiffs or their assignors by the Firm was approximately $344 million. The amended complaint raises common law claims of fraud, fraudulent inducement, aiding and abetting fraud, negligent misrepresentation and rescission based on mutual mistake and seeks, among other things, compensatory damages, punitive damages or alternatively rescission or rescissionary damages associated with the purchase of such certificates. On April 23, 2015, the court granted the Firm's motion to dismiss the amended complaint, and on May 21, 2015, the plaintiffs filed a notice of appeal of that order.

On November 6, 2013, Deutsche Bank, in its capacity as trustee, became the named plaintiff in *Federal Housing Finance Agency, as Conservator for the Federal Home Loan Mortgage Corporation, on behalf of the Trustee of the Morgan Stanley ABS Capital I Inc. Trust, Series 2007-NC3 (MSAC 2007-NC3) v. Morgan Stanley Mortgage Capital Holdings LLC*, and filed a complaint in the Supreme Court of NY under the caption *Deutsche Bank National Trust Company, solely in its capacity as Trustee for Morgan Stanley ABS Capital I Inc. Trust, Series 2007-NC3 v. Morgan Stanley Mortgage Capital Holdings LLC, as Successor-by-Merger to Morgan Stanley Mortgage Capital Inc.* The complaint asserts claims for breach of contract and breach of the implied covenant of good faith and fair dealing and alleges, among other things, that the loans in the trust, which had an original principal balance of approximately $1.3 billion, 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, rescission, interest and costs. On April 12, 2016, the court granted the Firm's motion

to dismiss the complaint, and granted the plaintiff the ability to seek to replead certain aspects of the complaint. On May 25, 2016, Deutsche Bank filed a notice of appeal of that order. On January 17, 2017, the First Department affirmed the lower court's order granting the motion to dismiss the complaint.

On December 30, 2013, Wilmington Trust Company, in its capacity as trustee for Morgan Stanley Mortgage Loan Trust 2007-12, filed a complaint against the Firm styled *Wilmington Trust Company v. Morgan Stanley Mortgage Capital Holdings LLC et al.*, 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, interest and costs. On June 14, 2016, the court granted in part and denied in part the Firm's motion to dismiss the complaint. On August 17, 2016, plaintiff filed a notice of appeal of that order.

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 United States District Court for the Southern District of New York ("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.

On September 19, 2014, Financial Guaranty Insurance Company ("FGIC") filed a complaint against the Firm in the Supreme Court of NY, styled *Financial Guaranty Insurance Company v. Morgan Stanley ABS Capital I Inc. et al.* relating to a securitization issued by Basket of Aggregated Residential NIMS 2007-1 Ltd. The complaint asserts claims for breach of contract and alleges, among other things, that the net interest margin securities ("NIMS") in the trust breached various representations and warranties. FGIC issued a financial guaranty policy with respect to certain notes that had an original balance of approximately $475 million. The complaint seeks, among other relief, specific performance of the NIMS breach remedy procedures in the transaction documents, unspecified damages, reimbursement of certain payments made pursuant to the transaction documents, attorneys' fees and interest. On November 24, 2014, the Firm filed a motion to dismiss the complaint, which the court denied on January 19, 2017.

On September 23, 2014, FGIC filed a complaint against the Firm in the Supreme Court of NY styled *Financial Guaranty Insurance Company v. Morgan Stanley ABS Capital I Inc. et al*. relating to the Morgan Stanley ABS Capital I Inc. Trust 2007-NC4. The complaint asserts claims for breach of contract and fraudulent inducement and alleges, among other things, that the loans in the trust breached various representations and warranties and defendants made untrue statements and material omissions to induce FGIC to issue a financial guaranty policy on certain classes of certificates that had an original balance of approximately $876 million. The complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, compensatory, consequential and punitive damages, attorneys' fees and interest. On January 23, 2017, the court denied the Firm's motion to dismiss the complaint.

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 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 December 11, 2015, the court granted in part and denied in part the Firm's motion to dismiss the complaint. On February 11, 2016, plaintiff filed a notice of appeal of that order.

On April 1, 2016, the California Attorney General's Office filed an action against the Firm in California state court styled *California v. Morgan Stanley, et al.*, on behalf of California investors, including the California Public Employees' Retirement System and the California Teachers' Retirement System. The complaint alleges that the Firm made misrepresentations and omissions regarding residential mortgage-backed securities and notes issued by the Cheyne SIV, and asserts violations of the California False Claims Act and other state laws and seeks treble damages, civil penalties, disgorgement, and injunctive relief. On September 30, 2016, the court granted the Firm's demurrer, with leave to replead. On October 21, 2016, the California Attorney General filed

an amended complaint. On January 25, 2017, the court denied the Firm's demurrer with respect to the amended complaint.

Currency Related Matters

The Firm is responding to a number of regulatory and governmental inquiries both in the United States and abroad related to its foreign exchange business. In addition, on June 29, 2015, the Firm and a number of other financial institutions were named as respondents in a proceeding before Brazil's Council for Economic Defense related to alleged anticompetitive activity in the foreign exchange market for the Brazilian Real.

The Firm, as well as other foreign exchange dealers, are defendants in *In Re Foreign Exchange Benchmark Rates Antitrust Litigation*, pending in the SDNY. On July 16, 2015, plaintiffs filed an amended complaint generally alleging that defendants engaged in a conspiracy to fix, maintain or make artificial prices for key benchmark rates, to manipulate bid/ask spreads, and, by their behavior in the over-the-counter market, to thereby cause corresponding manipulation in the foreign exchange futures market. Plaintiffs seek declaratory relief as well as treble damages in an unspecified amount. On December 16, 2016, the Firm and plaintiffs reached an agreement in principle to settle the litigation with respect to the Firm. After it is finalized by the parties, the settlement will be subject to court approval.

European Matters

On June 26, 2006, the public prosecutor in Parma, Italy brought criminal charges against certain present and former employees of the Firm related to the bankruptcy of Parmalat in 2003. The trial commenced in September 2009 and the evidence phase concluded in January 2017. A verdict is expected during the course of 2017. While the Firm is not a defendant in the criminal proceeding, certain investors have asserted civil claims against the Firm related to the proceedings. These claims seek, among other relief, moral damages and loss of opportunity damages related to their purchase of approximately €327 million in bonds issued by Parmalat. In addition, on October 11, 2011, an Italian financial institution, Banco Popolare Societá Cooperativa ("Banco Popolare"), filed a civil claim against the Firm in the Milan courts, styled *Banco Popolare Societá Cooperativa v Morgan Stanley & Co. International plc & others* (File number 63671/2011), related to its purchase of €100 million of bonds issued by Parmalat. The claim asserted by Banco Popolare alleges, among other things, that the Firm was aware of Parmalat's impending insolvency and conspired with others to deceive Banco Popolare into buying bonds by concealing both Parmalat's true financial condition and certain features of the bonds from the market and Banco Popolare. Banco Popolare seeks damages of €76 million (approximately $80 million) plus damages for loss of opportunity and moral damages. The Firm filed its answer on April 20, 2012, and the hearing on the parties' final submissions is scheduled for March 20, 2018.

On May 12, 2016, the Austrian state of Land Salzburg filed a claim against the Firm in the Regional Court in Frankfurt, Germany, styled *Land Salzburg v. Morgan Stanley & Co. International plc* (the "German Proceedings") seeking €209 million (approximately $220 million) plus interest, attorneys' fees and other relief relating to certain fixed income and commodities derivative transactions which Land Salzburg entered into with the Firm between 2005 and 2012. Land Salzburg has alleged that it had neither the capacity nor authority to enter into such transactions, which should be set aside, and that the Firm breached certain advisory and other duties which the Firm had owed to it. On April 28, 2016, the Firm filed an action against Land Salzburg in the High Court in London, England styled *Morgan Stanley Capital Services LLC and Morgan Stanley & Co. International plc v. Land Salzburg* (the "English Proceedings") in which the Firm is seeking declarations that Land Salzburg had both the capacity and authority to enter into the transactions, and that the Firm has no liability to Land Salzburg arising from them. On July 25, 2016, the Firm filed an application with the Regional Court in Frankfurt to stay the German Proceedings on the basis that the High Court in London was first seized of the dispute between the parties and, pending determination of that application, filed its statement of defense on December 23, 2016. On December 8, 2016, Land Salzburg filed an application with the High Court in London challenging its jurisdiction to determine the English Proceedings.

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 €2.879 billion (approximately $3 billion). The Firm does not agree with the Proposed Claim and presented its defenses to the public prosecutor.

Other Litigation

On October 20, 2014, a purported class action complaint was filed against the Firm and other defendants styled *Genesee County Employees' Retirement System v. Bank of America Corporation et al.* in the SDNY. The action was later consolidated with four similar actions in SDNY under the lead case styled *Alaska Electrical Pension Fund v. Bank of America Corporation et al.* A consolidated amended complaint was filed on February 2, 2015 asserting claims for alleged violations of the Sherman Act, breach of contract, breach of the implied covenant of good faith and fair dealing, unjust enrichment, and tortious interference with contract. The consolidated amended complaint alleges, among other things, that the defendants engaged in antitrust violations with regards to the process of setting ISDAfix, a financial benchmark and seeks treble damages, injunctive relief, attorneys' fees and other relief. On March 28, 2016, the court granted in part and denied in part the defendants' motion to dismiss the consolidated amended complaint. On February 7, 2017, the plaintiffs filed a second consolidated amended complaint.

The following matters were terminated during or following the quarter ended December 31, 2016:

On December 23, 2009, the Federal Home Loan Bank of Seattle filed a complaint against the Firm and another defendant in the Superior Court of the State of Washington, styled *Federal Home Loan Bank of Seattle v. Morgan Stanley & Co. Inc., et al.* The amended complaint, filed on September 28, 2010, alleges that defendants made untrue statements and material omissions in the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sold to plaintiff by the Firm was approximately $233 million. The complaint raises claims under the Washington State Securities Act and seeks, among other things, to rescind the plaintiff's purchase of such certificates. On January 23, 2017, the parties reached an agreement to settle the litigation.

On March 15, 2010, the Federal Home Loan Bank of San Francisco filed a complaint against the Firm and other defendants in the Superior Court of the State of California styled *Federal Home Loan Bank of San Francisco v. Deutsche Bank Securities Inc. et al.* An amended complaint, filed on June 10, 2010, alleges that defendants made untrue statements and material omissions in connection with the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The amount of certificates allegedly sold to plaintiff by the Firm was approximately $276 million. The complaint raises claims under both the federal securities laws and California law and seeks, among other things, to rescind the plaintiff's purchase of such certificates. On December 21, 2016, the parties reached an agreement to settle the litigation.

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 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 in 2007. The complaint seeks, among other things, to have the Firm repurchase the loan and pay additional monetary damages, and interest. On February 17, 2017, the parties reached an agreement in principle to settle the litigation.

Item 4. Mine Safety Disclosures

Not applicable.

Part II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Morgan Stanley's common stock trades under the symbol "MS" on the New York Stock Exchange. As of February 17, 2017, we had 64,798 holders of record; however, we believe the number of beneficial owners of common stock exceeds this number.

The table below sets forth, for each of the last eight quarters, the low and high sales prices per share of our common stock and the amount of dividends declared per common share by our Board of Directors for such quarter.

	2016			2015		
	High	Low	Dividend Declared per Common Share	High	Low	Dividend Declared per Common Share
First quarter	**$ 31.70**	**$ 21.16**	**$ 0.15**	$ 39.15	$ 33.72	$ 0.10
Second quarter	**28.29**	**23.11**	**0.15**	40.26	35.36	0.15
Third quarter	**32.44**	**24.57**	**0.20**	41.04	30.40	0.15
Fourth quarter	**44.04**	**30.96**	**0.20**	35.74	30.15	0.15

The following table sets forth the information with respect to purchases made by us or on our behalf of our common stock during the fourth quarter of the year ended December 31, 2016.

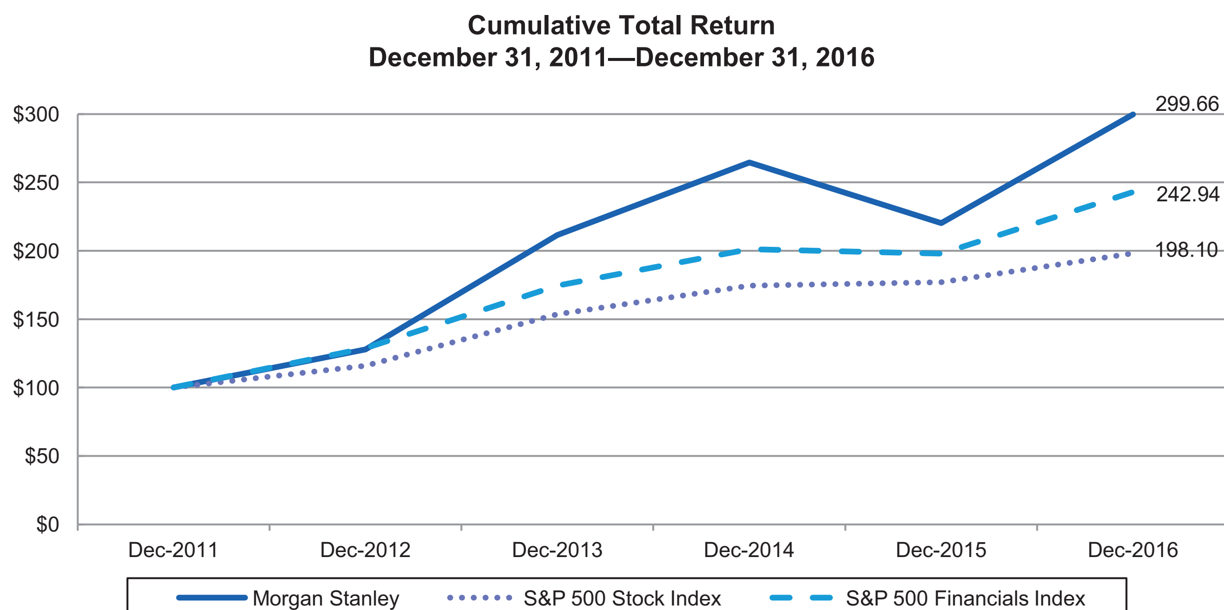
Issuer Purchases of Equity Securities

$ in millions, except per share data	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[1]	Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs
Month #1 (October 1, 2016-October 31, 2016)				
Share Repurchase Program[2]	**4,857,000**	**$ 33.28**	**4,857,000**	**$ 2,088**
Employee transactions[3]	**63,861**	**$ 32.21**	**—**	**—**
Month #2 (November 1, 2016-November 30, 2016)				
Share Repurchase Program[2]	**14,074,500**	**$ 36.09**	**14,074,500**	**$ 1,580**
Employee transactions[3]	**196,639**	**$ 39.10**	**—**	**—**
Month #3 (December 1, 2016-December 31, 2016)				
Share Repurchase Program[2]	**7,751,467**	**$ 42.63**	**7,751,467**	**$ 1,250**
Employee transactions[3]	**337,765**	**$ 42.91**	**—**	**—**
Quarter ended December 31, 2016				
Share Repurchase Program[2]	**26,682,967**	**$ 37.48**	**26,682,967**	**$ 1,250**
Employee transactions[3]	**598,265**	**$ 40.52**	**—**	**—**

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 we deem appropriate and may be suspended at any time.
2. Our Board of Directors has authorized the repurchase of our 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 stock-based compensation and benefit plan requirements. The Share Repurchase Program has no set expiration or termination date. Share repurchases are subject to regulatory approval. In June 2016, we received a conditional non-objection from the Federal Reserve to our 2016 capital plan, which 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. During the quarter ended December 31, 2016, we repurchased approximately $1.0 billion of our outstanding common stock as part of our Share Repurchase Program. For further information, see "Liquidity and Capital Resources—Capital Management" in Part II, Item 7.
3. Includes shares acquired by us in satisfaction of the tax withholding obligations on stock-based awards and the exercise of stock options granted under our stock-based compensation plans.

Stock Performance Graph

The following graph compares the cumulative total shareholder return (rounded to the nearest whole dollar) of our common stock, the Standard & Poor's 500 ("S&P 500") Stock Index and the S&P 500 Financials Index for the last five years. The graph assumes a $100 investment at the closing price on December 31, 2011 and reinvestment of dividends on the respective dividend payment dates without commissions. This graph does not forecast future performance of our common stock.



	At December 31,					
	2011	2012	2013	2014	2015	**2016**
Morgan Stanley	$ 100.00	$ 127.93	$ 211.50	$ 264.56	$ 220.24	**$ 299.66**
S&P 500 Stock Index	100.00	115.99	153.55	174.55	176.95	**198.10**
S&P 500 Financials Index	100.00	128.75	174.57	201.07	197.92	**242.94**

Item 6. Selected Financial Data

Morgan Stanley Selected Financial Data

$ in millions	**2016**	2015	2014	2013	2012
Income Statement Data					
Revenues:					
Total non-interest revenues	**$ 30,933**	$ 32,062	$ 32,540	$ 31,715	$ 26,383
Interest income	**7,016**	5,835	5,413	5,209	5,692
Interest expense	**3,318**	2,742	3,678	4,431	5,897
Net interest	**3,698**	3,093	1,735	778	(205)
Net revenues	**34,631**	35,155	34,275	32,493	26,178
Non-interest expenses:					
Compensation and benefits	**15,878**	16,016	17,824	16,277	15,615
Other	**9,905**	10,644	12,860	11,658	9,967
Total non-interest expenses	**25,783**	26,660	30,684	27,935	25,582
Income from continuing operations before income taxes	**8,848**	8,495	3,591	4,558	596
Provision for (benefit from) income taxes	**2,726**	2,200	(90)	902	(161)
Income from continuing operations	**6,122**	6,295	3,681	3,656	757
Income (loss) from discontinued operations, net of income taxes	**1**	(16)	(14)	(43)	(41)
Net income	**6,123**	6,279	3,667	3,613	716
Net income applicable to redeemable non-controlling interests	**—**	—	—	222	124
Net income applicable to nonredeemable non-controlling interests	**144**	152	200	459	524
Net income applicable to Morgan Stanley	**$ 5,979**	$ 6,127	$ 3,467	$ 2,932	$ 68
Preferred stock dividends and other	**471**	456	315	277	98
Earnings (loss) applicable to Morgan Stanley common shareholders[1]	**$ 5,508**	$ 5,671	$ 3,152	$ 2,655	$ (30)
Amounts applicable to Morgan Stanley:					
Income from continuing operations	**$ 5,978**	$ 6,143	$ 3,481	$ 2,975	$ 138
Income (loss) from discontinued operations	1	(16)	(14)	(43)	(70)
Net income applicable to Morgan Stanley	**$ 5,979**	$ 6,127	$ 3,467	$ 2,932	$ 68

in millions, except per share amounts	**2016**	2015	2014	2013	2012
Per Share Data					
Earnings (loss) per basic common share[2]:					
Income from continuing operations	**$ 2.98**	$ 2.98	$ 1.65	$ 1.42	$ 0.02
Income (loss) from discontinued operations	**—**	(0.01)	(0.01)	(0.03)	(0.04)
Earnings (loss) per basic common share	**$ 2.98**	$ 2.97	$ 1.64	$ 1.39	$ (0.02)
Earnings (loss) per diluted common share[2]:					
Income from continuing operations	**$ 2.92**	$ 2.91	$ 1.61	$ 1.38	$ 0.02
Income (loss) from discontinued operations	**—**	(0.01)	(0.01)	(0.02)	(0.04)
Earnings (loss) per diluted common share	**$ 2.92**	$ 2.90	$ 1.60	$ 1.36	$ (0.02)
Book value per common share[3]	**$ 36.99**	$ 35.24	$ 33.25	$ 32.24	$ 30.70
Common shares outstanding at December 31st	**1,852**	1,920	1,951	1,945	1,974
Dividends declared per common share	**0.70**	0.55	0.35	0.20	0.20
Average common shares outstanding[1]:					
Basic	**1,849**	1,909	1,924	1,906	1,886
Diluted	**1,887**	1,953	1,971	1,957	1,919
Balance Sheet and Other Operating Data					
Trading assets	**$ 262,154**	$ 239,505	$ 278,117	$ 301,252	$ 281,881
Loans[4]	**94,248**	85,759	66,577	42,874	29,046
Total assets	**814,949**	787,465	801,510	832,702	780,960
Total deposits	**155,863**	156,034	133,544	112,379	83,266
Long-term borrowings	**164,775**	153,768	152,772	153,575	169,571
Morgan Stanley shareholders' equity	**76,050**	75,182	70,900	65,921	62,109
Common shareholders' equity	**68,530**	67,662	64,880	62,701	60,601
Return on average common equity[5]	**8.0%**	8.5%	4.8%	4.3%	N/M

N/M—Not Meaningful

1. Amounts shown are used to calculate earnings (loss) per basic and diluted common share.
2. For the calculation of basic and diluted earnings (loss) per common share, see Note 16 to the consolidated financial statements in Part II, Item 8.
3. Book value per common share equals common shareholders' equity divided by common shares outstanding.
4. Amounts include loans held for investment 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 Part II, Item 8).
5. The calculation of return on average common equity equals net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity. The return on average common equity is a non-generally accepted accounting principle financial measure that the Firm considers to be a useful measure to the Firm, investors and analysts to assess operating performance.

Item 7. 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," "Firm," "us," "we," or "our" mean Morgan Stanley (the "Parent Company") 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, lending and other services to corporations, governments, financial institutions, and high to ultra-high net worth clients. Investment banking services consist of 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 and fixed income products, including foreign exchange and commodities, as well as prime brokerage services. Lending services include originating and/or purchasing corporate loans, commercial and residential mortgage lending, asset-backed lending, financing extended to equities and commodities customers, and loans to municipalities. Other activities include 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, 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 include equity, fixed income, liquidity and alternative/other products. Institutional clients include defined benefit/defined contribution plans, 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; and 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 and "Liquidity and Capital Resources—Regulatory Requirements" herein.

Executive Summary

Overview of Financial Results

Selected Financial Information and Other Statistical Data

$ in millions, except per share amounts	2016	2015	2014
Net revenues by segment			
Institutional Securities	**$ 17,459**	$ 17,953	$ 16,871
Wealth Management	**15,350**	15,100	14,888
Investment Management	**2,112**	2,315	2,712
Intersegment Eliminations	**(290)**	(213)	(196)
Consolidated net revenues	**$ 34,631**	$ 35,155	$ 34,275
Net revenues by region[1]			
Americas	**$ 25,487**	$ 25,080	$ 25,140
EMEA	**4,994**	5,353	4,772
Asia-Pacific	**4,150**	4,722	4,363
Consolidated net revenues	**$ 34,631**	$ 35,155	$ 34,275
Income from continuing operations applicable to Morgan Stanley			
Institutional Securities	**$ 3,650**	$ 3,713	$ (77)
Wealth Management	**2,104**	2,085	3,192
Investment Management	**223**	345	366
Intersegment Eliminations	**1**	—	—
Income from continuing operations applicable to Morgan Stanley	**$ 5,978**	$ 6,143	$ 3,481
Income (loss) from discontinued operations applicable to Morgan Stanley	**1**	(16)	(14)
Net income applicable to Morgan Stanley	**5,979**	6,127	3,467
Preferred stock dividends and other	**471**	456	315
Earnings applicable to Morgan Stanley common shareholders	**$ 5,508**	$ 5,671	$ 3,152
Earnings per basic common share[2]	**$ 2.98**	$ 2.97	$ 1.64
Earnings per diluted common share[2]	**2.92**	2.90	1.60
Effective income tax rate from continuing operations	**30.8%**	25.9%	(2.5)%

	At December 31, 2016	At December 31, 2015
Capital ratios (Transitional)[3]		
Common Equity Tier 1 capital ratio	**16.9%**	15.5%
Tier 1 capital ratio	**19.0%**	17.4%
Total capital ratio	**22.0%**	20.7%
Tier 1 leverage ratio[4]	**8.4%**	8.3%

$ in millions, except per share amounts	At December 31, 2016	At December 31, 2015
Loans[5]	**$ 94,248**	$ 85,759
Total assets	**$ 814,949**	$ 787,465
Global Liquidity Reserve[6]	**$ 202,297**	$ 203,264
Deposits	**$ 155,863**	$ 156,034
Long-term borrowings	**$ 164,775**	$ 153,768
Common shareholders' equity	**$ 68,530**	$ 67,662
Common shares outstanding	**1,852**	1,920
Book value per common share[7]	**$ 36.99**	$ 35.24
Worldwide employees	**55,311**	56,218

EMEA—Europe, Middle East and Africa

1. For a discussion of how the geographic breakdown for net revenues is determined, see Note 21 to the consolidated financial statements in Item 8.
2. For the calculation of basic and diluted earnings per common share, see Note 16 to the consolidated financial statements in Item 8.
3. For a discussion of our regulatory capital ratios, see "Liquidity and Capital Resources—Regulatory Requirements" herein.
4. See Note 14 to the consolidated financial statements in Item 8 for information on the Tier 1 leverage ratio.
5. 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 8).
6. 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" herein.
7. Book value per common share equals common shareholders' equity divided by common shares outstanding.

Consolidated Results: 2016 Compared with 2015

- We reported net revenues of $34,631 million in 2016, compared with $35,155 million in 2015. For 2016, net income applicable to Morgan Stanley was $5,979 million, or $2.92 per diluted common share, compared with $6,127 million, or $2.90 per diluted common share, in 2015.

- Results for 2016 included net discrete tax benefits of $68 million or $0.04 per diluted common share, primarily related to the remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination, partially offset by adjustments for other tax matters. Results for 2015 included net discrete tax benefits 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 due to the impact of debt valuation adjustment ("DVA") of $618 million or $0.20 per diluted common share. For a further discussion of the net discrete tax bene-

fits, see "Supplemental Financial Information and Disclosures—Income Tax Matters" 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 (i.e., DVA) to be presented in other comprehensive income (loss) ("OCI") as opposed to Trading revenues. Results for 2015 and 2014 are not restated pursuant to that guidance.

- Net revenues were $34,631 million and net income applicable to Morgan Stanley was $5,979 million, or $2.92 per diluted common share, in 2016 compared with net revenues of $34,537 million and net income applicable to Morgan Stanley of $5,728 million, or $2.70 per diluted common share, excluding DVA in 2015. Excluding the net discrete tax benefits, net income applicable to Morgan Stanley was $5,911 million, or $2.88 per diluted common share, in 2016 compared with net income applicable to Morgan Stanley of $5,164 million, or $2.41 per diluted common share, excluding both DVA and the net discrete tax benefits in 2015. (see "Selected Non-Generally Accepted Accounting Principles ("Non-GAAP") Financial Information" herein).

Consolidated Results: 2015 Compared with 2014

- We reported net revenues of $35,155 million in 2015, compared with $34,275 million in 2014. In 2015, net income applicable to Morgan Stanley was $6,127 million, or $2.90 per diluted common share, compared with $3,467 million, or $1.60 per diluted common share in 2014.

- Results for 2015 included net discrete tax benefits 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 due to the impact of DVA of $618 million, or $0.20 per diluted common share. Results for 2014 included net discrete tax benefits of $2,226 million, or $1.13 per diluted common share, due to the release of a deferred tax liability associated with a legal entity restructuring, remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax examination, and the repatriation of non-U.S. earnings at a cost lower than originally estimated. For a further discussion of these net discrete tax benefits, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein. Results for 2014 also included positive revenues associated with DVA of $651 million, or $0.21 per diluted common share. Results for 2014 also included litigation costs related to residential mortgage-backed securities and credit crisis matters of $3,083 million, or a loss of $1.47 per diluted common share, 2014 compensation actions of approximately $1,137 million (see also "Supplemental Financial Information and Disclosures—Discretionary Incentive Compensation" herein), or a loss of $0.39 per diluted common share, and a funding valuation adjustment ("FVA") implementation charge of $468 million, or a loss of $0.17 per diluted common share.

- Excluding DVA, net revenues were $34,537 million and net income applicable to Morgan Stanley was $5,728 million, or $2.70 per diluted common share, in 2015 compared with net revenues of $33,624 million, and net income applicable to Morgan Stanley of $3,049 million, or $1.39 per diluted common share, in 2014. Excluding both DVA and the net discrete tax benefits, net income applicable to Morgan Stanley was $5,164 million, or $2.41 per diluted common share, in 2015 compared with net income applicable to Morgan Stanley of $823 million, or $0.26 per diluted common share, in 2014 (see "Selected Non-Generally Accepted Accounting Principles ("Non-GAAP") Financial Information" herein). For a further discussion of the net discrete tax benefits, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein.

Business Segment Net Revenues: 2016 Compared with 2015

- Institutional Securities net revenues of $17,459 million in 2016 decreased 3% compared with $17,953 million in 2015, primarily as a result of lower Investment banking and sales and trading revenues, partially offset by higher Other revenues.

- Wealth Management net revenues of $15,350 million in 2016 increased 2% from $15,100 million in 2015, primarily as a result of growth in Net interest income, partially offset by lower Commissions and fees and Investment banking revenues.

- Investment Management net revenues of $2,112 million in 2016 decreased 9% from $2,315 million in 2015, primarily reflecting weaker investment performance compared with 2015. This was partially offset by carried interest losses in 2015 associated with Asia private equity that did not re-occur in 2016. Asset management fees in 2016 were relatively unchanged from 2015.

Business Segment Net Revenues: 2015 Compared with 2014

- Institutional Securities net revenues of $17,953 million in 2015 increased 6% compared with $16,871 million in 2014, primarily as a result of higher sales and trading net revenues, partially offset by lower Other revenues and lower revenues in Investment banking.

- Wealth Management net revenues of $15,100 million in 2015 increased 1% from $14,888 million in 2014, primarily as a result of higher Net interest income and asset management revenues, partially offset by lower transactional revenues.

- Investment Management net revenues of $2,315 million in 2015 decreased 15% from $2,712 million in 2014, primarily reflecting the reversal of previously accrued carried interest, reduction in revenues attributable to non-controlling interests and markdowns on principal investments.

Consolidated Non-Interest Expenses: 2016 Compared with 2015

- Compensation and benefits expenses of $15,878 million in 2016 decreased 1% from $16,016 million in 2015, primarily due to a decrease in salaries, severance costs, discretionary incentive compensation and employer taxes, partially offset by an increase in the fair value of deferred compensation plan referenced investments.

- Non-compensation expenses were $9,905 million in 2016 compared with $10,644 million in 2015, representing a 7% decrease, primarily due to lower litigation costs and expense management.

Consolidated Non-Interest Expenses: 2015 Compared with 2014

- Compensation and benefits expenses of $16,016 million in 2015 decreased 10% from $17,824 million in 2014, primarily as a result of the 2014 compensation actions, and a decrease in the fair value of deferred compensation plan referenced investments, related carried interest, and the level of discretionary incentive compensation in 2015 (see also "Supplemental Financial Information and Disclosures—Discretionary Incentive Compensation" herein).

- Non-compensation expenses were $10,644 million in 2015 compared with $12,860 million in 2014, representing a 17% decrease, primarily due to lower litigation costs in the Institutional Securities business segment associated with residential mortgage-backed securities and credit crisis-related matters.

Return on Average Common Equity

- For 2016, the return on average common equity and the return on average common equity, excluding DVA was 8.0%, or 7.9% excluding DVA and the net discrete tax benefits. For 2015, the return on average common equity was 8.5%, or 7.8% excluding DVA, and 7.0% excluding DVA and the net discrete tax benefits. For 2014, the return on average common equity was 4.8%, or 4.1% excluding DVA, and 0.8% excluding DVA and the net discrete tax benefits. 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 of America ("U.S. GAAP"). From time to time, we may disclose certain "non-GAAP financial measures" in this document, or 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 non-GAAP financial measure.

The principal Non-GAAP financial measures presented in this document are set forth below.

Non-GAAP Financial Measures by Business Segment

$ in billions	**2016**	2015	2014
Pre-tax profit margin[1]			
Institutional Securities	**29%**	26%	N/M
Wealth Management	**22%**	22%	20%
Investment Management	**14%**	21%	24%
Consolidated	**26%**	24%	10%
Average common equity[2]			
Institutional Securities	**$ 43.2**	$ 34.6	$ 32.2
Wealth Management	**15.3**	11.2	11.2
Investment Management	**2.8**	2.2	2.9
Parent Company	**7.6**	18.9	19.0
Consolidated average common equity	**$ 68.9**	$ 66.9	$ 65.3
Return on average common equity[2]			
Institutional Securities	**7.6%**	9.9%	N/M
Wealth Management	**13.3%**	16.9%	27.5%
Investment Management	**7.7%**	15.8%	13.0%
Consolidated	**8.0%**	8.5%	4.8%

Reconciliations from U.S. GAAP to Non-GAAP Consolidated Financial Measures

$ in millions, except per share data	2016	2015	2014
Net revenues			
U.S. GAAP	**$34,631**	$35,155	$34,275
Impact of DVA[3]	**—**	(618)	(651)
Net revenues, excluding DVA—non-GAAP[4]	**$34,631**	$34,537	$33,624
Net income applicable to Morgan Stanley			
U.S. GAAP	**$ 5,979**	$ 6,127	$ 3,467
Impact of DVA, net of tax[3]	**—**	(399)	(418)
Net income applicable to Morgan Stanley, excluding DVA—non-GAAP[4]	**$ 5,979**	$ 5,728	$ 3,049
Impact of net discrete tax benefits[5]	**(68)**	(564)	(2,226)
Net income applicable to Morgan Stanley, excluding DVA and net discrete tax benefits—non GAAP[4]	**$ 5,911**	$ 5,164	$ 823
Earnings per diluted common share			
U.S. GAAP	**$ 2.92**	$ 2.90	$ 1.60
Impact of DVA[3]	**—**	(0.20)	(0.21)
Earnings per diluted common share, excluding DVA—non-GAAP[4]	**$ 2.92**	$ 2.70	$ 1.39
Impact of net discrete tax benefits[5]	**(0.04)**	(0.29)	(1.13)
Earnings per diluted common share, excluding DVA and net discrete tax benefits—non-GAAP[4]	**$ 2.88**	$ 2.41	$ 0.26
Effective income tax rate			
U.S. GAAP	**30.8%**	25.9%	(2.5)%
Impact of net discrete tax benefits[5]	**0.8%**	6.6%	62.0%
Effective income tax rate from continuing operations, excluding net discrete tax benefits—non-GAAP[4]	**31.6%**	32.5%	59.5%

N/M—Not Meaningful

DVA represents the change in the fair value resulting from fluctuations in our credit spreads and other credit factors related to liabilities carried at fair value under the fair value option, 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.
2. Average common equity and return on average common equity are 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. 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 an allocation of preferred dividends as a percentage of average common equity for that segment. Consolidated return on average common equity equals consolidated net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity.
3. In 2016, 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) are recorded within OCI in the consolidated comprehensive income statements. For 2015 and 2014, DVA gains (losses) were recorded within Trading revenues in the consolidated income statements. See Notes 2 and 15 to the consolidated financial statements in Item 8 for further information.
4. Net revenues, excluding DVA, net income applicable to Morgan Stanley, excluding DVA, net income applicable to Morgan Stanley, excluding DVA and net discrete tax benefits, earnings per diluted common share, excluding DVA, earnings per diluted common share, excluding DVA and net discrete tax benefits and effective income tax rate from continuing operations, excluding net discrete tax benefits, are non-GAAP financial measures we consider to be useful measures to us, investors and analysts to allow better comparability of period-to-period operating performance.
5. For a discussion of our net discrete tax benefits, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein.

Consolidated Non-GAAP Financial Measures

$ in billions	2016	2015	2014
Average common equity[1, 3]			
Unadjusted	**$ 68.9**	$ 66.9	$ 65.3
Excluding DVA	**69.1**	67.6	66.4
Excluding DVA and net discrete tax benefits	**69.1**	67.1	65.7
Return on average common equity[1, 2]			
Unadjusted	**8.0%**	8.5%	4.8%
Excluding DVA	**8.0%**	7.8%	4.1%
Excluding DVA and net discrete tax benefits	**7.9%**	7.0%	0.8%
Average tangible common equity[1, 3]			
Unadjusted	**$ 59.5**	$ 57.3	$ 55.5
Excluding DVA	**59.6**	57.9	56.7
Excluding DVA and net discrete tax benefits	**59.7**	57.5	55.9
Return on average tangible common equity[1, 4]			
Unadjusted	**9.3%**	9.9%	5.7%
Excluding DVA	**9.2%**	9.1%	4.8%
Excluding DVA and net discrete tax benefits	**9.1%**	8.2%	0.9%

	At December 31, 2016	At December 31, 2015
Tangible book value per common share[1, 5]	**$ 31.98**	$ 30.26

1. The 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 measures set forth in this table 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.
2. 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 calculations of the return on average common equity excluding DVA, and excluding DVA and net discrete tax benefits to adjust for DVA only in the denominator. Prior to January 1, 2016, for the return on average common equity measures, where DVA is excluded, both the numerator and denominator were adjusted to exclude the impact of DVA. When excluding the net discrete tax benefits, both the numerator and denominator are adjusted to exclude that item in all periods.
3. The impact of DVA on average common equity and average tangible common equity was approximately $(183) million, $(637) million and $(1,108) million in 2016, 2015 and 2014, respectively. The impact of the net discrete tax benefits on average common equity and average tangible common equity was approximately $(40) million, $434 million and $713 million in 2016, 2015 and 2014, respectively.
4. 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 calculations of return on average tangible common equity excluding DVA, and excluding DVA and net discrete tax benefits to adjust for DVA only in the denominator. Prior to January 1, 2016, for the return on average tangible common equity measures, where DVA is excluded, both the numerator and the denominator were adjusted to exclude the impact of DVA. When excluding the net discrete tax benefits, both the numerator and denominator are adjusted to exclude that item in all periods. The impact of DVA was insignificant in 2016 and 0.8% and 0.9% in 2015 and 2014, respectively. The impact of the net discrete tax benefits was 0.1%, 0.9% and 3.9% in 2016, 2015 and 2014, respectively.
5. Tangible book value per common share equals tangible common equity of $59,234 million at December 31, 2016 and $58,098 million at December 31, 2015 divided by common shares outstanding of 1,852 million at December 31, 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 ("Return on Equity Target") of 9% to 11%, excluding DVA to be achieved by 2017, subject to the successful execution of our strategic objectives. We plan to progress toward achieving our Return on Equity Target through the following key elements of our strategy:

- Revenue and profitability growth:
  - Wealth Management pre-tax margin improvement to approximately 23% to 25% through net interest income growth via continued high-quality lending, expense efficiency and business growth;
  - Continued strength in Investment Banking and Equity Sales and Trading results;
  - Stable performance in Fixed Income Sales and Trading and Investment Management;
- Expense efficiency:
  - Successful completion of Project Streamline, our expense savings program launched in 2016 to reduce expenses by $1 billion by 2017 (not including any outsized litigation expense or penalties) assuming a flat revenue environment, resulting in an expense efficiency target ratio of 74%;
- Sufficient capital:
  - Increasing capital returns to shareholders, subject to regulatory approval.

Our Return on Equity Target and the related strategies and goals are forward-looking statements that may be materially affected by many factors, including, among other things: macroeconomic and market conditions; legislative and regulatory developments; industry trading and investment banking volumes; equity market levels; interest rate environment; legal expenses and the ability to reduce expenses in general; capital levels; and discrete tax items. Given the uncertainties surrounding these and other factors, there are significant risks that our Return on Equity Target and the related strategies and goals may not be realized. Actual results may differ from our goals and targets, and the differences may be material and adverse. Accordingly, we caution that undue reliance should not be placed on any of these forward-looking statements. See "Forward-Looking Statements" immediately preceding Part I, Item 1 and "Risk Factors" in Part I, Item 1A for additional information regarding these forward-looking statements.

Return on average common equity and pre-tax margin are non-GAAP financial measures that we consider to be a useful measure to us, investors and analysts to assess operating performance. See "Selected Non-Generally Accepted Accounting Principles ("Non-GAAP") Financial Information" herein. Our expense efficiency ratio represents total non-interest expenses as a percentage of net revenues. For 2016, our expense efficiency ratio was 74.5%, which was calculated as non-interest expenses of $25,783 million divided by net revenues of $34,631 million.

Business Segments

Substantially all of our operating revenues and operating expenses are directly attributable to our 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

Investment Banking. 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.

Trading. Trading revenues include revenues from customers' purchases and sales of financial instruments in which we act as a market maker, as well as gains and losses on our related positions and other positions carried at fair value. Trading revenues include the realized gains and losses from sales of cash instruments and derivative settlements, unrealized gains and losses from ongoing fair value changes of our positions related to market-making activities, and gains and losses related to investments associated with certain employee deferred compensation plans and other positions carried at fair value. In many markets, the realized and unrealized gains and losses from the purchase and sale transactions will include any spreads between bids and offers. Certain fees received on loans carried at fair value and dividends from equity securities are also recorded in Trading revenues since they relate to positions carried at fair value.

As a market maker, we stand ready to buy, sell or otherwise transact with customers under a variety of market conditions and to provide firm or indicative prices in response to customer requests. Our liquidity obligations can be explicit in some cases, and in others, customers expect us to be willing to transact with them. In order to most effectively fulfill our

market-making function, we engage in activities across all of our trading businesses that include, but are not limited to:

(i) taking positions in anticipation of, and in response to, customer demand to buy or sell and—depending on the liquidity of the relevant market and the size of the position—to hold those positions for a period of time;

(ii) managing and assuming basis risk (risk associated with imperfect hedging) between customized customer risks and the standardized products available in the market to hedge those risks;

(iii) building, maintaining and rebalancing inventory, through trades with other market participants, and engaging in accumulation activities to accommodate anticipated customer demand;

(iv) trading in the market to remain current on pricing and trends; and

(v) engaging in other activities to provide efficiency and liquidity for markets.

Although not included in Trading revenues, Interest income and expense are also impacted by market-making activities, as debt securities held by us earn interest and securities are loaned, borrowed, sold with agreement to repurchase and purchased with agreement to resell.

We often invest in investments or other financial instruments to economically hedge our obligations under certain deferred compensation plans. Changes in the value of such investments are recorded in either Trading revenues or Investments revenues. Expenses associated with the related deferred compensation plans are recorded in Compensation and benefits. Generally, changes in compensation expense resulting from changes in fair value of the referenced investment will be offset by changes in fair value of the investments made by us.

Investments. Our investments generally are held for long-term appreciation, or as discussed above, for hedging purposes and generally are subject to significant sales restrictions. Estimates of the fair value of the investments may involve significant judgment and may fluctuate significantly over time in light of business, market, economic and financial conditions generally or in relation to specific transactions. In some cases, such investments are required or are a necessary part of offering other products.

The revenues recorded are the result of realized gains and losses from sales and unrealized gains and losses from ongoing fair value changes of our holdings, as well as from investments associated with certain employee deferred compensation and co-investment plans. Typically, there are no fee revenues from these investments. The sales restrictions on the investments relate primarily to redemption and withdrawal restrictions on investments in certain Investment Management funds, which include investments made in connection with certain employee deferred compensation plans (see Note 3 to the consolidated financial statements in Item 8). Restrictions on interests in exchanges and clearinghouses generally include a requirement to hold those interests for the period of time where we are clearing trades on that exchange or clearinghouse. Additionally, there are certain sponsored Investment Management funds consolidated by us primarily related to holders of noncontrolling interests.

Commissions and Fees. Commission and fee revenues primarily arise from agency transactions in listed and over-the-counter ("OTC") equity securities, services related to sales and trading activities, and sales of mutual funds, futures, insurance products and options. Commissions received for purchasing and selling listed equity securities and options are recorded separately in Commissions and fees. Other cash and derivative instruments typically do not have fees associated with them, and fees for any related services are recorded in Commissions and fees.

Asset Management, Distribution and Administration Fees. Asset management, distribution and administration fees include fees associated with the management and supervision of assets, account services and administration, performance-based fees relating to certain funds, separately managed accounts, shareholder servicing and the distribution of certain open-ended mutual funds.

Asset management, distribution and administration fees in the Wealth Management business segment also include revenues from individual and institutional investors electing a fee-based pricing arrangement and fees for Investment Management. Mutual fund distribution fees in the Wealth Management business segment are based on either the average daily fund net asset balances or average daily aggregate net fund sales and are affected by changes in the overall level and mix of assets under management or supervision.

Asset management fees in the Investment Management business segment arise from investment management services we provide to investment vehicles pursuant to various contractual arrangements. We receive fees primarily based upon mutual fund daily average net assets or based on monthly or quarterly invested equity for other vehicles. Performance-based fees in the Investment Management business segment are earned on certain products as a percentage of appreciation earned by those products and, in certain cases, are based upon the achievement of performance criteria. These fees are normally earned annually and are recognized on a monthly or quarterly basis.

Net Interest. Interest income and Interest expense are a function of the level and mix of total assets and liabilities, including Trading assets and Trading liabilities; Investment securities, which include available-for-sale ("AFS") securities and held-to-maturity ("HTM") securities; Securities borrowed or purchased under agreements to resell; Securities loaned or sold under agreements to repurchase; Loans; Deposits; Other short-term borrowings; Long-term borrowings; trading strategies; customer activity in the prime brokerage business; and the prevailing level, term structure and volatility of interest rates.

Other. Other revenues include revenues from equity method investments, realized gains and losses on AFS securities, gains and losses on loans held for sale, provision for loan losses, and other miscellaneous revenues.

Net Revenues by Segment

Institutional Securities. Net revenues are composed of Investment banking revenues, Sales and trading net revenues, Investments and Other revenues.

For information about the composition of Investment banking revenues, see "Net Revenues" herein.

Sales and trading net revenues are composed of Trading revenues; Commissions and fees; Asset management, distribution and administration fees; and Net interest. In assessing the profitability of our sales and trading activities, we view these net revenues in the aggregate. In addition, decisions relating to trading are based on an overall review of aggregate revenues and costs associated with each transaction or series of transactions. This review includes, among other things, an assessment of the potential gain or loss associated with a transaction, including any associated commissions and fees, dividends, the interest income or expense associated with financing or hedging our positions and other related expenses.

Sales and trading revenues are broken down into major business lines as follows: equity, fixed income and other. See "Sales and Trading Activities—Equity and Fixed Income" for a description of the activities within equity and fixed income. Other sales and trading revenues include impacts from certain central treasury functions, such as liquidity costs and gains (losses) on economic hedges related to long-term borrowings, as well as certain activities associated with corporate lending activities.

For information about revenue from Investments, see "Net Revenues" herein.

Other revenues include revenues from equity method investments, gains and losses on loans held for sale, provision for loan losses, and other miscellaneous revenues.

Wealth Management. Net revenues are composed of Transactional, Asset management, Net interest and Other revenues.

Transactional revenues include Investment banking, Trading, and Commissions and fees. Investment banking revenues include revenues from the distribution of equity and fixed income securities, including initial public offerings, secondary offerings, closed-end funds and unit trusts. Trading revenues include revenues from customers' purchases and sales of financial instruments, in which we act as principal, and gains and losses associated with certain employee deferred compensation plans. Revenues from Commissions and fees primarily arise from agency transactions in listed and OTC equity securities and sales of mutual funds, futures, insurance products and options.

Asset management revenues include Asset management, distribution and administration fees, and referral fees related to the bank deposit program.

Net interest income includes interest related to the bank deposit program, interest on AFS securities and HTM securities, interest on lending activities and other net interest. Interest income and Interest expense are a function of the level and mix of total assets and liabilities. Net interest is driven by securities-based lending, mortgage lending, margin loans, securities borrowed and securities loaned transactions, and bank deposit program activity.

Other revenues include revenues from realized gains and losses on AFS securities, provision for loan losses, referral fees and other miscellaneous revenues.

Investment Management. Investments revenue is primarily earned on investments in certain closed-end funds that generally are held for long-term appreciation and generally subject to sales restrictions. Estimates of the fair value of the investments involve significant judgment and may fluctuate materially over time in light of business, market, economic and financial conditions generally or in relation to specific transactions.

For information about the composition of Asset Management, Distribution and Administration Fees, see "Net Revenues" herein.

Compensation Expense

Compensation and benefits expense includes accruals for base salaries and fixed allowances, formulaic programs, discretionary incentive compensation, amortization of deferred cash and equity awards, changes in fair value of deferred compensation plan referenced investments, carried interest, severance costs, and other items such as health and welfare benefits. The factors that drive compensation for our employees vary from quarter to quarter, from segment to segment and within a segment. For certain revenue-producing employees in the Wealth Management and Investment Management business segments, compensation is largely paid

on the basis of formulaic payouts that link employee compensation to revenues. Compensation for certain employees, including revenue-producing employees in the Institutional Securities business segment, may also include incentive compensation that is determined following the assessment of the Firm, business unit and individual performance. Compensation for our remaining employees is largely fixed in nature (e.g., base salary, benefits, etc.).

Compensation expense for deferred cash-based compensation plans is calculated based on the notional value of the award granted, adjusted for upward and downward changes in fair value of the referenced investment, and is recognized ratably over the prescribed vesting period for the award. However, there may be a timing difference between the immediate revenue recognition of gains and losses on our investments and the deferred recognition of the related compensation expense over the vesting period.

Income Taxes

The income tax provision for our business segments is generally determined based on the revenues, expenses and activities directly attributable to each business segment. Certain items have been allocated to each business segment, generally in proportion to its respective net revenues or other relevant measures.

Institutional Securities

Income Statement Information

$ in millions	2016	2015	2014	% Change 2016	% Change 2015
Revenues					
Investment banking	**$ 4,476**	$ 5,008	$ 5,203	**(11)%**	(4)%
Trading	**9,387**	9,400	8,445	**—**	11%
Investments	**147**	274	240	**(46)%**	14%
Commissions and fees	**2,456**	2,616	2,610	**(6)%**	—
Asset management, distribution and administration fees	**293**	281	281	**4%**	—
Other	**535**	221	684	**142%**	(68)%
Total non-interest revenues	**17,294**	17,800	17,463	**(3)%**	2%
Interest income	**4,005**	3,190	3,389	**26%**	(6)%
Interest expense	**3,840**	3,037	3,981	**26%**	(24)%
Net interest	**165**	153	(592)	**8%**	N/M
Net revenues	**17,459**	17,953	16,871	**(3)%**	6%
Compensation and benefits	**6,275**	6,467	7,786	**(3)%**	(17)%
Non-compensation expenses	**6,061**	6,815	9,143	**(11)%**	(25)%
Total non-interest expenses	**12,336**	13,282	16,929	**(7)%**	(22)%
Income (loss) from continuing operations before income taxes	**5,123**	4,671	(58)	**10%**	N/M
Provision for (benefit from) income taxes	**1,318**	825	(90)	**60%**	N/M
Income from continuing operations	**3,805**	3,846	32	**(1)%**	N/M
Income (loss) from discontinued operations, net of income taxes	**(1)**	(17)	(19)	**94%**	11%
Net income	**3,804**	3,829	13	**(1)%**	N/M
Net income applicable to noncontrolling interests	**155**	133	109	**17%**	22%
Net income (loss) applicable to Morgan Stanley	**$ 3,649**	$ 3,696	$ (96)	**(1)%**	N/M

N/M—Not Meaningful

Investment Banking

Investment Banking Revenues

$ in millions	2016	2015	2014	% Change 2016	% Change 2015
Advisory revenues	**$ 2,220**	$ 1,967	$ 1,634	**13%**	20%
Underwriting revenues:					
Equity underwriting revenues	**887**	1,398	1,613	**(37)%**	(13)%
Fixed income underwriting revenues	**1,369**	1,643	1,956	**(17)%**	(16)%
Total underwriting revenues	**2,256**	3,041	3,569	**(26)%**	(15)%
Total investment banking revenues	**$ 4,476**	$ 5,008	$ 5,203	**(11)%**	(4)%

Investment Banking Volumes

$ in billions	2016[1]	2015[1]	2014[1]
Completed mergers and acquisitions[2]	**$1,006**	$ 662	$ 625
Equity and equity-related offerings[3]	**45**	67	72
Fixed income offerings[4]	**239**	256	265

1. Source: Thomson Reuters, data at January 17, 2017. 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.

2016 Compared with 2015

Investment banking revenues of $4,476 million in 2016 decreased 11% from 2015 due to lower underwriting revenues, partially offset by an increase in advisory revenues in 2016.

- Advisory revenues increased reflecting the higher dollar volume of completed merger, acquisition and restructuring transactions ("M&A") activity (see Investment Banking Volumes table). As the number of completed transactions decreased in 2016 versus 2015, the 2016 revenue increase was at a lower rate than the percentage increase in dollar volume.

- Equity underwriting revenues decreased as a result of lower equity-related offerings in 2016 (see Investment Banking Volumes table). Fixed income underwriting revenues decreased in 2016, primarily due to lower bond and loan fees.

2015 Compared with 2014

Investment banking revenues of $5,008 million in 2015 decreased 4% from 2014 due to lower underwriting revenues, partially offset by higher advisory revenues.

- Advisory revenues increased led primarily by M&A fee realization in the Americas.

- Equity underwriting revenues decreased on reduced volumes driven by lower initial public offerings (see Investment Banking Volumes table). Fixed income underwriting revenues decreased primarily driven by lower non-investment grade bond and loan fees.

Sales and Trading Net Revenues

By Income Statement Line Item

$ in millions	**2016**	2015	2014
Trading	**$ 9,387**	$ 9,400	$ 8,445
Commissions and fees	**2,456**	2,616	2,610
Asset management, distribution and administration fees	**293**	281	281
Net interest	**165**	153	(592)
Total sales and trading net revenues	**$ 12,301**	$ 12,450	$ 10,744

By Business

				% Change	
$ in millions	**2016**	2015	2014	**2016**	2015
Equity—U.S. GAAP	**$ 8,037**	$ 8,288	$ 7,135	**(3)%**	16%
Impact of DVA[1]	**—**	(163)	(232)	**100%**	30%
Impact of FVA[2]	**—**	—	2	**—**	(100)%
Equity—non-GAAP	**$ 8,037**	$ 8,125	$ 6,905	**(1)%**	18%
Fixed income—U.S. GAAP[3]	**$ 5,117**	$ 4,758	$ 4,214	**8%**	13%
Impact of DVA[1]	**—**	(455)	(419)	**100%**	(9)%
Impact of FVA[2]	**—**	—	466	**—**	(100)%
Fixed income—non-GAAP	**$ 5,117**	$ 4,303	$ 4,261	**19%**	1%
Other—U.S. GAAP	**(853)**	(596)	(605)	**(43)%**	1%
Total—U.S. GAAP	**$12,301**	$12,450	$10,744	**(1)%**	16%
Total—Impact of DVA[1]	**—**	(618)	(651)	**100%**	5%
Total—Impact of FVA[2]	**—**	—	468	**—**	(100)%
Total—non-GAAP	**$12,301**	$11,832	$10,561	**4%**	12%

1. In 2016, 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) are recorded within OCI in the consolidated comprehensive income statements. In 2015 and 2014, DVA gains (losses) were recorded within Trading revenues in the consolidated income statements. See Notes 2 and 15 to the consolidated financial statements in Item 8 for further information.
2. Represents the initial implementation of FVA.
3. Effective in 2016, the Institutional Securities "Fixed Income and Commodities" business has been renamed the "Fixed Income" business.

Sales and trading net revenues, including equity and fixed income sales and trading net revenues that exclude the impact of DVA in 2015, or exclude the impact of DVA and the initial implementation of FVA in 2014, are non-GAAP financial measures that we consider useful for us, investors and analysts to allow further comparability of period-to-period operating performance.

Sales and Trading Activities—Equity and Fixed Income

Following is a description of the sales and trading activities within our equities and fixed income businesses as well as how their results impact the income statement line items, followed by a presentation and explanation of results.

Equities—Financing. We provide financing and prime brokerage services to our clients active in the equity markets through a variety of products including margin lending, securities lending and swaps. Results from this business are largely driven by the difference between financing income earned and financing costs incurred, which are reflected in Net interest for securities and equity lending products and in Trading revenues for derivative products.

Equities—Execution services. We make markets for our clients in equity-related securities and derivative products, including providing liquidity and hedging products. A significant portion of the results for this business is generated by commissions and fees from executing and clearing client transactions on major stock and derivative exchanges as well as from OTC transactions. Market-making also generates gains and losses on inventory, which are reflected in Trading revenues.

Fixed income—Within fixed income we make markets in order to facilitate client activity as part of the following products and services.

- *Global macro products.* We make markets for our clients in interest rate, foreign exchange and emerging market products, including exchange-traded and OTC securities, loans and derivative instruments. The results of this market-making activity are primarily driven by gains and losses from buying and selling positions to stand ready for and satisfy client demand and are recorded in Trading revenues.
- *Credit products.* We make markets in credit-sensitive products, such as corporate bonds and mortgage securities and other securitized products, and related derivative instruments. The value of positions in this business are sensitive to changes in credit spreads and interest rates, which result in gains and losses reflected in Trading revenues. Due to the amount and type of the interest-bearing securities and loans making up this business, a significant portion of the results is also reflected in Net interest revenues.
- *Commodities products.* We make markets in various commodity products related primarily to electricity, natural gas, oil, and precious metals, with the results primarily reflected in Trading revenues.

Sales and Trading Net Revenues—Equity and Fixed Income

$ in millions	2016			
	Trading	Fees[1]	Net Interest[2]	Total
Financing	**$ 3,668**	**$ 347**	**$ (283)**	**$ 3,732**
Execution services	**2,231**	**2,241**	**(167)**	**4,305**
Total Equity	**$ 5,899**	**$2,588**	**$ (450)**	**$ 8,037**
Total Fixed Income	**$ 4,115**	**$ 162**	**$ 840**	**$ 5,117**

$ in millions	2015			
	Trading	Fees[1]	Net Interest[2]	Total
Financing	$ 3,300	$ 322	$ 126	$ 3,748
Execution services	2,210	2,437	(270)	4,377
Impact of DVA[3]	163	—	—	163
Total Equity	$ 5,673	$2,759	$ (144)	$ 8,288
Fixed Income	$ 3,333	$ 139	$ 831	$ 4,303
Impact of DVA[3]	455	—	—	455
Total Fixed Income	$ 3,788	$ 139	$ 831	$ 4,758

$ in millions	2014			
	Trading	Fees[1]	Net Interest[2]	Total
Financing	$ 2,843	$ 283	$ 23	$ 3,149
Execution services	1,623	2,473	(340)	3,756
Impact of DVA[3]	232	—	—	232
Impact of FVA	(2)	—	—	(2)
Total Equity	$ 4,696	$2,756	$ (317)	$ 7,135
Fixed Income	$ 3,824	$ 136	$ 301	$ 4,261
Impact of DVA[3]	419	—	—	419
Impact of FVA	(466)	—	—	(466)
Total Fixed Income	$ 3,777	$ 136	$ 301	$ 4,214

1. Includes Commissions and fees and Asset management, distribution and administration fees.
2. Funding costs are allocated to the businesses based on funding usage and are included in Net interest in the previous tables. Such allocations were estimated for prior periods to conform to the current presentation.
3. In 2016, 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) are recorded within OCI in the consolidated comprehensive income statements. In 2015 and 2014, the DVA gains (losses) were recorded within Trading revenues in the consolidated income statements. See Notes 2 and 15 to the consolidated financial statements in Item 8 for further information.

As discussed in "Net Revenues by Segment" herein, we manage each of the sales and trading businesses based on its aggregate net revenues, which are comprised of the consolidated income statement line items quantified in the previous table. Trading revenues are affected by a variety of market dynamics, including volumes, bid-offer spreads, and inventory prices, as well as impacts from hedging activity, which are interrelated. We provide qualitative commentary in the discussion of results that follow on the key drivers of period over period variances, as the quantitative impact of the various market dynamics typically cannot be disaggregated.

For additional information on total Trading revenues, see the table "Trading Revenues by Product Type" in Note 4 to the consolidated financial statements in Item 8.

2016 Compared with 2015

Equity

Excluding the $163 million positive impact of DVA on 2015 results, equity sales and trading net revenues of $8,037 million in 2016 were lower than 2015, reflecting lower results in both financing and execution services revenues.

- Financing revenues were in line with the results from 2015 as Net interest revenues declined from higher net interest costs, reflecting the business' increased portion of global liquidity reserve requirements, offset by increased client activity in equity swaps reflected in Trading.
- Execution services decreased 2% from 2015, primarily reflecting a decrease in fee revenues of $196 million due to reduced client activity.

Fixed Income

Excluding the $455 million positive impact of DVA on 2015 results, fixed income net revenues of $5,117 million in 2016 were 19% higher than 2015, primarily due to improved results in credit products.

- Credit products Trading revenues were the primary driver for the overall increase in fixed income Trading revenues of $782 million, reflecting an improved credit market environment that resulted in gains on inventory in 2016 compared with losses in 2015.
- Overall results from other fixed income businesses were relatively unchanged. There was a net increase in Trading revenues from global macro products, reflecting gains on inventory in interest rate products, offset by declines in commodities activities, primarily due to 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 "Investments, Other Revenues, Non-interest Expenses, Income Tax Items, Dispositions and Other Items—2015 Compared with 2014—Dispositions" herein.

Other

- Other sales and trading net losses of $853 million in 2016 increased from 2015, primarily reflecting losses in 2016 associated with corporate loan hedging activity.

2015 Compared with 2014

Equity

Equity sales and trading net revenues, excluding the impact of DVA and the implementation of FVA, increased reflecting higher results in financing and execution services revenues.

- Financing revenues increased 19% from 2014 with an increase in client balances and derivative activity reflected in the $457 million increase in Trading revenues primarily from equity swaps and a $103 million increase in Net interest revenues for securities.

- Execution services increased 17% from 2014, primarily due to the $587 million increase in Trading revenues from client activity in derivatives and reduced inventory losses compared with the prior year.

Fixed Income

Excluding the $455 million positive impact of DVA on 2015 results, and the $419 million positive impact of DVA and the $466 million negative impact from the implementation of FVA on 2014 results, fixed income net revenues of $4,303 million in 2015 were 1% higher than 2014 due to improved results in global macro and commodities products, offset by lower results in credit products.

- Global macro products results increased from 2014, primarily due to an increase in Trading revenues due to improved results in interest rate products as a result of inventory gains and improved performance in foreign exchange products

- Credit products decreased, primarily driven by a decrease in Trading revenues from lower results in credit and securitized products from a widening credit spread environment, which led to inventory losses. This decrease was partially offset by an increase in Net interest revenues, driven primarily by a change in the product mix in the securitized products group assets.

- Commodities products net revenues increased, primarily reflecting higher revenues from the global oil merchanting business, which was sold on November 1, 2015. The increase was partially offset by credit-driven losses and the absence of revenues from TransMontaigne Inc., which was sold on July 1, 2014 (see "Investments, Other Revenues, Non-interest Expenses, Income Tax Items, Dispositions and Other Items—2015 Compared with 2014—Dispositions" herein).

Investments, Other Revenues, Non-interest Expenses, Income Tax Items, Dispositions and Other Items

2016 Compared with 2015

Investments

- Net investment gains of $147 million in 2016 decreased from 2015 as a result of lower gains on real estate and business-related investments and losses on investments associated with our compensation plans compared with gains in 2015.

Other

- Other revenues of $535 million in 2016 increased from 2015, primarily reflecting mark-to-market gains on loans held for sale in 2016 compared with mark-to-market losses in 2015, partially offset by 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 8 for further information).

Non-interest Expenses

Non-interest expenses of $12,336 million in 2016 decreased from 2015, primarily reflecting a 3% reduction in Compensation and benefits expenses and an 11% reduction in Non-compensation expenses in 2016.

- Compensation and benefits expenses decreased in 2016, primarily due to a decrease in salaries, severance costs, discretionary incentive compensation and employer taxes, partially offset by an increase in the fair value of deferred compensation plan referenced investments.

- Non-compensation expenses decreased in 2016, primarily due to lower litigation costs and Professional services expense. In 2015, Non-compensation expenses included increases to reserves for the settlement of a credit default swap ("CDS") antitrust litigation matter and legacy residential mortgage-backed securities matters.

2015 Compared with 2014

Investments

- Net investment gains of $274 million in 2015 increased 14% from 2014 driven by gains on business-related investments.

Other

- Other revenues of $221 million in 2015 decreased 68% from 2014 due to the absence of gains realized on certain assets sold in 2014 (see Note 1 to the consolidated financial statements in Item 8) and markdowns and provisions on loans held for sale and held for investment.

Non-interest Expenses

Non-interest expenses of $13,282 million in 2015 decreased 22% from 2014 driven by a 25% reduction in Non-compensation expenses and a 17% reduction in Compensation and benefits expenses.

- Compensation and benefits expenses decreased, primarily due to the 2014 compensation actions, a decrease in the fair value of deferred compensation plan referenced investments and a decrease in the level of discretionary incentive compensation in 2015 (see also "Supplemental Financial Information and Disclosures—Discretionary Incentive Compensation" herein).
- Non-compensation expenses decreased, primarily due to lower litigation costs.

Income Tax Items

In 2016, we recognized in Provision for (benefit from) income taxes net discrete tax benefits of $83 million. These net discrete tax benefits were primarily related to the remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination, partially offset by adjustments for other tax matters.

In 2015, we recognized in Provision for (benefit from) income taxes net discrete tax benefits of $564 million. These net discrete tax benefits were 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 United Kingdom ("U.K.").

In 2014, we recognized in Provision for (benefit from) income taxes net discrete tax benefits of $839 million. This included net discrete tax benefits of $612 million principally associated with remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination and $237 million primarily associated with the repatriation of non-U.S. earnings at a cost lower than originally estimated. In addition, our Provision for (benefit from) income taxes was impacted by approximately $900 million of tax provision as a result of non-deductible expenses related to litigation and regulatory matters.

Dispositions

On November 1, 2015, we completed the sale of our global oil merchanting unit of the commodities division to Castleton Commodities International LLC. The loss on sale of approximately $71 million was recognized in Other revenues.

On July 1, 2014, we completed the sale of our ownership stake in TransMontaigne Inc., a U.S.-based oil storage, marketing and transportation company, as well as related physical inventory and the assumption of our obligations under certain terminal storage contracts, to NGL Energy Partners LP. The gain on sale of $112 million was recognized in Other revenues.

On March 27, 2014, we completed the sale of Canterm Canadian Terminals Inc., a public storage terminal operator for refined products with two distribution terminals in Canada. The gain on sale was approximately $45 million and was recognized in Other revenues.

Other Items

Japanese Securities Joint Venture

We hold a 40% voting interest and Mitsubishi UFJ Financial Group, Inc. ("MUFG") holds a 60% voting interest in MUMSS.

To the extent that losses incurred by MUMSS result in a requirement to restore its capital level, MUFG is solely responsible for providing this additional capital to a minimum level, whereas we are not obligated to contribute additional capital to MUMSS. To the extent that MUMSS is required to increase its capital level due to factors other than losses, such as changes in regulatory requirements, both MUFG and we are required to contribute the necessary capital based upon the economic interest as set forth above.

See Note 8 to the consolidated financial statements in Item 8 for further information.

Noncontrolling Interests

Noncontrolling interests primarily relate to MUFG's interest in Morgan Stanley MUFG Securities Co., Ltd.

Wealth Management

Income Statement Information

$ in millions	2016[1]	2015	2014	% change 2016	% change 2015
Revenues					
Investment banking	**$ 484**	$ 623	$ 791	**(22)%**	(21)%
Trading	**861**	731	957	**18%**	(24)%
Investments	**—**	18	9	**N/M**	100%
Commissions and fees	**1,745**	1,981	2,127	**(12)%**	(7)%
Asset management, distribution and administration fees	**8,454**	8,536	8,345	**(1)%**	2%
Other	**277**	255	320	**9%**	(20)%
Total non-interest revenues	**11,821**	12,144	12,549	**(3)%**	(3)%
Interest income	**3,888**	3,105	2,516	**25%**	23%
Interest expense	**359**	149	177	**141%**	(16)%
Net interest	**3,529**	2,956	2,339	**19%**	26%
Net revenues	**15,350**	15,100	14,888	**2%**	1%
Compensation and benefits	**8,666**	8,595	8,825	**1%**	(3)%
Non-compensation expenses	**3,247**	3,173	3,078	**2%**	3%
Total non-interest expenses	**11,913**	11,768	11,903	**1%**	(1)%
Income from continuing operations before income taxes	**3,437**	3,332	2,985	**3%**	12%
Provision for (benefit from) income taxes	**1,333**	1,247	(207)	**7%**	N/M
Net income applicable to Morgan Stanley	**$ 2,104**	$ 2,085	$ 3,192	**1%**	(35)%

N/M—Not Meaningful

1. Effective July 1, 2016, the Institutional Securities and Wealth Management business segments entered into an agreement, whereby Institutional Securities assumed management of Wealth Management's fixed income client-driven trading activities and employees. Institutional Securities now pays fees to Wealth Management based on distribution activity (collectively, the "Fixed Income Integration"). Prior periods have not been recast for this new intersegment agreement due to immateriality.

Statistical Data

Financial Information and Statistical Data

$ in billions	At December 31, 2016	At December 31, 2015
Client assets	**$ 2,103**	$ 1,985
Fee-based client assets[1]	**$ 877**	$ 795
Fee-based client assets as a percentage of total client assets	**42%**	40%
Client liabilities[2]	**$ 73**	$ 64
Bank deposit program	**$ 153**	$ 149
Investment securities portfolio	**$ 63.9**	$ 57.9
Loans and lending commitments	**$ 68.7**	$ 55.3
Wealth Management representatives	**15,763**	15,889
Retail locations	**601**	608

	2016	2015	2014
Revenues per representative (dollars in thousands)[3]	**$ 968**	$ 950	$ 914
Client assets per representative (dollars in millions)[4]	**$ 133**	$ 125	$ 126
Fee-based asset flows[5] (dollars in billions)	**$ 48.5**	$ 46.3	$ 58.8

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, residential real estate loans and margin lending.
3. Revenues per representative equal Wealth Management's net 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 institutional cash management-related activity.

Transactional Revenues

$ in millions	2016	2015	2014	% Change 2016	% Change 2015
Investment banking	**$ 484**	$ 623	$ 791	**(22)%**	(21)%
Trading	**861**	731	957	**18%**	(24)%
Commissions and fees	**1,745**	1,981	2,127	**(12)%**	(7)%
Total	**$ 3,090**	$ 3,335	$ 3,875	**(7)%**	(14)%

2016 Compared with 2015

Net Revenues

Transactional Revenues

Transactional revenues of $3,090 million in 2016 decreased 7% from the prior year, primarily reflecting lower revenues related to commissions and fees and investment banking revenues, partially offset by higher trading revenues.

- Investment banking revenues decreased in 2016, primarily due to lower revenues from the distribution of unit investment trusts, equity and structured products.
- Trading revenues increased in 2016, primarily due to gains related to investments associated with certain employee deferred compensation plans compared with losses in 2015.
- Commissions and fees decreased in 2016 reflecting lower daily average commissions, primarily due to reduced client activity in equity, annuity and mutual fund products. This decrease was partially offset by increased fees due to the Fixed Income Integration.

Asset Management

Asset management, distribution and administration fees of $8,454 million in 2016 decreased 1% from the prior year, primarily due to the decrease in mutual fund fees. Revenues from fee-based accounts were relatively flat with decreased client fee rates, partially offset by positive flows. See "Fee-Based Client Assets Activity and Average Fee Rate by Account Type" herein for more details.

Net Interest

Net interest of $3,529 million in 2016 increased 19% from the prior year, primarily due to higher loan balances and investment portfolio yields.

Other

Other revenues of $277 million in 2016 increased 9% from the prior year due to the combination of higher referral fees in 2016 and a decrease in provision for loan losses in 2016.

Non-interest Expenses

Non-interest expenses of $11,913 million in 2016 increased 1% from the prior year.

- Compensation and benefits expenses increased in 2016, primarily due to an increase in the fair value of deferred compensation plan referenced investments.
- Non-compensation expenses increased in 2016, primarily as a result of a $70 million provision related to certain brokerage service reporting activities. See "Other Items" herein.

2015 Compared with 2014

Net Revenues

Transactional Revenues

Transactional revenues of $3,335 million in 2015 decreased 14% from the prior year due to lower revenues in each of Trading, Investment banking, and Commissions and fees.

- Investment banking revenues decreased, primarily due to lower revenues from the distribution of underwritten offerings.
- Trading revenues decreased, primarily due to losses related to investments associated with certain employee deferred compensation plans and lower revenues from fixed income products.
- Commissions and fees decreased, primarily due to lower revenues from equity, mutual fund and annuity products, partially offset by higher revenues from alternative asset classes.

Asset Management

Asset management, distribution and administration fees of $8,536 million in 2015 increased 2% from the prior year, primarily due to higher fee-based revenues that resulted from positive flows and higher average market values over 2015 as compared with the average market values during 2014. The increase in fee-based revenues was partially offset by lower referral fees from the bank deposit program, reflecting the completion of the transfer of deposits from Citigroup Inc. ("Citi") to us in connection with the former retail securities joint venture between the Firm and Citi. See "Fee-Based Client Assets Activity and Average Fee Rate by Account Type" herein for more details.

Net Interest

Net interest of $2,956 million in 2015 increased 26% from the prior year, primarily due to higher balances in the bank deposit program and growth in loans and lending commitments.

Other

Other revenues of $255 million in 2015 decreased 20% from the prior year, primarily due to a $40 million gain on sale of a retail property space in the prior year and an increase in the provision for loan losses in 2015.

Non-interest Expenses

Non-interest expenses of $11,768 million in 2015 decreased 1% from the prior year, primarily due to lower Compensation and benefit expenses, partially offset by higher Non-compensation expenses.

- Compensation and benefits expenses decreased, primarily due to the 2014 compensation actions, a decrease in the fair value of deferred compensation plan referenced investments and a decrease in the level of discretionary incentive compensation in 2015 (see also "Supplemental Financial Information and Disclosures—Discretionary Incentive Compensation" herein).
- Non-compensation expenses increased, primarily due to an increase in Professional services, resulting from increased consulting and legal fees, partially offset by a provision related to a rescission offer in the prior year. Other expenses in 2014 included $50 million related to a rescission offer to Wealth Management clients who may not have received a prospectus for certain securities transactions, for which delivery of a prospectus was required.

Income Tax Items

In 2014, we recognized in Provision for (benefit from) income taxes net discrete tax benefits of $1,390 million due to the release of a deferred tax liability as a result of an internal restructuring to simplify our legal entity organization. For a further discussion of these net discrete tax benefits, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein.

Other Items

The Firm has identified operational issues that resulted in the reporting of incorrect cost basis tax information to the Internal Revenue Service ("IRS") and retail brokerage clients for tax years 2011 through 2016. Most of our clients are not impacted by these issues. However, these issues have affected a significant number of client accounts. In the case of clients for whom the Firm has determined that there have been tax underpayments to the IRS as a result of these issues, the Firm is in advanced discussions with the IRS to resolve client tax underpayments to the IRS caused by these issues at no expense to our clients. In the case of clients for whom the Firm has determined that there have been tax overpayments to the IRS as a result of these issues, the Firm plans to notify them and to offer to pay them an amount equivalent to their overpayment to the IRS. The $70 million provision referred to above is based on currently available information and analyses, and our review of these issues is continuing.

Fee-Based Client Assets Activity and Average Fee Rate by Account Type

Wealth Management earns fees based on a contractual percentage of fee-based client assets related to certain account types that we offer. These fees, which we record in the Asset management, distribution and administration fees line on its income statement, are earned based on the client assets in the specific account types in which the client participates and are generally not driven by asset class. For most account types, fees are billed in the first month of each quarter based on the related client assets as of the end of the prior quarter. Across the account types, fees will vary based on both the distinct services provided within each account type and on the level of household assets under supervision in Wealth Management.

$ in billions, fee rate in bps	At December 31, 2015	Inflows	Outflows	Market Impact	**At December 31, 2016**	**Average for the Year Ended December 31, 2016** Fee Rate
Separately managed accounts[1]	$ 283	**$ 33**	**$ (97)**	**$ 3**	**$ 222**	**27**
Unified managed accounts	105	**107**	**(17)**	**9**	**204**	**105**
Mutual fund advisory	25	**2**	**(6)**	**—**	**21**	**121**
Representative as advisor	115	**31**	**(26)**	**5**	**125**	**88**
Representative as portfolio manager	252	**63**	**(41)**	**11**	**285**	**101**
Subtotal	$ 780	**$ 236**	**$ (187)**	**$ 28**	**$ 857**	**74**
Cash management	15	**14**	**(9)**	**—**	**20**	**6**
Total fee-based client assets	$ 795	**$ 250**	**$ (196)**	**$ 28**	**$ 877**	**72**

$ in billions, fee rate in bps	At December 31, 2014	Inflows	Outflows	Market Impact	At December 31, 2015	Average for the Year Ended December 31, 2015 Fee Rate
Separately managed accounts[1]	$ 285	$ 42	$ (32)	$ (12)	$ 283	34
Unified managed accounts	93	29	(14)	(3)	105	113
Mutual fund advisory	31	3	(6)	(3)	25	121
Representative as advisor	119	29	(25)	(8)	115	89
Representative as portfolio manager	241	58	(38)	(9)	252	104
Subtotal	$ 769	$ 161	$ (115)	$ (35)	$ 780	76
Cash management	16	9	(10)	—	15	6
Total fee-based client assets	$ 785	$ 170	$ (125)	$ (35)	$ 795	74

$ in billions, fee rate in bps	At December 31, 2013	Inflows	Outflows	Market Impact	At December 31, 2014	Average for the Year Ended December 31, 2014 Fee Rate
Separately managed accounts[1]	$ 260	$ 41	$ (31)	$ 15	$ 285	35
Unified managed accounts	78	24	(11)	2	93	116
Mutual fund advisory	34	5	(8)	—	31	121
Representative as advisor	111	30	(23)	1	119	90
Representative as portfolio manager	201	60	(28)	8	241	106
Subtotal	$ 684	$ 160	$ (101)	$ 26	$ 769	77
Cash management	13	12	(9)	—	16	6
Total fee-based client assets	$ 697	$ 172	$ (110)	$ 26	$ 785	75

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.

- *Inflows*—include new accounts, account transfers, deposits, dividends and interest.
- *Outflows*—include closed or terminated accounts, account transfers, withdrawals and client fees.
- *Market impact*—includes realized and unrealized gains and losses on portfolio investments.
- *Separately managed accounts*—Accounts by which third-party asset managers are engaged to manage clients' assets with investment decisions made by the asset manager. One third-party asset manager strategy can be held per account.
- *Unified managed accounts*—Accounts that provide the client with the ability to combine separately managed accounts, mutual funds and exchange traded funds all in one aggregate account. Unified managed accounts can be client-directed, financial advisor-directed or directed by us (with "directed" referring to the investment direction or decision/discretion/power of attorney).
- *Mutual fund advisory*—Accounts that give the client the ability to systematically allocate assets across a wide range of mutual funds. Investment decisions are made by the client.
- *Representative as advisor*—Accounts where the investment decisions must be approved by the client and the financial advisor must obtain approval each time a change is made to the account or its investments.
- *Representative as portfolio manager*—Accounts where a financial advisor has discretion (contractually approved by the client) to make ongoing investment decisions without the client's approval for each individual change.
- *Cash management*—Accounts where the financial advisor provides discretionary cash management services to institutional clients, whereby securities or proceeds are invested and reinvested in accordance with the client's investment criteria. Generally, the portfolio will be invested in short-term fixed income and cash equivalent investments.

Investment Management

Income Statement Information

$ in millions	2016	2015	2014	% Change 2016	% Change 2015
Revenues					
Investment banking	**$ —**	$ 1	$ 5	**N/M**	(80)%
Trading	**(2)**	(1)	(19)	**(100)%**	95%
Investments	**13**	249	587	**(95)%**	(58)%
Commissions and fees	**3**	1	—	**200%**	N/M
Asset management, distribution and administration fees	**2,063**	2,049	2,049	**1%**	—
Other	**31**	32	106	**(3)%**	(70)%
Total non-interest revenues	**2,108**	2,331	2,728	**(10)%**	(15)%
Interest income	**5**	2	2	**150%**	—
Interest expense	**1**	18	18	**(94)%**	—
Net interest	**4**	(16)	(16)	**N/M**	—
Net revenues	**2,112**	2,315	2,712	**(9)%**	(15)%
Compensation and benefits	**937**	954	1,213	**(2)%**	(21)%
Non-compensation expenses	**888**	869	835	**2%**	4%
Total non-interest expenses	**1,825**	1,823	2,048	**—**	(11)%
Income from continuing operations before income taxes	**287**	492	664	**(42)%**	(26)%
Provision for income taxes	**75**	128	207	**(41)%**	(38)%
Income from continuing operations	**212**	364	457	**(42)%**	(20)%
Income from discontinued operations, net of income taxes	**2**	1	5	**100%**	(80)%
Net income	**214**	365	462	**(41)%**	(21)%
Net income (loss) applicable to noncontrolling interests	**(11)**	19	91	**N/M**	(79)%
Net income applicable to Morgan Stanley	**$ 225**	$ 346	$ 371	**(35)%**	(7)%

N/M—Not Meaningful

2016 Compared with 2015

Net Revenues

Investments

- Investments gains of $13 million in 2016 decreased 95% from the prior year reflecting weaker investment performance compared with the prior year. This was partially offset by carried interest losses in 2015 associated with Asia private equity that did not re-occur in 2016.

Asset Management, Distribution and Administration Fees

- Asset management, distribution and administration fees of $2,063 million in 2016 were relatively unchanged from the prior year, as increases in management fees resulting from higher assets under management or supervision ("AUM") and average fee rates in certain products were offset by lower performance fees (see "AUM and Average Fee Rate by Asset Class" herein).

Non-interest Expenses

Non-interest expenses of $1,825 million in 2016 were relatively unchanged from the prior year, primarily due to higher Non-compensation expenses offset by lower Compensation and benefits expenses.

- Compensation and benefits expenses decreased, primarily due to a decrease in salaries.
- Non-compensation expenses increased, primarily due to higher brokerage clearing and exchange fees, partially offset by lower litigation costs and expense management.

2015 Compared with 2014

Net Revenues

Investments

- Investments gains of $249 million in 2015 decreased 58% from the prior year reflecting the reversal of previously accrued carried interest associated with Asia private equity and additional net markdowns on principal investments.

Asset Management, Distribution and Administration Fees

- Asset management, distribution and administration fees were unchanged from the prior year as the impact of positive net flows was offset by a shift in the asset class mix from equity and fixed income products to liquidity products (see "AUM and Average Fee Rate by Asset Class" herein).

Other

- Other revenues of $32 million in 2015 decreased 70% from the prior year due to lower revenues associated with our minority investment in certain third-party investment managers.

Non-interest Expenses

Non-interest expenses of $1,823 million in 2015 decreased 11% from the prior year, primarily due to lower Compensation and benefit expenses, partially offset by higher Non-compensation expenses.

- Compensation and benefits expenses decreased, primarily due to the 2014 compensation actions, a decrease in deferred compensation associated with carried interest and a decrease in the level of incentive compensation in 2015 (see also "Supplemental Financial Information and Disclosures—Discretionary Incentive Compensation" herein).
- Non-compensation expenses increased, primarily due to higher brokerage clearing and exchange fees, and professional services resulting from higher consulting and legal fees and information processing and communications expenses.

Assets Under Management or Supervision

Effective in 2016, the presentation of AUM for Investment Management has been revised to better align asset classes with its present organizational structure. All prior period information has been recast in the new format.

AUM and Average Fee Rate by Asset Class

$ in billions, Fee Rate in bps	At December 31, 2015	Inflows	Outflows	Distributions	Market Impact	Foreign Currency Impact	**At December 31, 2016**	**Average for the Year Ended December 31, 2016**	
								Total AUM	Fee Rate
Equity	$ 83	**$ 19**	**$ (24)**	**$ —**	**$ 1**	**$ —**	**$ 79**	**$ 81**	**72**
Fixed income	60	**25**	**(26)**	**—**	**2**	**(1)**	**60**	**61**	**32**
Liquidity	149	**1,325**	**(1,310)**	**—**	**—**	**(1)**	**163**	**151**	**18**
Alternative / Other products	114	**27**	**(27)**	**(3)**	**4**	**—**	**115**	**115**	**75**
Total assets under management or supervision	$ 406	**$1,396**	**$ (1,387)**	**$ (3)**	**$ 7**	**$ (2)**	**$ 417**	**$ 408**	**47**
Shares of minority stake assets	8						**8**	**8**	

$ in billions, Fee Rate in bps	At December 31, 2014	Inflows[1]	Outflows	Distributions	Market Impact	Foreign Currency Impact	At December 31, 2015	Average for the Year Ended December 31, 2015	
								Total AUM	Fee Rate
Equity	$ 99	$ 15	$ (30)	$ —	$ —	$ (1)	$ 83	$ 93	69
Fixed income	65	21	(23)	—	(1)	(2)	60	63	32
Liquidity	128	1,259	(1,238)	—	—	—	149	136	10
Alternative / Other products	111	28	(18)	(6)	—	(1)	114	113	79
Total assets under management or supervision	$ 403	$ 1,323	$ (1,309)	$ (6)	$ (1)	$ (4)	$ 406	$ 405	46
Shares of minority stake assets	7						8	7	

$ in billions, Fee Rate in bps	At December 31, 2013	Inflows	Outflows	Distributions	Market Impact	Foreign Currency Impact	At December 31, 2014	Average for the Year Ended December 31, 2014	
								Total AUM	Fee Rate
Equity	$ 106	$ 16	$ (24)	$ (1)	$ 3	$ (1)	$ 99	$ 102	67
Fixed income	60	26	(20)	—	1	(2)	65	63	32
Liquidity	112	963	(945)	—	(2)	—	128	119	8
Alternative / Other products	99	31	(20)	(2)	4	(1)	111	110	81
Total assets under management or supervision	$ 377	$1,036	$ (1,009)	$ (3)	$ 6	$ (4)	$ 403	$ 394	47
Shares of minority stake assets	6						7	7	

bps—Basis points

1. Includes $4.6 billion related to the transfer of certain equity portfolio managers and their portfolios from the Wealth Management business segment to the Investment Management business segment.

- *Inflows*—represent investments or commitments from new and existing clients in new or existing investment products, including reinvestments of client dividends and increases in invested capital. Excludes the impact of exchanges occurring, whereby a client changes positions within the same asset class.
- *Outflows*—represent redemptions from clients' funds, transition of funds from the committed capital period to the invested capital period and decreases in invested capital. Excludes the impact of exchanges occurring, whereby a client changes positions within the same asset class.

- *Distributions*—represent decreases in invested capital due to returns of capital after the investment period of a fund. It also includes fund dividends for which the client has not elected to reinvest.

- *Market impact*—includes realized and unrealized gains and losses on portfolio investments. This excludes any funds where market impact does not impact management fees.

- *Foreign currency impact*—reflects foreign currency changes for non-U.S. dollar denominated funds.

- *Average fee rate*—based on asset management and administration fees, net of waivers. It excludes performance-based fees and other non-management fees. For certain non-U.S. funds, it includes the portion of advisory fees that the advisor collects on behalf of third-party distributors. The payment of those fees to the distributor is included in Non-compensation expenses in the consolidated income statements.

- *Alternative / Other products*—asset class includes products in fund of funds, real estate, private equity and credit strategies as well as multi-asset portfolios.

- *Shares of minority stake assets*—represent the Investment Management business segment's proportional share of assets managed by entities in which it owns a minority stake.

Supplemental Financial Information and Disclosures

Legal

We incurred legal expenses of $263 million in 2016, $563 million in 2015 and $3,364 million in 2014. Legal expenses are included in Other expenses in the consolidated income statements.

Legal expenses incurred in 2015 were primarily related to increases in reserves for the settlement of a credit default swap antitrust litigation matter and for legacy residential mortgage-backed securities matters. The legal expenses incurred in 2014 were principally due to reserve additions and settlements related to legacy residential mortgage-backed securities and credit crisis related matters, including our $2,600 million agreement with the United States Department of Justice, Civil Division, which was reached on February 25, 2015 and finalized on February 10, 2016 (see "Contingencies—Legal" in Note 12 to the consolidated financial statements in Item 8).

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 market penetration of the Wealth Management business segment's client base. For a further discussion of our credit risks, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk" in Item 7A. For further discussion about loans and lending commitments, see Notes 7 and 12 to the consolidated financial statements in Item 8.

U.S. Bank Subsidiaries' Supplemental Financial Information Excluding Transactions with the Parent Company

$ in billions	At December 31, 2016	At December 31, 2015
U.S. Bank Subsidiaries assets	**$ 180.7**	$ 174.2
U.S. Bank Subsidiaries investment securities portfolio[1]	**63.9**	57.9
Wealth Management U.S. Bank Subsidiaries data		
Securities-based lending and other loans[2]	**$ 36.0**	$ 28.6
Residential real estate loans	**24.4**	20.9
Total	**$ 60.4**	$ 49.5
Institutional Securities U.S. Bank Subsidiaries data		
Corporate loans	**$ 20.3**	$ 22.9
Wholesale real estate loans	**9.9**	8.9
Total	**$ 30.2**	$ 31.8

1. The U.S. Bank Subsidiaries investment securities portfolio includes AFS investment securities of $50.3 billion at December 31, 2016 and $53.0 billion at December 31, 2015. The remaining balance represents held to maturity investment securities of $13.6 billion at December 31, 2016 and $4.9 billion at December 31, 2015.
2. Other loans primarily include tailored lending.

Income Tax Matters

Effective Tax Rate

	2016	2015	2014
From continuing operations	**30.8%**	25.9%	(2.5)%

2016

Included in the effective tax rate for 2016 were net discrete tax benefits of $68 million, primarily related to the remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination, partially offset by adjustments for other tax matters. Excluding these net discrete tax benefits, the effective tax rate from continuing operations for 2016 would have been 31.6%, which is generally reflective of the geographic mix of earnings.

2015

Included in the effective tax rate for 2015 were net discrete tax benefits 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 the legal entity organization in the U.K. Excluding these net discrete tax benefits, the effective tax rate from continuing operations for 2015 would have been 32.5%.

2014

Included in the effective tax rate for 2014 were net discrete tax benefits of $2,226 million. These net discrete tax benefits consisted of: $1,380 million primarily due to the release of a deferred tax liability, previously established as part of the acquisition of Smith Barney in 2009 through a charge to Additional paid-in capital, as a result of the legal entity restructuring that included a change in tax status of Morgan Stanley Smith Barney Holdings LLC from a partnership to a corporation; $609 million principally associated with the remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination; and $237 million primarily associated with the repatriation of non-U.S. earnings at a cost lower than originally estimated. Excluding these net discrete tax benefits, the effective tax rate from continuing operations for 2014 would have been 59.5%, which is primarily attributable to approximately $900 million of tax provision from non-deductible expenses for litigation and regulatory matters.

Discretionary Incentive Compensation

On December 1, 2014, the Compensation, Management Development and Succession Committee ("CMDS Committee") of our Board of Directors (the "Board") approved an approach for awards of discretionary incentive compensation for the 2014 performance year that were granted in 2015, which reduced the average deferral of such awards to an approximate baseline of 50%. Additionally, the CMDS Committee approved the acceleration of vesting for certain outstanding deferred cash-based incentive compensation awards. The deferred cash-based incentive compensation awards subject to accelerated vesting will be distributed on their regularly scheduled future distribution dates and will continue to be subject to cancellation and clawback provisions. The following table presents the increase in Compensation and benefits expense for the Firm and each of the business segments as a result of these actions in 2014 ("2014 compensation actions").

2014 Compensation and Benefits Expense

$ in millions	Institutional Securities	Wealth Management	Investment Management	Total
2014 compensation and benefits expense before fourth quarter actions[1]	$ 6,882	$ 8,737	$ 1,068	$ 16,687
Fourth quarter actions:				
Change in 2014 level of deferrals[2]	610	66	80	756
Acceleration of prior-year cash-based deferred awards[3]	294	22	65	381
Fourth quarter actions total	$ 904	$ 88	$ 145	$ 1,137
2014 compensation and benefits expense	$ 7,786	$ 8,825	$ 1,213	$ 17,824

1. Amount represents compensation and benefits expense at pre-adjustment accrual levels (*i.e.*, at an approximate average baseline 74% deferral rate and with no acceleration of cash-based award vesting that was utilized for the first three quarters of 2014).
2. Amounts reflect reduction in deferral level from an approximate average baseline of 74% to an approximate average baseline of 50%.
3. Amounts represent acceleration of vesting for certain cash-based awards.

Accounting Development Updates

The Financial Accounting Standards Board issued the following accounting updates that apply to us.

We consider the applicability and impact of all accounting updates. Accounting updates not listed below were assessed and determined to be either not applicable or are not expected to have a significant impact on our consolidated financial statements.

The following accounting update was adopted on January 1, 2017.

- *Improvements to Employee Share-Based Payment Accounting*. This accounting update simplifies the accounting for employee share-based payments, including the recognition of forfeitures, the classification of income tax consequences, and the classification within the cash flow statements. This guidance became effective for us as of January 1, 2017, and the transition impact was not significant. With this update, the income tax consequences for these payments are required to be recognized in Provision for income taxes in the consolidated income statements instead of additional paid-in capital. The impact of the income tax consequences may be either a benefit or a provision, and will primarily occur in the first quarter of each year as share-based awards to employees are

converted to Morgan Stanley shares. The impact of recognizing excess tax benefits upon conversion of awards in January 2017 was an approximate $110 million benefit to the Provision for income taxes.

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

- *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 revenues 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. We will adopt the guidance on January 1, 2018 and are currently evaluating the method of adoption.

  We expect this accounting update to potentially change the timing and presentation of certain revenues, as well as the timing and presentation of certain related costs, for Investment banking fees and Asset management, distribution and administration fees. Outside of Investment Management performance fees in the form of carried interest, discussed further in the following paragraph, these changes are not expected to be significant.

  Regarding the recognition of performance fees from fund management activities in the form of carried interest that are subject to reversal, there are alternative views in the industry which include consideration as to whether these arrangements are in the scope of the new revenue guidance or are financial instruments under the scope of equity method of accounting. If we follow the equity method of accounting principles, the current recognition of such fees would remain essentially unchanged. If the fees are deemed in the scope of the new revenue guidance, we would defer recognition until such fees are no longer subject to reversal, which would cause a significant delay in the recognition of these fees as revenue. We are currently assessing the alternative accounting approaches and continue to closely monitor developments in this still-evolving area.

  We will continue to assess the impact of the new rule as we progress through the implementation of the new standard; therefore, additional impacts may be identified prior to 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 HTM 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.

- *Leases.* This accounting update requires lessees to recognize on the balance sheet all leases with terms exceeding one year, which results in the recognition of a right of use asset and corresponding lease liability, including for those leases that 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.

- *Gains and Losses from the Derecognition of Nonfinancial Assets.* This accounting update clarifies the guidance on how to account for the derecognition of nonfinancial assets and in substance nonfinancial assets and also provides guidance on the accounting for partial sales of nonfinancial assets. This update is effective as of January 1, 2018.

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 8). We believe that of our significant accounting policies (see Note 2 to the consolidated financial statements in Item 8), the following policies involve a higher degree of judgment and complexity.

Fair Value

Financial Instruments Measured at Fair Value

A significant number of our financial instruments are carried at fair value. We make estimates regarding valuation of assets and liabilities measured at fair value in preparing the consolidated financial statements. These assets and liabilities include, but are not limited to:

- Trading assets and Trading liabilities;
- Investment Securities—AFS securities;
- Certain Securities purchased under agreements to resell;
- Certain Deposits, primarily structured certificates of deposits;

- Certain Short-term borrowings, primarily structured notes;
- Certain Securities sold under agreements to repurchase;
- Certain Other secured financings; and
- Certain Long-term borrowings, primarily structured notes.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (*i.e.*, the exit price) in an orderly transaction between market participants at the measurement date.

In determining fair value, we use various valuation approaches. A hierarchy for inputs is used in measuring fair value that maximizes the use of observable prices and inputs and minimizes the use of unobservable prices and inputs by requiring that the relevant observable inputs be used when available. The hierarchy is broken down into three levels, wherein Level 1 represents quoted prices in active markets, Level 2 represents valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, and Level 3 consists of valuation techniques that incorporate significant unobservable inputs and, therefore, require the greatest use of judgment. In periods of market disruption, the observability of prices and inputs may be reduced for many instruments. This condition could cause an instrument to be recategorized from Level 1 to Level 2 or from Level 2 to Level 3. In addition, a downturn in market conditions could lead to declines in the valuation of many instruments. For further information on the valuation process, fair value definition, Level 1, Level 2, Level 3 and related valuation techniques, and quantitative information about and sensitivity of significant unobservable inputs used in Level 3 fair value measurements, see Notes 2 and 3 to the consolidated financial statements in Item 8.

Where appropriate, valuation adjustments are made to account for various factors such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty and concentration risk in order to arrive at fair value. For a further discussion of valuation adjustments that we apply, see Note 2 to the consolidated financial statements in Item 8.

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

At December 31, 2016 and December 31, 2015, certain of our assets and liabilities were measured at fair value on a non-recurring basis, primarily relating to loans, other investments, premises, equipment and software costs, intangible assets, other assets and other liabilities, and accrued expenses. We incur losses or gains for any adjustments of these assets to fair value. A downturn in market conditions could result in impairment charges in future periods.

For assets and liabilities measured at fair value on a non-recurring basis, fair value is determined by using various valuation approaches. The same hierarchy as described above, which maximizes the use of observable inputs and minimizes the use of unobservable inputs by generally requiring that the observable inputs be used when available, is used in measuring fair value for these items.

See Note 3 to the consolidated financial statements in Item 8 for further information on assets and liabilities that are measured at fair value on a non-recurring basis.

Fair Value Control Processes

We employ control processes designed to validate the fair value of our financial instruments, including those derived from pricing models. These control processes are designed to ensure that the values used for financial reporting are based on observable inputs wherever possible. In the event that observable inputs are not available, the control processes are designed to ensure that the valuation approach utilized is appropriate and consistently applied and that the assumptions are reasonable.

See Note 2 to the consolidated financial statements in Item 8 for additional information regarding our valuation policies, processes and procedures.

Goodwill and Intangible Assets

Goodwill

We test goodwill for impairment on an annual basis on July 1 and on an interim basis when certain events or circumstances exist. We test for impairment at the reporting unit level, which is generally at the level of or one level below its business segments. Goodwill no longer retains its association with a particular acquisition once it has been assigned to a reporting unit. As such, all the activities of a reporting unit, whether acquired or organically developed, are available to support the value of the goodwill. For both the annual and interim tests, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount.

If after assessing the totality of events or circumstances, we determine it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then performing the two-step impairment test is not required. However, if we conclude otherwise, then we are required to perform the first step of the two-step impairment test. Goodwill impairment is determined by comparing the estimated fair value of a reporting unit with its respective carrying value. If the estimated fair value exceeds the carrying value,

goodwill at the reporting unit level is not deemed to be impaired. If the estimated fair value is below carrying value, however, further analysis is required to determine the amount of the impairment.

The estimated fair value of the reporting units is derived based on valuation techniques we believe market participants would use for each of the reporting units. The estimated fair value is generally determined by utilizing a discounted cash flow methodology or methodologies that incorporate price-to-book and price-to-earnings multiples of certain comparable companies. At each annual goodwill impairment testing date, each of our reporting units with goodwill had a fair value that was substantially in excess of its carrying value.

Intangible Assets

Amortizable intangible assets are amortized over their estimated useful life and are reviewed for impairment on an interim basis when certain events or circumstances exist. An impairment exists when the carrying amount of the intangible asset exceeds its fair value. An impairment loss will be recognized only if the carrying amount of the intangible asset is not recoverable and exceeds its fair value. The carrying amount of the intangible asset is not recoverable if it exceeds the sum of the expected undiscounted cash flows.

For both goodwill and intangible assets, to the extent an impairment loss is recognized, the loss establishes the new cost basis of the asset. Subsequent reversal of impairment losses is not permitted. For amortizable intangible assets, the new cost basis is amortized over the remaining useful life of that asset. Adverse market or economic events could result in impairment charges in future periods.

See Notes 2, 3 and 9 to the consolidated financial statements in Item 8 for additional information about goodwill and intangible assets.

Legal and Regulatory Contingencies

In the normal course of business, we have been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with our 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 in financial distress.

We are also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding our business and involving, among other matters, sales and trading activities, wealth and investment management services, financial products or offerings sponsored, underwritten or sold by us, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief.

Accruals for litigation and regulatory proceedings are generally determined on a case-by-case basis. Where available information indicates that it is probable a liability had been incurred at the date of the consolidated financial statements and we can reasonably estimate the amount of that loss, we accrue the estimated loss by a charge to income. In many proceedings, however, it is inherently difficult to determine whether any loss is probable or even possible or to estimate the amount of any loss.

For certain legal proceedings and investigations, we can estimate possible losses, additional losses, ranges of loss or ranges of additional loss in excess of amounts accrued. For certain other legal proceedings and investigations, we cannot reasonably estimate such losses, particularly for proceedings and investigations where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, disgorgement or penalties. Numerous issues may need to be resolved before a loss or additional loss or range of loss or additional range of loss can be reasonably estimated for a proceeding or investigation, 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 addressing novel or unsettled legal questions relevant to the proceedings or investigations in question.

Significant judgment is required in deciding when and if to make these accruals, and the actual cost of a legal claim or regulatory fine/penalty may ultimately be materially different from the recorded accruals.

See Note 12 to the consolidated financial statements in Item 8 for additional information on legal proceedings.

Income Taxes

We are subject to the income and indirect tax laws of the U.S., its states and municipalities and those of the foreign jurisdictions in which we have significant business operations. These tax laws are complex and subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. We must make judgments and interpretations about the application of these inherently complex tax laws when determining the provision for income taxes and the expense for indirect taxes and must also make estimates about when certain items affect taxable income in the various

tax jurisdictions. Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. We periodically evaluate the likelihood of assessments in each taxing jurisdiction resulting from current and subsequent years' examinations, and unrecognized tax benefits related to potential losses that may arise from tax audits are established in accordance with the guidance on accounting for unrecognized tax benefits. Once established, unrecognized tax benefits are adjusted when there is more information available or when an event occurs requiring a change.

Our provision for income taxes is composed of current and deferred taxes. Current income taxes approximate taxes to be paid or refunded for the current period. Our deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the applicable enacted tax rates and laws that will be in effect when such differences are expected to reverse. Our deferred tax balances also include deferred assets related to tax attribute carryforwards, such as net operating losses and tax credits that will be realized through reduction of future tax liabilities and, in some cases, are subject to expiration if not utilized within certain periods. We perform regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income and incorporate various tax planning strategies, including strategies that may be available to tax attribute carryforwards before they expire. Once the deferred tax asset balances have been determined, we may record a valuation allowance against the deferred tax asset balances to reflect the amount of these balances (net of valuation allowance) that we estimate it is more likely than not to realize at a future date. Both current and deferred income taxes could reflect adjustments related to our unrecognized tax benefits.

Significant judgment is required in estimating the consolidated provision for (benefit from) income taxes, current and deferred tax balances (including valuation allowance, if any), accrued interest or penalties and uncertain tax positions. Revisions in estimates and/or the actual costs of a tax assessment may ultimately be materially different from the recorded accruals and unrecognized tax benefits, if any.

See Note 2 to the consolidated financial statements in Item 8 for additional information on our significant assumptions, judgments and interpretations associated with the accounting for income taxes and Note 20 to the consolidated financial statements in Item 8 for additional information on our tax examinations.

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 and capital usage.

Total Assets by Business Segment

	At December 31, 2016			
$ in millions	Institutional Securities	Wealth Management	Investment Management	Total
Assets				
Cash and cash equivalents[1]	**$ 25,291**	**$ 18,022**	**$ 68**	**$ 43,381**
Trading assets at fair value	**259,680**	**64**	**2,410**	**262,154**
Investment securities	**16,222**	**63,870**	**—**	**80,092**
Securities purchased under agreements to resell	**96,735**	**5,220**	**—**	**101,955**
Securities borrowed	**124,840**	**396**	**—**	**125,236**
Customer and other receivables	**26,624**	**19,268**	**568**	**46,460**
Loans, net of allowance	**33,816**	**60,427**	**5**	**94,248**
Other assets[2]	**45,941**	**13,868**	**1,614**	**61,423**
Total assets	**$ 629,149**	**$ 181,135**	**$ 4,665**	**$ 814,949**

	At December 31, 2015			
$ in millions	Institutional Securities	Wealth Management	Investment Management	Total
Assets				
Cash and cash equivalents[1]	$ 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[2]	45,257	13,926	1,472	60,655
Total assets	$ 602,714	$ 179,708	$ 5,043	$ 787,465

1. Cash and cash equivalents include cash and due from banks and interest bearing deposits with banks.
2. 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.

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. Total assets increased to $815 billion at December 31, 2016 from $787 billion at December 31, 2015, primarily due to increases in Trading assets within Institutional Securities, including increases in highly liquid U.S. government and agency securities and corporate equities. These increases were partially offset by a reduction in Securities borrowed driven by a decrease in Trading liabilities. Cash and cash equivalent balances resulting from bank deposits continued to be redeployed into Investment securities and lending activity primarily within the Wealth Management business segment.

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 8).

Collateralized Financing Transactions

$ in millions	**At December 31, 2016**	At December 31, 2015
Securities purchased under agreements to resell and Securities borrowed	**$227,191**	$230,073
Securities sold under agreements to repurchase and Securities loaned	**$ 70,472**	$ 56,050

	Daily Average Balance Three Months Ended	
$ in millions	**December 31, 2016**	December 31, 2015
Securities purchased under agreements to resell and Securities borrowed	**$ 224,355**	$ 250,605
Securities sold under agreements to repurchase and Securities loaned	**$ 68,908**	$ 62,373

At December 31, 2016, differences between period end balances and average balances during the three months ended December 31, 2016 in the previous table were not significant. Securities purchased under agreements to resell and Securities borrowed and Securities sold under agreements to repurchase and Securities loaned at December 31, 2015 were lower than the average balances during 2015. The balances moved in line with client financing activity and with general movements in Trading assets and liabilities. Additionally, included within securities financing transactions were $14 billion and $11 billion at December 31, 2016 and December 31, 2015, respectively, related to fully collateralized securities-for-securities lending transactions represented in Trading assets.

Customer 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 and liquidity reserves held against this risk exposure.

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 and time horizons. 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 (as defined below), which support our target liquidity profile.

Required Liquidity Framework

Our Required Liquidity Framework reflects the amount of liquidity we must hold in both normal and stressed environments to ensure that our financial condition and overall soundness are not adversely affected by an inability (or perceived inability) to meet our financial obligations in a timely manner. The Required Liquidity Framework considers the most constraining liquidity requirement to satisfy all regulatory and internal limits at a consolidated and legal entity level.

Liquidity Stress Tests

We use Liquidity Stress Tests to model external and intercompany liquidity flows across multiple scenarios and a range of time horizons. These scenarios contain various combinations of idiosyncratic and systemic stress events of different severity and duration. The methodology, implementation, production and analysis of our Liquidity Stress Tests are important components of the Required Liquidity Framework.

The scenarios or assumptions used by us in our Liquidity Stress Tests include, but are not limited to, the following:

- No government support;
- No access to equity and unsecured debt markets;
- Repayment of all unsecured debt maturing within the stress horizon;
- Higher haircuts for and significantly lower availability of secured funding;
- Additional collateral that would be required by trading counterparties, certain exchanges and clearing organizations related to credit rating downgrades;
- Additional collateral that would be required due to collateral substitutions, collateral disputes and uncalled collateral;
- Discretionary unsecured debt buybacks;
- Drawdowns on lending commitments provided to third parties;

- Client cash withdrawals and reduction in customer short positions that fund long positions;
- Limited access to the foreign exchange swap markets; and
- Maturity roll-off of outstanding letters of credit with no further issuance.

Liquidity Stress Tests are produced for the Parent Company and major operating subsidiaries, as well as at major currency levels, to capture specific cash requirements and cash availability across the Firm, including a limited number of asset sales in a stressed environment. The Liquidity Stress Tests assume that subsidiaries will use their own liquidity first to fund their obligations before drawing liquidity from the Parent Company and that the Parent Company will support its subsidiaries and will not have access to subsidiaries' liquidity reserves. In addition to the assumptions underpinning the Liquidity Stress Tests, we take into consideration settlement risk related to intraday settlement and clearing of securities and financing activities.

At December 31, 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. The size of the Global Liquidity Reserve is actively managed by us considering the following components: unsecured debt maturity profile; balance sheet size and composition; funding needs in a stressed environment, inclusive of contingent cash outflows; legal entity, regional and segment liquidity requirements; regulatory requirements; and collateral requirements. In addition, our Global Liquidity Reserve includes a discretionary surplus based on risk tolerance and is subject to change dependent on market and Firm-specific events. The Global Liquidity Reserve is held within the Parent Company and its major operating subsidiaries.

Global Liquidity Reserve by Type of Investment

$ in millions	At December 31, 2016	At December 31, 2015
Cash deposits with banks	$ 8,679	$ 10,187
Cash deposits with central banks	30,568	39,774
Unencumbered highly liquid securities:		
U.S. government obligations	78,615	72,265
U.S. agency and agency mortgage-backed securities	46,360	37,678
Non-U.S. sovereign obligations[1]	30,884	28,999
Other investment grade securities	7,191	14,361
Global Liquidity Reserve	$ 202,297	$ 203,264

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

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

			Daily Average Balance Three Months Ended	
$ in millions	At December 31, 2016	At December 31, 2015	December 31, 2016	December 31, 2015
Bank legal entities				
Domestic	$ 74,411	$ 88,432	$ 72,553	$ 84,356
Foreign	4,238	5,896	5,041	5,752
Total Bank legal entities	78,649	94,328	77,594	90,108
Non-Bank legal entities				
Domestic:				
Parent Company	66,514	54,810	65,657	53,298
Non-Parent Company	18,801	20,001	19,255	17,168
Total Domestic	85,315	74,811	84,912	70,466
Foreign	38,333	34,125	37,131	35,013
Total Non-Bank legal entities	123,648	108,936	122,043	105,479
Total	$ 202,297	$ 203,264	$ 199,637	$ 195,587

Regulatory Liquidity Framework

Liquidity Coverage Ratio

The Basel Committee on Banking Supervision's ("Basel Committee") Liquidity Coverage Ratio ("LCR") standard is designed to ensure that banking organizations have sufficient high-quality liquid assets to cover net cash outflows arising from significant stress over 30 calendar days. The standard's objective is to promote the short-term resilience of the liquidity risk profile of banking organizations.

We and our U.S. Bank Subsidiaries are subject to the LCR requirements issued by U.S. banking regulators ("U.S. LCR"), which are based on the Basel Committee's LCR, including a requirement to calculate each entity's U.S. LCR on each business day. As of January 1, 2017, we and our U.S. Bank Subsidiaries are required to maintain a minimum of 100% of the fully phased-in U.S. LCR. In addition, effective April 1, 2017, we will be required to disclose certain quantitative and qualitative information related to our U.S. LCR calculation after each calendar quarter. We and our U.S. Bank Subsidiaries are compliant with the minimum required U.S. LCR based on current interpretations.

Net Stable Funding Ratio

The objective of the Net Stable Funding Ratio ("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 May 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 measured with reference to sources of funding, including deposit and debt liabilities, that is no less than the amount of its required stable funding, which is measured by applying standardized weightings to its assets, derivatives exposures and certain other items.

If adopted as proposed, the requirements would apply to us and our U.S. Bank Subsidiaries beginning January 1, 2018. We continue to evaluate the potential impact of the proposal, which is subject to further rulemaking procedures following the closing of the public comment period. Our preliminary estimates, based on the current proposal, indicate that actions will be necessary to meet the requirement, which we expect to accomplish by the effective date of the final rule. Our preliminary estimates are subject to risks and uncertainties that may cause actual results based on the final rule to differ materially from estimates. For a discussion of risks and uncertainties that may affect our future results, see "Risk Factors" in Part I, Item 1A.

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 borrowings, securities sold under agreements to repurchase ("repurchase agreements"), securities lending, deposits, 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

A substantial portion of our total assets consist of liquid marketable securities and short-term receivables arising principally from sales and trading activities in the Institutional Securities business. The liquid nature of these assets provides us with flexibility in managing the composition and size of our balance sheet. Our goal is to achieve an optimal mix of durable secured and unsecured financing. Secured financing investors principally focus on the quality of the eligible collateral posted. Accordingly, we actively manage the secured financing book based on the quality of the assets being funded.

We utilize shorter-term secured financing only for highly liquid assets and have established longer tenor limits for less liquid asset classes, for which funding may be at risk in the event of a market disruption. We define highly liquid assets as government-issued or government-guaranteed securities with a high degree of fundability and less liquid assets as those that do not meet these criteria. At December 31, 2016 and December 31, 2015, the weighted average maturity of our secured financing of less liquid assets was greater than 120 days. To further minimize the refinancing risk of secured financing for less liquid assets, we have established concentration limits to diversify our investor base and reduce the amount of monthly maturities for secured financing of less liquid assets. Furthermore, we obtain term secured funding liabilities in excess of less liquid inventory as an additional risk mitigant to replace maturing trades in the event that secured financing markets, or our ability to access them, become limited. As a component of the Liquidity Risk Management Framework, we hold a portion of our Global Liquidity Reserve against the potential disruption to our secured financing capabilities.

We also maintain a pool of liquid and easily fundable securities, which provide a valuable future source of liquidity. With the implementation of liquidity standards, we have also incorporated high-quality liquid asset classifications that are consistent with the U.S. LCR definitions into our encumbrance reporting, which further substantiates the demonstrated liquidity characteristics of the unencumbered asset pool and our ability to readily identify new funding sources for such assets.

Unsecured Financing

We view long-term debt and deposits as stable sources of funding. Unencumbered securities and non-security assets are financed with a combination of long-term and short-term debt and deposits. Our unsecured financings include structured borrowings, whose payments and redemption values are based on the performance of certain underlying assets, including equity, credit, foreign exchange, interest rates and commodities. 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 8).

Deposits

Available funding sources to our U.S. Bank Subsidiaries include demand deposit accounts, money market deposit accounts, time deposits, repurchase agreements, federal funds purchased 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 December 31, 2016 and December 31, 2015, deposits were $155,863 million and $156,034 million, respectively (see Note 10 to the consolidated financial statements in Item 8).

Short-Term Borrowings

Our unsecured short-term borrowings may primarily consist of structured notes, bank loans and bank notes with original maturities of 12 months or less. At December 31, 2016 and December 31, 2015, we had approximately $941 million and $2,173 million, respectively, in short-term 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 borrowings 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 investors' best interests.

Long-term Borrowings by Maturity Profile

$ in millions	Parent Company	Subsidiaries	Total
Due in 2017	$ 21,489	$ 4,638	$ 26,127
Due in 2018	17,640	1,652	19,292
Due in 2019	21,389	1,008	22,397
Due in 2020	15,698	1,038	16,736
Due in 2021	15,658	1,521	17,179
Thereafter	58,461	4,583	63,044
Total	$ 150,335	$ 14,440	$ 164,775

Subsequent to December 31, 2016 and through February 21, 2017, long-term borrowings increased by approximately $7.1 billion, net of maturities. This amount includes the issuances of senior debt; $7.0 billion on January 20, 2017 and $3.0 billion on February 17, 2017.

Trust Preferred Securities

During 2016, Morgan Stanley Capital Trust III, Morgan Stanley Capital Trust IV, Morgan Stanley Capital Trust V and Morgan Stanley Capital Trust VIII redeemed all of their issued and outstanding Capital Securities pursuant to the optional redemption provisions provided in the respective governing documents. In the aggregate, $2.8 billion was redeemed. We concurrently redeemed the related underlying junior subordinated debentures.

For further information on long-term borrowings, see Note 11 to the consolidated financial statements in Item 8.

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 our credit ratings, among other things. 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 and the macroeconomic environment, among other things.

Our credit ratings do not include any 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 non-governmental third-party sources of potential support.

Parent Company and MSBNA's Senior Unsecured Ratings at February 21, 2017

	Parent Company		
	Short-Term Debt	Long-Term Debt	Rating Outlook
DBRS, Inc.	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 Global Ratings	A-2	BBB+	Stable

	Morgan Stanley Bank, N.A.		
	Short-Term Debt	Long-Term Debt	Rating Outlook
Fitch Ratings, Inc.	F1	A+	Stable
Moody's Investors Service, Inc.	P-1	A1	Stable
Standard & Poor's Global Ratings[1]	A-1	A+	Stable

1. On December 16, 2016, Standard & Poor's Global Ratings upgraded the long-term rating of MSBNA by one notch to A+ from A following the release of the final total loss-absorbing capacity ("TLAC") rule. The rating outlook was changed to Stable from Positive 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 Global Ratings ("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

$ in millions	**At December 31, 2016**	At December 31, 2015
One-notch downgrade	**$ 1,292**	$ 1,169
Two-notch downgrade	**875**	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

We view capital as an important source of financial strength and 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.

Common Stock

We repurchased approximately $3,500 million of our outstanding common stock as part of our share repurchase program during 2016 and $2,125 million during 2015 (see Note 15 to the consolidated financial statements in Item 8). 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 by us are subject to regulatory approval (see "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" in Part II, Item 5).

The Board determines the declaration and payment of dividends on a quarterly basis. On January 17, 2017, we announced that the Board declared a quarterly dividend per common share of $0.20. The dividend was paid on February 15, 2017 to common shareholders of record on January 31, 2017.

Preferred Stock

On December 15, 2016, we announced that the Board declared quarterly dividends for preferred stock shareholders of record on December 30, 2016 that were paid on January 17, 2017.

Series K Preferred Stock. In January 2017, we issued 40,000,000 Depositary Shares, for an aggregate price of $1,000 million. Each Depositary Share represents a 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K, $0.01 par value ("Series K Preferred Stock"). The Series K Preferred Stock is redeemable at our option, (i) in whole or in part, from time to time, on any dividend payment date on or after April 15, 2027 or (ii) in whole but not in part at any time within 90 days following a regulatory capital treatment event (as described in the terms of that series), in each case at a redemption price of $25,000 per share (equivalent to $25 per Depositary Share), plus any declared and unpaid dividends to, but excluding, the date fixed for redemption, without accumulation of any undeclared dividends. The Series K Preferred Stock also has a preference over our common stock upon liquidation. The Series K Preferred Stock offering (net of related issuance costs) resulted in proceeds of approximately $969 million.

Preferred Stock Dividends

Series	Preferred Stock Description	Quarterly Dividend per Share
A	Floating Rate Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/1,000th interest in a share of preferred stock and each having a dividend of $0.25556)	$ 255.56
C	10% Non-Cumulative Non-Voting Perpetual Preferred Stock	25.00
E	Fixed-to-Floating Rate Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/1,000th interest in a share of preferred stock and each having a dividend of $0.44531)	445.31
F	Fixed-to-Floating Rate Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/1,000th interest in a share of preferred stock and each having a dividend of $0.42969)	429.69
G	6.625% Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/1,000th interest in a share of preferred stock and each having a dividend of $0.41406)	414.06
H	Fixed-to-Floating Rate Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/25th interest in a share of preferred stock and each having a dividend of $27.25000)[1]	681.25
I	Fixed-to-Floating Rate Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/1,000th interest in a share of preferred stock and each having a dividend of $0.39844)	398.44
J	Fixed-to-Floating Rate Non-Cumulative Preferred Stock (represented by depositary shares, each representing a 1/25th interest in a share of preferred stock and each having a dividend of $27.75000)[2]	693.75

1. Dividend on Series H Preferred Stock is payable semiannually until July 15, 2019 and quarterly thereafter.
2. Dividend on Series J Preferred Stock is payable semiannually until July 15, 2020 and quarterly thereafter.

Tangible Equity

			Monthly Average Balance Twelve Months Ended	
$ in millions	**At December 31, 2016**	At December 31, 2015	**December 31, 2016**	December 31, 2015
Common equity	**$ 68,530**	$ 67,662	**$ 68,870**	$ 66,936
Preferred equity	**7,520**	7,520	**7,520**	7,174
Morgan Stanley shareholders' equity	**76,050**	75,182	**76,390**	74,110
Junior subordinated debentures issued to capital trusts	**—**	2,870	**1,753**	3,640
Less: Goodwill and net intangible assets	**(9,296)**	(9,564)	**(9,410)**	(9,661)
Tangible Morgan Stanley shareholders' equity[1]	**$ 66,754**	$ 68,488	**$ 68,733**	$ 68,089
Common equity	**$ 68,530**	$ 67,662	**$ 68,870**	$ 66,936
Less: Goodwill and net intangible assets	**(9,296)**	(9,564)	**(9,410)**	(9,661)
Tangible common equity[1]	**$ 59,234**	$ 58,098	**$ 59,460**	$ 57,275

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 Board of Governors of the Federal Reserve System (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 "Dodd-Frank Act").

The Basel Committee has recently published revisions to certain standards in its capital framework, including with respect to counterparty credit risk exposures in derivatives transactions, market risk, interest rate risk in the banking book, and securitization capital standards, although these revisions have not yet been adopted by the U.S. banking agencies. In addition, the Basel Committee is actively considering other potential revisions to other capital standards that would substantially change the framework. The impact on us of any revisions to the Basel Committee's capital standards could be substantial but 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.

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 goodwill, intangibles, certain deferred tax assets, other amounts in Accumulated other comprehensive income (loss) ("AOCI") 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 ("CCyB"), currently set by banking regulators at zero (collectively, the "buffers").

In 2017, the phase-in amount for each of the buffers is 50% of the fully phased-in buffer requirement. Failure to maintain the buffers would 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 "G-SIB Capital Surcharge" herein.

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:

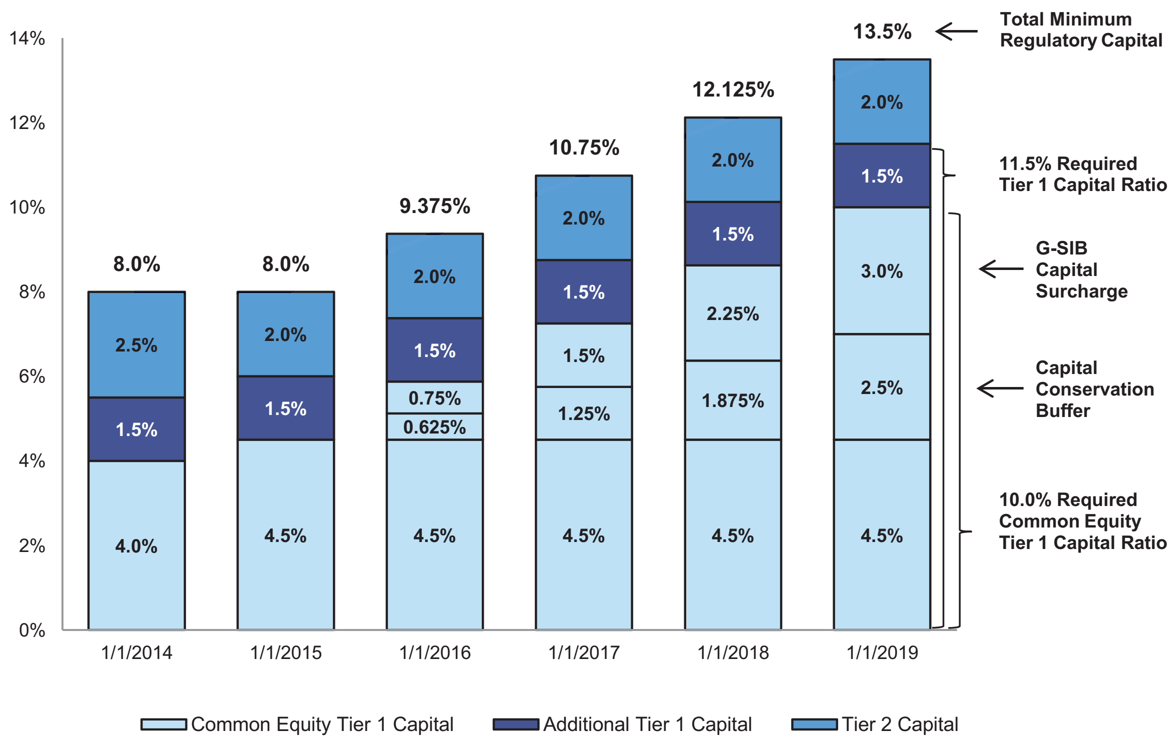
- Credit risk: The failure of a borrower, counterparty or issuer to meet its financial obligations to us;
- Market risk: Adverse changes in the level of one or more market prices, rates, indices, implied volatilities, correlations or other market factors, such as market liquidity; and
- Operational risk: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

For a further discussion of our market, credit and operational risks, see "Quantitative and Qualitative Disclosures about Market Risk" in Item 7A.

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 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 December 31, 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



1. These ratios assume the requirements for the G-SIB capital surcharge (3.0%) and CCyB (zero) remain at current levels. See "Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements" herein for additional capital requirements effective January 1, 2019.

Transitional and Fully Phased-In Regulatory Capital Ratios

	At December 31, 2016			
	Transitional		Pro Forma Fully Phased-In	
$ in millions	Standardized	Advanced	Standardized	Advanced
Risk-based capital				
Common Equity Tier 1 capital	**$ 60,398**	**$ 60,398**	**$ 58,616**	**$ 58,616**
Tier 1 capital	**68,097**	**68,097**	**66,315**	**66,315**
Total capital	**78,917**	**78,642**	**77,155**	**76,881**
Total RWAs	**340,191**	**358,141**	**351,101**	**369,709**
Common Equity Tier 1 capital ratio	**17.8%**	**16.9%**	**16.7%**	**15.9%**
Tier 1 capital ratio	**20.0%**	**19.0%**	**18.9%**	**17.9%**
Total capital ratio	**23.2%**	**22.0%**	**22.0%**	**20.8%**
Leverage-based capital				
Adjusted average assets[1]	**$ 811,402**	**N/A**	**$ 810,288**	**N/A**
Tier 1 leverage ratio[2]	**8.4%**	**N/A**	**8.2%**	**N/A**

	At December 31, 2015			
	Transitional		Pro Forma Fully Phased-In	
$ in millions	Standardized	Advanced	Standardized	Advanced
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 ended December 31, 2016 and 2015 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 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 regulations 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 December 31, 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, 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.

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

	At December 31, 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 December 31, 2016 would have exceeded the revised well-capitalized 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

$ in millions	At December 31, 2016	At December 31, 2015
Common Equity Tier 1 capital		
Common stock and surplus	**$ 17,494**	$ 20,114
Retained earnings	**53,679**	49,204
AOCI	**(2,643)**	(1,656)
Regulatory adjustments and deductions:		
Net goodwill	**(6,526)**	(6,582)
Net intangible assets (other than goodwill and mortgage servicing assets)	**(1,631)**	(1,192)
Credit spread premium over risk-free rate for derivative liabilities	**(271)**	(202)
Net deferred tax assets	**(304)**	(675)
Net after-tax DVA[1]	**357**	156
Adjustments related to AOCI	**422**	411
Other adjustments and deductions	**(179)**	(169)
Total Common Equity Tier 1 capital	**$ 60,398**	$ 59,409
Additional Tier 1 capital		
Preferred stock	**$ 7,520**	$ 7,520
Trust preferred securities	**—**	702
Noncontrolling interests	**613**	678
Regulatory adjustments and deductions:		
Net deferred tax assets	**(202)**	(1,012)
Credit spread premium over risk-free rate for derivative liabilities	**(181)**	(303)
Net after-tax DVA[1]	**238**	233
Other adjustments and deductions	**(101)**	(253)
Additional Tier 1 capital	**$ 7,887**	$ 7,565
Deduction for investments in covered funds	**(188)**	(252)
Total Tier 1 capital	**$ 68,097**	$ 66,722
Tier 2 capital		
Subordinated debt	**$ 10,303**	$ 10,404
Trust preferred securities	**—**	2,106
Other qualifying amounts	**62**	35
Regulatory adjustments and deductions	**180**	136
Total Tier 2 capital	**$ 10,545**	$ 12,681
Total capital	**$ 78,642**	$ 79,403

Rollforward of Regulatory Capital Calculated under Advanced Approach Transitional Rules

$ in millions	2016
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	**868**
Net goodwill	**56**
Net intangible assets (other than goodwill and mortgage servicing assets)	**(439)**
Credit spread premium over risk-free rate for derivative liabilities	**(69)**
Net deferred tax assets	**371**
Net after-tax DVA[1]	**201**
Adjustments related to AOCI	**11**
Other deductions and adjustments	**(10)**
Common Equity Tier 1 capital at December 31, 2016	**$ 60,398**
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	**(65)**
Net deferred tax assets	**810**
Credit spread premium over risk-free rate for derivative liabilities	**122**
Net after-tax DVA[1]	**5**
Other adjustments and deductions	**152**
Additional Tier 1 capital at December 31, 2016	**7,887**
Deduction for investments in covered funds at December 31, 2015	(252)
Deduction for investments in covered funds	**64**
Deduction for investments in covered funds at December 31, 2016	**(188)**
Tier 1 capital at December 31, 2016	**$ 68,097**
Tier 2 capital	
Tier 2 capital at December 31, 2015	$ 12,681
Change related to the following items:	
Subordinated debt	**(101)**
Trust preferred securities	**(2,106)**
Noncontrolling interests	**27**
Other adjustments and deductions	**44**
Tier 2 capital at December 31, 2016	**$ 10,545**
Total capital at December 31, 2016	**$ 78,642**

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.

Rollforward of RWAs Calculated under Advanced Approach Transitional Rules

$ in millions		2016[1]
Credit risk RWAs		
Balance at December 31, 2015	$	173,586
Change related to the following items:		
Derivatives		**(446)**
Securities financing transactions		**745**
Other counterparty credit risk		**45**
Securitizations		**(1,997)**
Credit valuation adjustment		**1,023**
Investment securities		**1,183**
Loans		**(1,792)**
Cash		**757**
Equity investments		**(2,908)**
Other credit risk[2]		**(965)**
Total change in credit risk RWAs	**$**	**(4,355)**
Balance at December 31, 2016	**$**	**169,231**
Market risk RWAs		
Balance at December 31, 2015	$	71,476
Change related to the following items:		
Regulatory VaR		**(2,094)**
Regulatory stressed VaR		**(1,286)**
Incremental risk charge		**292**
Comprehensive risk measure		**(2,763)**
Specific risk:		
Non-securitizations		**(654)**
Securitizations		**(4,099)**
Total change in market risk RWAs	**$**	**(10,604)**
Balance at December 31, 2016	**$**	**60,872**
Operational risk RWAs		
Balance at December 31, 2015	$	139,100
Change in operational risk RWAs[3]		**(11,062)**
Balance at December 31, 2016	**$**	**128,038**
Total RWAs	**$**	**358,141**

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.

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

$ in millions		At December 31, 2016		At December 31, 2015
Average total assets[1]	**$**	**820,536**	$	813,715
Adjustments[2, 3]		**242,113**		284,090
Pro forma supplementary leverage exposure	**$**	**1,062,649**	$	1,097,805
Pro forma supplementary leverage ratio		**6.4%**		6.1%

1. Computed as the average daily balance of consolidated total assets under U.S. GAAP during the calendar quarter ended December 31, 2016 and 2015.
2. Computed as the arithmetic mean of the month-end balances over the calendar quarter ended December 31, 2016 and 2015.
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 6.2% at December 31, 2016 and 5.8% at December 31, 2015. These estimates utilize a fully phased-in Tier 1 capital numerator and a fully phased-in denominator of approximately $1,061.5 billion at December 31, 2016 and $1,095.6 billion at December 31, 2015, 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 December 31, 2016	At December 31, 2015
MSBNA	**7.7%**	7.3%
MSPBNA	**10.2%**	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.

G-SIB Capital Surcharge

We and other U.S. G-SIBs are subject to a risk-based capital surcharge. A G-SIB must calculate its G-SIB capital surcharge under two methods and use the higher of the two surcharges. The first method considers the G-SIB's size, interconnectedness, cross-jurisdictional activity, substitutability and complexity, which is generally consistent with the methodology developed by the Basel Committee ("Method 1"). The second method uses similar inputs, but replaces substitutability with the use of short-term wholesale funding ("Method 2") and generally results in higher surcharges than the first method. The G-SIB capital surcharge must be satisfied using Common Equity Tier 1 capital and functions as an extension of the capital conservation buffer. Our current G-SIB surcharge is 3%. The surcharge is being phased in between January 1, 2016 and January 1, 2019, and the phase-in amount for 2017 is 50% of the applicable surcharge (see "Minimum Risk-Based Capital Ratios: Transitional Provisions" herein).

Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements

On December 15, 2016, the Federal Reserve adopted a final rule for top-tier bank holding companies of U.S. G-SIBs ("covered BHCs"), including the Parent Company, that establishes external TLAC, long-term debt ("LTD") and clean holding company requirements. The final rule contains various definitions and restrictions, such as requiring eligible LTD to be issued by the covered BHC and be unsecured, have a maturity of one year or more from the date of issuance and not have certain derivative-linked features, typically associated with certain types of structured notes. Covered BHCs must comply with all requirements under the rule by January 1, 2019, which we expect to accomplish.

The main purpose of the Federal Reserve's minimum external TLAC and LTD requirements is to ensure that covered BHCs, including the Parent Company, will have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of eligible LTD to equity or otherwise by imposing losses on eligible LTD or other forms of TLAC where a single point of entry ("SPOE") resolution strategy is used (see "Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning" in Part I, Item 1 and "Risk Factors—Legal, Regulatory and Compliance Risk" in Part I, Item 1A).

Under the final rule, a covered BHC is required to maintain minimum external TLAC equal to the greater of 18% of total RWAs and 7.5% of its total leverage exposure (the denominator of its supplementary leverage ratio). In addition, covered BHCs must meet a separate external LTD requirement equal to the greater of 6% of total RWAs plus the greater of the Method 1 and Method 2 G-SIB capital surcharge applicable to the Parent Company and 4.5% of its total leverage exposure.

In addition, the final rule imposes TLAC buffer requirements on top of both the risk-based and leverage-exposure-based external TLAC minimum requirements. The risk-based TLAC buffer is equal to the sum of 2.5%, the covered BHC's Method 1 G-SIB surcharge and the countercyclical capital buffer, if any, as a percentage of total RWAs. The leverage-exposure-based TLAC buffer is equal to 2% of the covered BHC's total leverage exposure. Failure to maintain the TLAC buffers would result in restrictions on capital distributions and discretionary bonus payments to executive officers.

The final rule provides permanent grandfathering for debt instruments issued prior to December 31, 2016 that would be eligible LTD but for having impermissible acceleration clauses or being governed by foreign law.

Furthermore, under the clean holding company requirements of the final rule, a covered BHC is prohibited from incurring any external short-term debt or certain other liabilities, regardless of whether the liabilities are fully secured or otherwise senior to eligible LTD, or entering into certain other prohibited transactions. Certain other external liabilities, including structured notes, are subject to a cap equal to 5% of the covered BHC's outstanding external TLAC amount.

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.

We must submit an annual capital plan to the Federal Reserve, taking into account the results of separate stress tests designed by us and the Federal Reserve, so that the Federal Reserve may assess our systems and processes that incorporate forward-looking projections of revenues and losses to monitor and maintain our internal capital adequacy.

The capital plan must include a description of all planned capital actions over a nine-quarter planning horizon, including any issuance of a debt or equity capital instrument, any capital distribution (*i.e.*, payments of dividends or stock repurchases) and any similar action that the Federal Reserve determines could impact our consolidated capital. The capital plan must include a discussion of how we will maintain capital above the minimum regulatory capital ratios, including the requirements that are phased in over the planning horizon, and serve as a source of strength to our U.S. Bank Subsidiaries under supervisory stress scenarios. In

addition, the Federal Reserve has issued guidance setting out its heightened expectations for capital planning practices at certain large financial institutions, including us.

In November 2015, the Federal Reserve amended its capital plan and stress test rules to delay until 2017 the use of the supplementary leverage ratio requirement, defer indefinitely the use of the Advanced Approach risk-based capital framework in capital planning and company-run stress tests, and incorporate the Tier 1 capital deductions for certain investments in Volcker Rule covered funds into the pro forma minimum capital requirements for capital plan and stress testing purposes.

The capital plan rule requires that large bank holding companies receive no objection from the Federal Reserve before making a capital distribution. In addition, even with an approved capital plan, the bank holding company must seek the approval of the Federal Reserve before making a capital distribution if, among other reasons, the bank holding company would not meet its regulatory capital requirements after making the proposed capital distribution. A bank holding company's ability to make capital distributions (other than scheduled payments on Additional Tier 1 and Tier 2 capital instruments) is also limited if its net capital issuances are less than the amount indicated in its capital plan.

In addition, we must conduct semiannual company-run stress tests and are subject to an annual Dodd-Frank Act supervisory stress test conducted by the Federal Reserve.

On April 5, 2016, we submitted our 2016 CCAR capital plan, and summary results of the CCAR and Dodd-Frank Act 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). On December 29, 2016, we resubmitted our capital plan, as required by the Federal Reserve, to address 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 included 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 submitted the results of our mid-cycle company-run stress test to the Federal Reserve on October 5, 2016, and we disclosed a summary of the results on October 31, 2016.

For the 2017 capital planning and stress test cycle, we are required to submit our capital plan and company-run stress test results to the Federal Reserve by April 5, 2017. We expect that the Federal Reserve will provide its response to our 2017 capital plan by June 30, 2017. The Federal Reserve is expected to publish summary results of the CCAR and Dodd-Frank Act supervisory stress tests of each large bank holding company, including us, by June 30, 2017. We are required to disclose a summary of the results of our company-run stress tests within 15 days of the date the Federal Reserve discloses the results of the supervisory stress tests. In addition, we must submit the results of our mid-cycle company-run stress test to the Federal Reserve by October 5, 2017 and disclose a summary of the results between October 5, 2017 and November 4, 2017.

In January 2017, the Federal Reserve adopted revisions to the capital plan and stress test rules that, among other things, reduce the *de minimis* threshold for additional capital distributions that a firm may make during a capital plan cycle without seeking the Federal Reserve's prior approval. The final rule also establishes a "blackout period" beginning in March of each year while the Federal Reserve is conducting CCAR reviews during which firms are not permitted to submit *de minimis* exception notices or prior approval requests for additional capital distributions. The Federal Reserve is currently considering making further changes to CCAR requirements, which may increase minimum capital requirements for the Firm.

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 the 2017 stress test cycle, MSBNA and MSPBNA must submit their 2017 annual company-run stress tests to the OCC by April 5, 2017 and publish the summary results between June 15, 2017 and July 15, 2017.

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 Company equity. We generally hold Parent Company 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 pro forma 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 attributed to Parent Company equity during the year. Periods prior to 2016 have not been recast under this new methodology.

The Required Capital framework is expected to evolve over time in response to changes in the business and regulatory environment, for example, to incorporate stress testing or 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 Attribution

$ in billions	**2016**	2015[1]	2014[1]
Institutional Securities	**$ 43.2**	$ 34.6	$ 32.2
Wealth Management	**15.3**	11.2	11.2
Investment Management	**2.8**	2.2	2.9
Parent Company	**7.6**	18.9	19.0
Total[1]	**$ 68.9**	$ 66.9	$ 65.3

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 Federal Deposit Insurance Corporation ("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 September 30, 2016, we submitted a status report to the Federal Reserve and the FDIC in respect of certain shortcomings identified in our 2015 resolution plan. Pursuant to the status report, we indicated that the Parent Company will amend and restate its support agreement with its material subsidiaries that is designed to ensure that such subsidiaries have sufficient capital and liquidity as and when needed throughout a resolution scenario.

Under the amended and restated support agreement, upon the occurrence of a resolution scenario, the Parent Company will be obligated to contribute or loan on a subordinated basis all of its material assets, other than shares in subsidiaries of the Parent Company and certain intercompany receivables, to provide capital and liquidity, as applicable, to our material subsidiaries.

The obligations of the Parent Company under the amended and restated support agreement will be secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company). As a result, claims of our material subsidiaries against the assets of the Parent Company (other than shares in subsidiaries of the Parent Company) will be effectively senior to unsecured obligations of the Parent Company.

Our next full resolution plan submission will be on July 1, 2017. If the Federal Reserve and the FDIC were 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 identified by the regulators, we or any of our subsidiaries may be subject 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 September 2016, the OCC issued final guidelines that establish enforceable standards for recovery planning by national banks and certain other institutions with total consolidated assets of $50 billion or more, calculated on a rolling four-quarter average basis, including MSBNA. The guidelines were effective on January 1, 2017, and MSBNA must be in compliance by January 1, 2018.

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 are parties. In August 2016, the OCC proposed a rule that would subject national banks that are subsidiaries of U.S. G-SIBs, including our U.S. Bank Subsidiaries, as well as certain other institutions (collectively with U.S. G-SIBs and their other subsidiaries, "covered entities"), to substantively identical requirements.

Under the proposals, 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 rules are issued. We continue to evaluate the potential impact of the proposals, which are 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.

Legacy Covered Funds under the Volcker Rule

The Volcker Rule prohibits "banking entities," including us and our affiliates, from engaging in certain "proprietary trading" activities, as defined in the Volcker Rule, subject to exemptions for underwriting, market-making-related activities, risk-mitigating hedging and certain other activities. The Volcker Rule also prohibits certain investments and relationships by banking entities with "covered funds," with a number of exemptions and exclusions.

Banking entities were required to bring all of their activities and investments into conformance with the Volcker Rule by July 21, 2015, subject to certain extensions. 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." The Volcker Rule also permits the Federal Reserve to provide an additional transition period of up to five years for banking entities to conform investments in certain legacy covered funds that are also illiquid funds.

On December 12, 2016, the Federal Reserve issued a policy statement with information about how banking entities may seek this further statutory extension. Additionally, the Federal Reserve stated that it expects the illiquid funds of banking entities to generally qualify for extensions, although they may not be granted if the banking entity has not demonstrated meaningful progress to conform or divest its illiquid funds, or has a deficient compliance program under the Volcker Rule, or if the Federal Reserve has concerns about evasion. We submitted our application for illiquid funds extension in January 2017, covering essentially all of our approximately $1.9 billion of non-conforming investments in, and relationships with, legacy covered funds subject to the Volcker Rule.

Off-Balance Sheet Arrangements and Contractual Obligations

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 13 to the consolidated financial statements in Item 8.

For information on our commitments, obligations under certain guarantee arrangements and indemnities, see Note 12 to the consolidated financial statements in Item 8. For further information on our lending commitments, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk—Lending Activities" in Item 7A.

Contractual Obligations

In the normal course of business, we enter into various contractual obligations that may require future cash payments. Contractual obligations include long-term borrowings, other secured financings, contractual interest payments, contractual payments on time deposits, operating leases and purchase obligations.

$ in millions	At December 31, 2016				
	Payments Due in:				
	2017	2018-2019	2020-2021	Thereafter	Total
Long-term borrowings[1]	$ 26,127	$ 41,689	$ 33,915	$ 63,044	$ 164,775
Other secured financings[1]	3,377	5,551	270	206	9,404
Contractual interest payments[2]	4,654	7,263	4,954	13,794	30,665
Time deposits[3]	1,210	43	8	50	1,311
Operating leases—premises[4]	649	1,176	949	2,958	5,732
Purchase obligations[5]	438	485	167	208	1,298
Total[6]	$ 36,455	$ 56,207	$ 40,263	$ 80,260	$ 213,185

1. For further information on long-term borrowings and other secured financings, see Note 11 to the consolidated financial statements in Item 8. Amounts presented for Other secured financings are financings with original maturities greater than one year.
2. Amounts represent estimated future contractual interest payments related to unsecured long-term borrowings based on applicable interest rates at December 31, 2016.
3. Amounts represent contractual principal and interest payments related to time deposits primarily held at our U.S. Bank Subsidiaries.
4. For further information on operating leases covering premises and equipment, see Note 12 to the consolidated financial statements in Item 8.
5. Purchase obligations for goods and services include payments for, among other things, consulting, outsourcing, computer and telecommunications maintenance agreements, and certain transmission, transportation and storage contracts related to the commodities business. Purchase obligations at December 31, 2016 reflect the minimum contractual obligation under legally enforceable contracts with contract terms that are both fixed and determinable. These amounts exclude obligations for goods and services that already have been incurred and are reflected on the consolidated balance sheets.
6. Amounts exclude unrecognized tax benefits, as the timing and amount of future cash payments are not determinable at this time (see Note 20 to the consolidated financial statements in Item 8 for further information).

Effects of Inflation and Changes in Interest and Foreign Exchange Rates

To the extent that an increased inflation outlook results in rising interest rates or has negative impacts on the valuation of financial instruments that exceed the impact on the value of our liabilities, it may adversely affect our financial position and profitability. Rising inflation may also result in increases in our non-interest expenses that may not be readily recoverable in higher prices of services offered. Other changes in the interest rate environment and related volatility as well as expectations about the level of future interest rates could also impact our results of operations.

A significant portion of our business is conducted in currencies other than the U.S. dollar, and changes in foreign exchange rates relative to the U.S. dollar, therefore, can affect the value of non-U.S. dollar net assets, revenues and expenses. Potential exposures as a result of these fluctuations in currencies are closely monitored, and, where cost-justified, strategies are adopted that are designed to reduce the impact of these fluctuations on our financial performance. These strategies may include the financing of non-U.S. dollar assets with direct or swap-based borrowings in the same currency and the use of currency forward contracts or the spot market in various hedging transactions related to net assets, revenues, expenses or cash flows. For information about cumulative foreign currency translation adjustments, see Note 15 to the consolidated financial statements in Item 8.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Risk Management

Overview

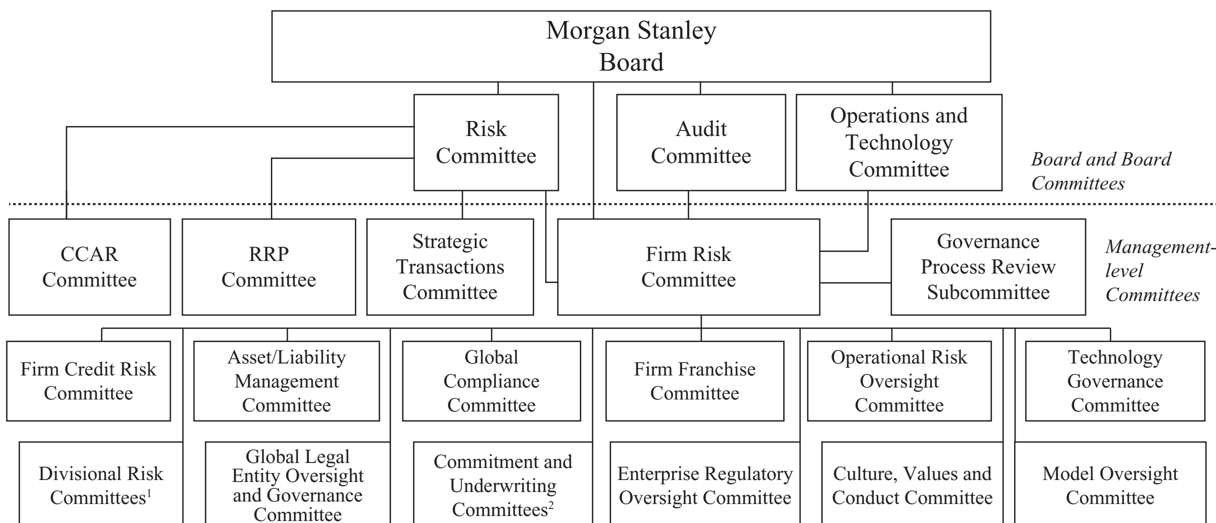
Management believes effective risk management is vital to the success of our business activities. Accordingly, we have established an enterprise risk management ("ERM") framework to integrate the diverse roles of risk management into a holistic enterprise structure and to facilitate the incorporation of risk assessment into decision-making processes across the Firm. Risk is an inherent part of our businesses and activities. We have policies and procedures in place to identify, measure, monitor, advise, challenge and control the principal risks involved in the activities of the Institutional Securities, Wealth Management and Investment Management business segments, as well as at the Parent Company level. The principal risks involved in our business activities include market (including non-trading interest rate risk), credit, operational, liquidity, model, compliance, strategic and reputational risk. Strategic risk is integrated into our business planning, embedded in the evaluation of all principal risks and overseen by our Board of Directors (the "Board").

The cornerstone of our risk management philosophy is the pursuit of risk-adjusted returns through prudent risk taking that protects our capital base and franchise. This philosophy is implemented through the ERM framework. Five key principles underlie this philosophy: integrity, comprehensiveness, independence, accountability and transparency. To help ensure the efficacy of risk management, which is an essential component of our reputation, senior management requires thorough and frequent communication and the appropriate escalation of risk matters. The fast-paced, complex and constantly evolving nature of global financial markets requires us to maintain a risk management culture that is incisive, knowledgeable about specialized products and markets, and subject to ongoing review and enhancement.

Our risk appetite defines the types of risk that the Firm is willing to accept in pursuit of our strategic objectives and business plan, taking into account the interest of clients and fiduciary duties to shareholders, as well as capital and other regulatory requirements. This risk appetite is embedded in our risk culture and linked to our short-term and long-term strategic, capital and financial plans, as well as compensation programs. This risk appetite and the related Board-level risk limits and risk tolerance statements are reviewed and approved by the Risk Committee of the Board ("BRC"), and the Board on, at least, an annual basis.

Risk Governance Structure

Risk management at the Firm requires independent Firm-level oversight, accountability of our business divisions, and effective communication of risk matters across the Firm, to senior management and ultimately to the Board. Our risk governance structure is composed of the Board; the BRC, the Audit Committee of the Board ("BAC"), and the Operations and Technology Committee of the Board ("BOTC"); the Firm Risk Committee ("FRC"); the functional risk and control committees; senior management oversight (including the Chief Executive Officer, Chief Risk Officer, Chief Financial Officer, Chief Legal Officer and Chief Compliance Officer); the Internal Audit Department and risk managers, committees, and groups within and across the business segments and operating legal entities. The ERM framework, composed of independent but complementary entities, facilitates efficient and comprehensive supervision of our risk exposures and processes.



1. Committees include Securities Risk Committee, Wealth Management Risk Committee and Investment Management Risk Committee
2. Committees include Capital Commitment Committee, Global Large Loan Committee, Equity Underwriting Committee, Leveraged Finance Underwriting Committee, Municipal Capital Commitment Committee

Morgan Stanley Board of Directors. The Board has oversight for the ERM framework and is responsible for helping to ensure that our risks are managed in a sound manner. The Board has authorized the committees within the ERM framework to help facilitate our risk oversight responsibilities. As set forth in our Corporate Governance Policies, the Board also oversees, and receives reports on, our financial performance, strategy and business plans as well as our practices and procedures relating to culture, values and conduct.

Risk Committee of the Board. The BRC is composed of non-management directors. The BRC oversees our global ERM framework; oversees the major risk exposures of the Firm, including market, credit, operational, model, liquidity, and reputational risk, against established risk measurement methodologies and the steps management has taken to monitor and control such exposures; oversees our risk appetite statement, including risk limits and tolerances; reviews capital, liquidity and funding strategy and related guidelines and policies; reviews the contingency funding plan and internal capital adequacy assessment process and capital plan; oversees our significant risk management and risk assessment guidelines and policies; oversees the performance of the Chief Risk Officer; reviews reports from our Strategic Transactions Committee, Comprehensive Capital Analysis and Review ("CCAR") Committee, and Resolution and Recovery Planning ("RRP") Committee; reviews significant reputational risk, franchise risk, new product risk, emerging risks and regulatory matters; and reviews results of Internal Audit reviews and assessment of the risk management, liquidity and capital functions. The BRC reports to the entire Board on a regular basis, coordinates with other Board committees with respect to oversight of risk management and risk assessment guidelines and the entire Board attends quarterly meetings with the BRC.

Audit Committee of the Board. The BAC is composed of independent directors. The BAC oversees the integrity of our consolidated financial statements, compliance with legal and regulatory requirements and system of internal controls; oversees risk management and risk assessment guidelines in coordination with the Board, BRC and BOTC and reviews the major legal and compliance risk exposures of the Firm and the steps management has taken to monitor and control such exposures; selects, determines the fees, evaluates and when appropriate, replaces the independent auditor; oversees the qualifications, independence and performance of our independent auditor, and pre-approves audit and permitted non-audit services; oversees the performance of our Global Audit Director; and after review, recommends to the Board the acceptance and inclusion of the annual audited consolidated financial statements in the Firm's Annual Report on Form 10-K. The BAC reports to the entire Board on a regular basis.

Operations and Technology Committee of the Board. The BOTC is composed of non-management directors. The BOTC oversees our operations and technology strategy, including trends that may affect such strategy; reviews operations and technology budget and significant expenditures and investments in support of such strategy; reviews operations and technology metrics; oversees risk management and risk assessment guidelines and policies regarding operations and technology risk; reviews the major operations and technology

risk exposures of the Firm, including information security and cybersecurity risks, and the steps management has taken to monitor and control such exposures; and oversees our business continuity planning. The BOTC reports to the entire Board on a regular basis.

Firm Risk Committee. The Board has also authorized the FRC, a management committee appointed and chaired by the Chief Executive Officer, which includes the most senior officers of the Firm, including the Chief Risk Officer, Chief Legal Officer and Chief Financial Officer, to oversee the global ERM framework. The FRC's responsibilities include oversight of our risk management principles, procedures and limits and the monitoring of capital levels and material market, credit, operational, model, liquidity, legal, compliance and reputational risk matters, and other risks, as appropriate, and the steps management has taken to monitor and manage such risks. The FRC also establishes and communicates risk tolerance, including aggregate Firm limits and tolerance, as appropriate. The Governance Process Review Subcommittee of the FRC oversees governance and process issues on behalf of the FRC. The FRC reports to the entire Board, the BAC, the BOTC and the BRC through the Chief Risk Officer, Chief Financial Officer and Chief Legal Officer.

Functional Risk and Control Committees. Functional risk and control committees comprising the ERM framework, including the Firm Credit Risk Committee, the Operational Risk Oversight Committee, the Asset/Liability Management Committee, the Global Compliance Committee, the Technology Governance Committee and the Firm Franchise Committee, facilitate efficient and comprehensive supervision of our risk exposures and processes. The Strategic Transactions Committee reviews large strategic transactions and principal investments for the Firm; the CCAR Committee and oversee our Comprehensive Capital Analysis and Review and Dodd-Frank Act Stress Testing; our RRP Committee oversees our Title I Resolution Plan and Recovery Plan; the Global Legal Entity Oversight and Governance Committee monitors the governance framework that operates over our consolidated legal entity population; the Enterprise Regulatory Oversight Committee oversees significant regulatory and supervisory requirements and assessments; various commitment and underwriting committees are responsible for reviewing capital, lending and underwriting commitments on behalf of us; and the Culture, Values and Conduct Committee oversees Firm-wide standards and initiatives relating to culture, values and conduct, including training and enhancements to performance and compensation processes.

In addition, each business segment has a risk committee that is responsible for helping to ensure that the business segment, as applicable, adheres to established limits for market, credit, operational and other risks; implements risk measurement, monitoring, and management policies, procedures, controls and systems that are consistent with the risk framework established by the FRC; and reviews, on a periodic basis, our aggregate risk exposures, risk exception experience, and the efficacy of our risk identification, measurement, monitoring and management policies and procedures, and related controls.

Chief Risk Officer. The Chief Risk Officer, who is independent of business units, reports to the BRC and the Chief Executive Officer. The Chief Risk Officer oversees compliance with our risk limits; approves exceptions to our risk limits; independently reviews material market, credit, liquidity, model and operational risks; and reviews results of risk management processes with the Board, the BRC and the BAC, as appropriate. The Chief Risk Officer also coordinates with the Chief Financial Officer regarding capital and liquidity management and works with the Compensation, Management Development and Succession Committee of the Board to help ensure that the structure and design of incentive compensation arrangements do not encourage unnecessary and excessive risk taking.

Independent Risk Management Functions. The independent risk management functions (Market Risk, Credit Risk, Operational Risk, Model Risk and Liquidity Risk Management Departments) are independent of our business units. These functions assist senior management and the FRC in monitoring and controlling our risk through a number of control processes. Each function maintains its own risk governance structure with specified individuals and committees responsible for aspects of managing risk. Further discussion about the responsibilities of the risk management functions may be found below under "Market Risk," "Credit Risk," "Operational Risk," "Model Risk," and "Liquidity Risk."

Support and Control Groups. Our support and control groups include the Legal and Compliance Division, the Finance Division, the Operations Division, the Technology and Data Division, the Human Resources Department, Strategy and Execution, and Corporate Services. Our support and control groups coordinate with the business segment control groups to review the risk monitoring and risk management policies and procedures relating to, among other things, controls over financial reporting and disclosure; the business segment's market, credit and operational risk profile; liquidity risks; model risks; sales practices; reputational, legal enforceability, compliance and regulatory risk; and technological risks. Participation by the senior officers of the Firm and business segment control groups helps ensure that risk policies and procedures, exceptions to risk limits, new products and business ventures, and transactions with risk elements undergo thorough review.

Internal Audit Department. The Internal Audit Department provides independent risk and control assessment and reports to the BAC. The Internal Audit Department provides an independent assessment of our control environment and risk

management processes using a risk-based audit coverage model and audit execution methodology developed from professional auditing standards. The Internal Audit Department also reviews and tests our compliance with internal guidelines set for risk management and risk monitoring, as well as external rules and regulations governing the industry. It effects these responsibilities through periodic reviews (with specified minimum frequency) of our processes, activities, products or information systems; targeted reviews of specific controls and activities; pre-implementation or initiative reviews of new or significantly changed processes, activities, products or information systems; and special investigations required as a result of internal factors or regulatory requests. In addition to regular reports to the BAC, the Global Audit Director also periodically reports to the BRC and BOTC on risk-related controls.

Culture, Values and Conduct of Employees. Employees of the Firm are accountable for conducting themselves in accordance with our core values: *Putting Clients First, Doing the Right Thing, Leading with Exceptional Ideas and Giving Back*. We are committed to building on our strong culture anchored in these core values, and supported by our governance framework, Board and management oversight, effective risk management and controls, training and development programs, policies, procedures, and defined roles and responsibilities, including the role of the Culture, Values and Conduct Committee. Our Code of Conduct (the "Code") establishes standards for employee conduct that further reinforce the Firm's commitment to integrity and ethical conduct. Every new hire and every employee annually must certify to their understanding of and adherence to the Code. The employee annual review process includes evaluation of adherence to the Code and our core values. The Global Incentive Compensation Discretion Policy sets forth standards for managers when making annual compensation decisions and specifically provides that managers must consider whether their employees effectively managed and/or supervised risk control practices during the performance year. We also have several mutually reinforcing processes to identify employee conduct that may have an impact on employment status, current-year compensation and/or prior-year compensation. Our clawback and cancellation provisions, which permit recovery of deferred incentive compensation, apply to a broad scope of employee conduct, including any act or omission that constitutes a breach of obligation to the Firm (including failure to comply with internal compliance, ethics or risk management standards, and failure or refusal to perform duties satisfactorily, including supervisory and management duties), causes a restatement of our consolidated financial results, constitutes a violation of our global risk management principles, policies and standards, or causes a loss of revenues associated with a position on which the employee was paid and the employee operated outside of internal control policies.

Risk Management Process

The following is a discussion of our risk management policies and procedures for our principal risks (capital and liquidity risk is discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" in Item 7). The discussion focuses on our securities activities (primarily our institutional trading activities) and corporate lending and related activities. We believe that these activities generate a substantial portion of our principal risks. This discussion and the estimated amounts of our risk exposure generated by our statistical analyses are forward-looking statements. However, the analyses used to assess such risks are not predictions of future events, and actual results may vary significantly from such analyses due to events in the markets in which we operate and certain other factors described below.

Risk Limits Framework

Risk limits and quantitative metrics provide the basis for monitoring risk-taking activity and avoiding outsized risk-taking. Our risk-taking capacity is sized through the Firm's capital planning process where losses are estimated under the Firm's Bank Holding Company Severely Adverse stress testing scenario. We also maintain a comprehensive suite of risk limits and quantitative metrics to support and implement our risk appetite statement. Our risk limits support linkages between the overall risk appetite, which is reviewed by the Board, and more granular risk-taking decisions and activities.

Risk limits, once established, are reviewed and updated on at least an annual basis, with more frequent updates as necessary. Board-level risk limits address the most important Firm-wide aggregations of risk, including, but not limited to, stressed market, credit and liquidity risks. Additional risk limits approved by the FRC address more specific types of risk and are bound by the higher-level Board risk limits.

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 Investment Management business segment primarily incurs non-trading market risk from capital investments in real estate funds and investments in private equity

vehicles. Market risk includes non-trading interest rate risk. Non-trading interest rate risk in the banking book (amounts classified for regulatory capital purposes under the banking book regime) refers to the exposure that a change in interest rates will result in prospective earnings changes for assets and liabilities in the banking book.

Sound market risk management is an integral part of our culture. The various business units and trading desks are responsible for ensuring that market risk exposures are well-managed and prudent. The control groups help ensure that these risks are measured and closely monitored and are made transparent to senior management. The Market Risk Department is responsible for ensuring transparency of material market risks, monitoring compliance with established limits and escalating risk concentrations to appropriate senior management. To execute these responsibilities, the Market Risk Department monitors our risk against limits on aggregate risk exposures, performs a variety of risk analyses, routinely reports risk summaries, and maintains our VaR and scenario analysis systems. These limits are designed to control price and market liquidity risk. Market risk is also monitored through various measures: by use of statistics (including VaR and related analytical measures); by measures of position sensitivity; and through routine stress testing, which measures the impact on the value of existing portfolios of specified changes in market factors, and scenario analyses conducted by the Market Risk Department in collaboration with the business units. The material risks identified by these processes are summarized in reports produced by the Market Risk Department that are circulated to and discussed with senior management, the FRC, the BRC and the Board.

The Chief Risk Officer, among other things, monitors market risk through the Market Risk Department, which reports to the Chief Risk Officer and is independent of the business units, and has close interactions with senior management and the risk management control groups in the business units. The Chief Risk Officer is a member of the FRC, chaired by the Chief Executive Officer, which includes the most senior officers of the Firm, and regularly reports on market risk matters to this committee, as well as to the BRC and the Board.

Sales and Trading and Related Activities

Primary Market Risk Exposures and Market Risk Management. During 2016, we had exposures to a wide range of interest rates, equity prices, foreign exchange rates and commodity prices—and the associated implied volatilities and spreads—related to the global markets in which we conduct our trading activities.

We are exposed to interest rate and credit spread risk as a result of our market-making activities and other trading in interest rate-sensitive financial instruments (*e.g.*, risk arising from changes in the level or implied volatility of interest rates, the timing of mortgage prepayments, the shape of the yield curve and credit spreads). The activities from which those exposures arise and the markets in which we are active include, but are not limited to, the following: corporate and government debt across both developed and emerging markets and asset-backed debt (including mortgage-related securities).

We are exposed to equity price and implied volatility risk as a result of making markets in equity securities and derivatives and maintaining other positions (including positions in non-public entities). Positions in non-public entities may include, but are not limited to, exposures to private equity, venture capital, private partnerships, real estate funds and other funds. Such positions are less liquid, have longer investment horizons and are more difficult to hedge than listed equities.

We are exposed to foreign exchange rate and implied volatility risk as a result of making markets in foreign currencies and foreign currency derivatives, from maintaining foreign exchange positions and from holding non-U.S. dollar-denominated financial instruments.

We are exposed to commodity price and implied volatility risk as a result of market-making activities in commodity products related primarily to electricity, natural gas, oil and precious metals. Commodity exposures are subject to periods of high price volatility as a result of changes in supply and demand. These changes can be caused by weather conditions; physical production and transportation; or geopolitical and other events that affect the available supply and level of demand for these commodities.

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). Hedging activities may not always provide effective mitigation against trading losses due to differences in the terms, specific characteristics or other basis risks that may exist between the hedge instrument and the risk exposure that is being hedged. We manage the market risk associated with our trading activities on a Firm-wide basis, on a worldwide trading division level and on an individual product basis. We manage and monitor our market risk exposures in such a way as to maintain a portfolio that we believe is well-diversified in the aggregate with respect to market risk factors and that reflects our aggregate risk tolerance as established by our senior management.

Aggregate market risk limits have been approved for the Firm across all divisions worldwide. Additional market risk limits are assigned to trading desks and, as appropriate, products and regions. Trading division risk managers, desk risk managers, traders and the Market Risk Department monitor market risk measures against limits in accordance with policies set by our senior management.

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. We estimate VaR using a model based on volatility-adjusted historical simulation for general market risk factors and Monte Carlo simulation for name-specific risk in corporate shares, bonds, loans and related derivatives. The model constructs a distribution of hypothetical daily changes in the value of trading portfolios based on the following: historical observation of daily changes in key market indices or other market risk factors; and information on the sensitivity of the portfolio values to these market risk factor changes. Our VaR model uses four years of historical data with a volatility adjustment to reflect current market conditions. VaR for risk management purposes ("Management VaR") is computed at a 95% level of confidence over a one-day time horizon, which is a useful indicator of possible trading losses resulting from adverse daily market moves. The 95%/one-day VaR corresponds to the unrealized loss in portfolio value that, based on historically observed market risk factor movements, would have been exceeded with a frequency of 5%, or five times in every 100 trading days, if the portfolio were held constant for one day.

Our VaR model generally takes into account linear and non-linear exposures to equity and commodity price risk, interest rate risk, credit spread risk and foreign exchange rates. The model also takes into account linear exposures to implied volatility risks for all asset classes and non-linear exposures to implied volatility risks for equity, commodity and foreign exchange referenced products. The VaR model also captures certain implied correlation risks associated with portfolio credit derivatives, as well as certain basis risks (*e.g.,* corporate debt and related credit derivatives).

We use VaR as one of a range of risk management tools. Among their benefits, VaR models permit estimation of a portfolio's aggregate market risk exposure, incorporating a range of varied market risks and portfolio assets. One key element of the VaR model is that it reflects risk reduction due to portfolio diversification or hedging activities. However, VaR has various limitations, which include, but are not limited to: use of historical changes in market risk factors, which may not be accurate predictors of future market conditions and may not fully incorporate the risk of extreme market events that are outsized relative to observed historical market behavior or reflect the historical distribution of results beyond the 95% confidence interval; and reporting of losses in a single day, which does not reflect the risk of positions that cannot be liquidated or hedged in one day. A small proportion of market risk generated by trading positions is not included in VaR. The modeling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity. We are aware of these and other limitations and, therefore, use VaR as only one component in our risk management oversight process. This process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis and control at the trading desk, division and Firm levels.

Our VaR model evolves over time in response to changes in the composition of trading portfolios and to improvements in modeling techniques and systems capabilities. We are committed to continuous review and enhancement of VaR methodologies and assumptions in order to capture evolving risks associated with changes in market structure and dynamics. As part of our regular process improvements, additional systematic and name-specific risk factors may be added to improve the VaR model's ability to more accurately estimate risks to specific asset classes or industry sectors.

Since the reported VaR statistics are estimates based on historical data, VaR should not be viewed as predictive of our future revenues or financial performance or of our ability to monitor and manage risk. There can be no assurance that our actual losses on a particular day will not exceed the VaR amounts indicated below or that such losses will not occur more than five times in 100 trading days for a 95%/one-day VaR. VaR does not predict the magnitude of losses that, should they occur, may be significantly greater than the VaR amount.

VaR statistics are not readily comparable across firms because of differences in the firms' portfolios, modeling assumptions and methodologies. These differences can result in materially different VaR estimates across firms for similar portfolios. The impact of such differences varies depending on the factor history assumptions, the frequency with which the factor history is updated and the confidence level. As a result, VaR statistics are more useful when interpreted as indicators of trends in a firm's risk profile rather than as an absolute measure of risk to be compared across firms.

We utilize the same VaR model for risk management purposes, as well as for regulatory capital calculations. Our VaR model has been approved by our regulators for use in regulatory capital calculations.

The portfolio of positions used for Management VaR differs from that used for regulatory capital requirements (“Regulatory VaR”), as Management VaR contains certain positions that are excluded from Regulatory VaR. Examples include counterparty credit valuation adjustment (“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, annual average, and annual 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. The Credit Portfolio includes counterparty CVA and related hedges, as well as loans that are carried at fair value and associated hedges.

Trading Risks

95%/One-Day Management VaR

	95%/One-Day VaR for 2016			
$ in millions	Period End	Average	High	Low
Interest rate and credit spread	**$ 24**	**$ 29**	**$ 39**	**$ 22**
Equity price	**12**	**16**	**43**	**11**
Foreign exchange rate	**7**	**8**	**12**	**4**
Commodity price	**8**	**10**	**13**	**7**
Less: Diversification benefit[1, 2]	**(21)**	**(27)**	**N/A**	**N/A**
Primary Risk Categories	**$ 30**	**$ 36**	**$ 61**	**$ 29**
Credit Portfolio	**15**	**19**	**24**	**12**
Less: Diversification benefit[1, 2]	**(11)**	**(12)**	**N/A**	**N/A**
Total Management VaR	**$ 34**	**$ 43**	**$ 68**	**$ 34**

	95%/One-Day VaR for 2015			
$ in millions	Period End	Average	High	Low
Interest rate and credit spread	$ 28	$ 34	$ 42	$ 27
Equity price	17	19	40	14
Foreign exchange rate	6	11	20	6
Commodity price	10	16	21	10
Less: Diversification benefit[1, 2]	(23)	(33)	N/A	N/A
Primary Risk Categories	$ 38	$ 47	$ 57	$ 38
Credit Portfolio	12	13	20	10
Less: Diversification benefit[1, 2]	(9)	(10)	N/A	N/A
Total Management VaR	$ 41	$ 50	$ 61	$ 41

N/A—Not Applicable

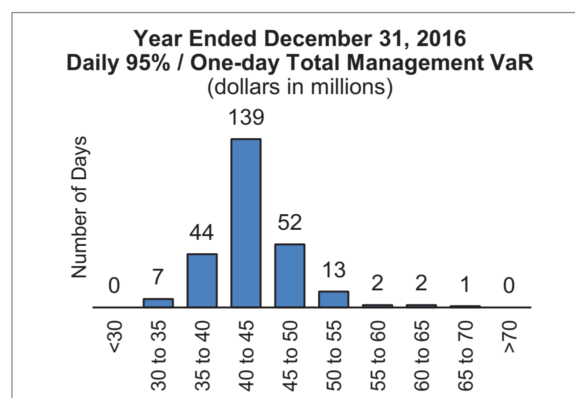
1. Diversification benefit equals the difference between the total Management VaR and the sum of the component VaRs. This benefit arises because the simulated one-day losses for each of the components occur on different days; similar diversification benefits also are taken into account within each component.
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 year, and therefore, the diversification benefit is not an applicable measure.

The average total Management VaR for 2016 was $43 million compared with $50 million for 2015. The average Management VaR for the Primary Risk Categories for 2016 was $36 million compared with $47 million in 2015. The noted decreases were driven by an overall reduction in risk exposures across the Sales and Trading businesses.

Distribution of VaR Statistics and Net Revenues for 2016. 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.

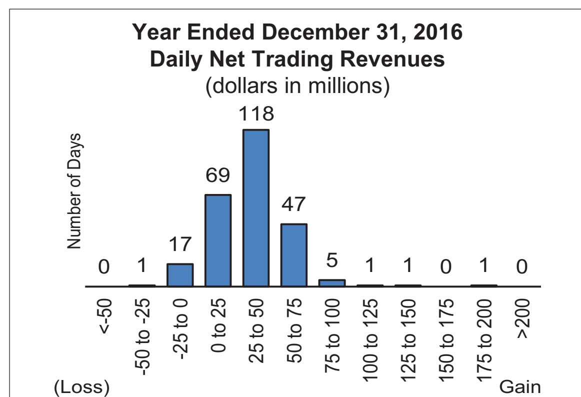
The distribution of VaR Statistics and Net Revenues is presented in the following histograms for the Total Trading populations.

Total Trading. As shown in the 95%/One-Day Management VaR table on the preceding page, the average 95%/one-day total Management VaR for 2016 was $43 million. The following histogram presents the distribution of the daily 95%/one-day total Management VaR for 2016, which was in a range between $30 million and $60 million for approximately 99% of trading days during the year.



The following histogram shows the distribution for 2016 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 2016, we experienced net trading losses on 18 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 $6 million for each 1 basis point widening in our credit spread level at both December 31, 2016 and December 31, 2015.

Funding Liabilities. The credit spread risk sensitivity of our mark-to-market funding liabilities corresponded to an increase in value of approximately $17 million and $11 million for each 1 basis point widening in our credit spread level at December 31, 2016 and December 31, 2015, 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.

During the fourth quarter of 2016, we changed the criteria used to determine the pricing for our deposit liabilities to client cash balances from client assets under management. As a result of the change, the U.S. Bank Subsidiaries balance sheet is expected to have greater sensitivity to higher rates than in prior periods.

U.S. Bank Subsidiaries' Net Interest Income Sensitivity Analysis

$ in millions	**At December 31, 2016**	At December 31, 2015
+200 basis points	**$ 550**	$ (149)
+100 basis points	**262**	(84)
-100 basis points	**(655)**	(512)

At December 31, 2016, the upward instantaneous interest rate shocks result in a positive impact to our U.S. Bank Subsidiaries' projected net interest income over the following 12 months.

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, assumes there are no changes in other macroeconomic variables normally correlated with changes in interest rates, and includes subjective assumptions regarding customer and market re-pricing behavior and other factors.

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.

Investments Sensitivity, Including Related Performance Fees

	10% Sensitivity	
$ in millions	**At December 31, 2016**	At December 31, 2015
Investments related to Investment Management activities	**$ 332**	$ 371
Other investments:		
Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	**158**	142
Other Firm investments	**130**	194

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.

We may incur credit risk in our Institutional Securities business segment through a variety of activities, including, but not limited to, the following:

- extending credit to clients through various lending commitments;
- entering into swap or other derivative contracts under which counterparties have obligations to make payments to us;
- providing short- or long-term funding that is secured by physical or financial collateral whose value may at times be insufficient to fully cover the loan repayment amount;
- posting margin and/or collateral to clearinghouses, clearing agencies, exchanges, banks, securities firms and other financial counterparties;
- placing funds on deposit at other financial institutions to support our clearing and settlement obligations; and
- investing or trading in securities and loan pools, whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

We incur credit risk in our Wealth Management business segment, primarily through lending to individuals and entities, including, but not limited to, the following:

- margin loans collateralized by securities;
- securities-based lending and other forms of secured loans, including tailored lending, to high net worth clients; and
- single-family residential mortgage loans in conforming, non-conforming or home equity lines of credit ("HELOC") form, primarily to existing Wealth Management clients.

Monitoring and Control

In order to help protect us from losses, the Credit Risk Management Department establishes Firm-wide practices to evaluate, monitor and control credit risk exposure at the transaction, obligor and portfolio levels. The Credit Risk Management Department approves extensions of credit, evaluates the creditworthiness of the counterparties and borrowers on a regular basis, and ensures that credit exposure is actively monitored and managed. The evaluation of counterparties and borrowers includes an assessment of the probability that an obligor will default on its financial obligations and any losses that may occur when an obligor defaults. In addition, credit risk exposure is actively managed by credit professionals and committees within the Credit Risk Management Department and through various risk committees, whose membership includes individuals from the Credit Risk Management Department. A comprehensive and global Credit Limits Framework is utilized to manage credit risk levels across the Firm. The Credit Limits Framework is calibrated within our risk tolerance and includes single-name limits and portfolio concentration limits by country, industry and product type.

The Credit Risk Management Department ensures transparency of material credit risks, compliance with established limits and escalation of risk concentrations to appropriate senior management. The Credit Risk Management Department also works closely with the Market Risk Department and applicable business units to monitor risk exposures and to perform stress tests to identify, analyze and control credit risk concentrations arising in the lending and trading activities. The stress tests shock market factors (*e.g.*, interest rates, commodity prices, credit spreads), risk parameters (*e.g.*, default probabilities and loss given default), recovery rates and expected losses in order to assess the impact of stresses on exposures, profit and loss, and our capital position. Stress and scenario tests are conducted in accordance with our established policies and procedures.

Credit Evaluation

The evaluation of corporate and institutional counterparties and borrowers includes assigning obligor credit ratings, which reflect an assessment of an obligor's probability of default and loss given default. Credit evaluations typically involve the assessment of financial statements; leverage; liquidity; capital strength; asset composition and quality; market capitalization; access to capital markets; adequacy of collateral, if applicable; and in the case of certain loans, cash flow projections and debt service requirements. The Credit Risk Management Department also evaluates strategy, market position, industry dynamics, management and other factors that could affect the obligor's risk profile. Additionally, the Credit Risk Management Department evaluates the relative position of our exposure in the borrower's capital structure and relative recovery prospects, as well as other structural elements of the particular transaction.

The evaluation of consumer borrowers is tailored to the specific type of lending. Margin and securities-based loans are evaluated based on factors that include, but are not limited to, the amount of the loan, the degree of leverage and the quality, diversification, price volatility and liquidity of the collateral. The underwriting of residential real estate loans includes, but is not limited to, review of the obligor's income,

net worth, liquidity, collateral, loan-to-value ratio and credit bureau information. Subsequent credit monitoring for individual loans is performed at the portfolio level, and collateral values are monitored on an ongoing basis.

Credit risk metrics assigned to our borrowers during the evaluation process are incorporated into the Credit Risk Management Department's maintenance of the allowance for loan losses for the loans held for the investment portfolio. Such allowance serves as a reserve for probable inherent losses, as well as probable losses related to loans identified for impairment. For more information on the allowance for loan losses, see Notes 2 and 7 to the consolidated financial statements in Item 8.

Risk Mitigation

We may seek to mitigate credit risk from our lending and trading activities in multiple ways, including collateral provisions, guarantees and hedges. At the transaction level, we seek to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. We actively hedge our lending and derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. Additionally, we may sell, assign or syndicate loans and lending commitments to other financial institutions in the primary and secondary loan markets. In connection with our derivatives trading 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 agreement in the event of a counterparty default. 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 8 for additional information about our collateralized transactions.

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 the 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 12 to the consolidated financial statements in Item 8 for further information.

Loan and Lending Commitment Portfolio by Business Segment

	At December 31, 2016			
$ in millions	Institutional Securities	Wealth Management	Investment Management[1]	Total
Corporate loans	**$ 13,858**	**$ 11,162**	**$ 5**	**$ 25,025**
Consumer loans	**—**	**24,866**	**—**	**24,866**
Residential real estate loans	**—**	**24,385**	**—**	**24,385**
Wholesale real estate loans	**7,702**	**—**	**—**	**7,702**
Loans held for investment, gross of allowance	**21,560**	**60,413**	**5**	**81,978**
Allowance for loan losses	**(238)**	**(36)**	**—**	**(274)**
Loans held for investment, net of allowance	**21,322**	**60,377**	**5**	**81,704**
Corporate loans	**10,710**	**—**	**—**	**10,710**
Residential real estate loans	**11**	**50**	**—**	**61**
Wholesale real estate loans	**1,773**	**—**	**—**	**1,773**
Loans held for sale	**12,494**	**50**	**—**	**12,544**
Corporate loans	**7,199**	**—**	**18**	**7,217**
Residential real estate loans	**966**	**—**	**—**	**966**
Wholesale real estate loans	**519**	**—**	**—**	**519**
Loans held at fair value	**8,684**	**—**	**18**	**8,702**
Total loans[2]	**42,500**	**60,427**	**23**	**102,950**
Lending commitments[3,4]	**90,143**	**8,299**	**—**	**98,442**
Total loans and lending commitments[3,4]	**$ 132,643**	**$ 68,726**	**23**	**$201,392**

	At December 31, 2015		
$ in millions	Institutional Securities	Wealth Management	Total
Corporate loans	$ 16,452	$ 7,102	$ 23,554
Consumer loans	—	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[2]	46,855	49,522	96,377
Lending commitments[3,4]	95,572	5,821	101,393
Total loans and lending commitments[3,4]	$ 142,427	$ 55,343	$ 197,770

1. Loans in Investment Management are entered into in conjunction with certain investment advisory activities.
2. Amounts exclude $24.4 billion and $25.3 billion related to margin loans and $4.7 billion and $4.9 billion related to employee loans at December 31, 2016 and December 31, 2015, respectively. See Notes 6 and 7 to the consolidated financial statements in Item 8 for further information.
3. 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.
4. 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.

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. Qualitative and environmental factors such as economic and business conditions, nature and volume of the portfolio and lending terms, and volume and severity of past due loans may also be considered.

At December 31, 2016 and December 31, 2015, the allowance for loan losses related to loans that were accounted for as held for investment was $274 million and $225 million, respectively, and the allowance for commitment losses related to lending commitments that were accounted for as held for investment was $190 million and $185 million, respectively. The aggregate allowance for loan and commitment losses increased over the year ended December 31, 2016 primarily due to the energy sector. See "Institutional Securities Lending Exposures Related to the Energy Industry" herein and Note 7 to the consolidated financial statements in Item 8 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.

We also participate in securitization activities whereby we extend short-term or long-term funding to clients through loans and lending commitments that are secured by the assets of the borrower and generally provide for over-collateralization. See Note 13 to the consolidated financial statements in Item 8 for information about our securitization activities.

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 $20.2 billion and $12.0 billion at December 31, 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 December 31, 2016				
	Years to Maturity				
$ in millions	Less than 1	1-3	3-5	Over 5	Total
AAA	**$ 50**	**$ 105**	**$ 50**	**$ —**	**$ 205**
AA	**3,724**	**451**	**4,027**	**—**	**8,202**
A	**2,229**	**5,385**	**12,526**	**944**	**21,084**
BBB	**7,970**	**15,479**	**20,916**	**2,015**	**46,380**
Investment grade	**13,973**	**21,420**	**37,519**	**2,959**	**75,871**
Non-investment grade	**7,506**	**21,048**	**19,896**	**5,722**	**54,172**
Unrated[2]	**806**	**132**	**175**	**1,487**	**2,600**
Total	**$ 22,285**	**$ 42,600**	**$ 57,590**	**$ 10,168**	**$ 132,643**

	At December 31, 2015				
	Years to Maturity				
$ in millions	Less than 1	1-3	3-5	Over 5	Total
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" herein.

At December 31, 2016 and December 31, 2015, the aggregate amount of investment grade loans was $15.3 billion and $15.8 billion, respectively, the aggregate amount of non-investment grade loans was $24.7 billion and $26.9 billion, respectively, and the aggregate amount of unrated loans was $2.5 billion and $4.2 billion, respectively.

At December 31, 2016 and 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.

Event-Driven Loans and Lending Commitments

$ in millions	At December 31, 2016	At December 31, 2015
Event-driven loans	$ 5,097	$ 5,414
Event-driven lending commitments	16,252	17,799
Total	$ 21,349	$ 23,213
Event-driven loans and lending commitments to non-investment grade borrowers	$ 15,339	$ 13,527

Maturity Profile of Event-Driven Loans and Lending Commitments

	At December 31, 2016	At December 31, 2015
Less than 1 year	34%	24%
1-3 years	14%	21%
3-5 years	28%	24%
Over 5 years	24%	31%

Institutional Securities Credit Exposure from Loans and Lending Commitments by Industry

$ in millions	At December 31, 2016	At December 31, 2015
Industry[1]		
Real estate	$ 19,807	$ 17,847
Consumer discretionary	12,059	12,837
Energy	11,757	15,921
Healthcare	11,534	12,677
Funds, exchanges and other financial services[2]	11,481	11,748
Industrials	11,465	10,067
Utilities	9,216	12,631
Information technology	8,602	11,122
Materials	7,630	6,440
Consumer staples	7,329	8,597
Mortgage finance	6,296	8,260
Telecommunications services	6,156	4,403
Insurance	4,190	4,682
Consumer finance	2,847	2,249
Other	2,274	2,946
Total	$ 132,643	$ 142,427

1. Industry categories are based on the Global Industry Classification Standard®.
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 December 31, 2016, Institutional Securities' loans and lending commitments related to the energy industry were $11.8 billion, of which approximately 68% are accounted for as held for investment and 32% are accounted for as either held for sale or at fair value. Additionally, approximately 52% of the total energy industry loans and lending commitments were to investment grade counterparties. At December 31, 2016, the energy industry portfolio included $1.3 billion in loans and $2.1 billion in lending commitments to Oil and Gas Exploration and Production ("E&P") companies.

The E&P loans were 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. Approximately 54% of the E&P lending commitments were to investment grade counterparties. During the year ended December 31, 2016, we increased the allowance for loan and commitment losses on held for investment energy exposures and incurred mark-to-market losses related to energy loans and lending commitments. See "Credit Risk—Lending Activities" herein for further information. To the extent commodities prices, or oil prices, remain at year-end levels, or deteriorate further, we may incur additional lending losses.

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 December 31, 2016 and December 31, 2015, the amounts related to margin lending were $11.9 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 $29.7 billion and $24.9 billion at December 31, 2016 and December 31, 2015, respectively. These loans allow the client to borrow money against the value of qualifying securities for any purpose other than purchasing securities. We establish approved credit lines against qualifying securities and monitor limits daily and, pursuant to such guidelines, require customers to deposit additional collateral, or reduce debt positions, when necessary. These credit lines are primarily uncommitted loan facilities, as we reserve the right to not make any advances, or may terminate these credit lines at any time. Factors considered in the review of these loans include, but are not limited to, the loan amount, the client's credit profile, the degree of leverage, collateral diversification, price volatility and liquidity of the collateral.

Residential real estate loans consist of first and second lien mortgages, including HELOC loans. Our underwriting policy is designed to ensure that all borrowers pass an assessment of capacity and willingness to pay, which includes an analysis utilizing industry standard credit scoring models (*e.g.*, Fair Isaac Corporation ("FICO") scores), debt ratios and assets of the borrower. Loan-to-value ratios are determined based on independent third-party property appraisal/valuations, and security lien position is established through title/ownership reports. The vast majority of mortgage and HELOC loans are held for investment in the Wealth Management business segment's loan portfolio.

For the year ended December 31, 2016, loans and lending commitments associated with the Wealth Management business segment lending activities increased by approximately 24%, mainly due to growth in LAL and residential real estate loans.

Wealth Management Lending Activities by Remaining Contractual Maturity

	At December 31, 2016				
	Years to Maturity				
$ in millions	Less than 1	1-3	3-5	Over 5	Total
Securities-based lending and other loans	**$ 30,547**	**$ 2,983**	**$ 1,304**	**$ 1,179**	**$ 36,013**
Residential real estate loans	**—**	**—**	**45**	**24,369**	**24,414**
Total	**$ 30,547**	**$ 2,983**	**$ 1,349**	**$ 25,548**	**$ 60,427**
Lending commitments	**6,372**	**1,413**	**268**	**246**	**8,299**
Total loans and lending commitments	**$ 36,919**	**$ 4,396**	**$ 1,617**	**$ 25,794**	**$ 68,726**

	At December 31, 2015				
	Years to Maturity				
$ in millions	Less than 1	1-3	3-5	Over 5	Total
Securities-based lending and other loans	$ 25,975	$ 1,004	$ 889	$ 749	$ 28,617
Residential real estate loans	—	—	35	20,870	20,905
Total	$ 25,975	$ 1,004	$ 924	$ 21,619	$ 49,522
Lending commitments	5,143	286	115	277	5,821
Total loans and lending commitments	$ 31,118	$ 1,290	$ 1,039	$ 21,896	$ 55,343

At December 31, 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 $12.5 billion and $14.7 billion at December 31, 2016 and December 31, 2015, respectively, which were classified within Customer and other receivables in the consolidated balance sheets.

In addition, the Wealth Management business segment has employee loans of $4.7 billion and $4.9 billion at December 31, 2016 and December 31, 2015, respectively, that are granted 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 8.

Credit Derivatives. A credit derivative is a contract between a seller and buyer of protection against the risk of a credit event occurring on one or more debt obligations issued by a specified reference entity. The buyer typically pays a periodic premium over the life of the contract and is protected for the period. If a credit event occurs, the seller is required to make payment to the beneficiary based on the terms of the credit derivative contract. Credit events, as defined in the contract, may be one or more of the following defined events: bankruptcy, dissolution or insolvency of the referenced entity, failure to pay, obligation acceleration, repudiation, payment moratorium and restructurings.

We trade in a variety of credit derivatives and may either purchase or write protection on a single name or portfolio of referenced entities. In transactions referencing a portfolio of entities or securities, protection may be limited to a tranche of

exposure or a single name within the portfolio. We are an active market maker in the credit derivatives markets. As a market maker, we work to earn a bid-offer spread on client flow business and manage any residual credit or correlation risk on a portfolio basis. Further, we use credit derivatives to manage our exposure to residential and commercial mortgage loans and corporate lending exposures. The effectiveness of our credit default swap ("CDS") protection as a hedge of our exposures may vary depending upon a number of factors, including the contractual terms of the CDS.

We actively monitor our counterparty credit risk related to credit derivatives. A majority of our counterparties are composed of banks, broker-dealers, insurance and other financial institutions. Contracts with these counterparties may include provisions related to counterparty rating downgrades, which may result in the counterparty posting additional collateral to us. As with all derivative contracts, we consider counterparty credit risk in the valuation of our positions and recognize credit valuation adjustments as appropriate within Trading revenues in the consolidated income statements.

Credit Derivative Portfolio by Counterparty Type

	At December 31, 2016				
	Fair Values[1]			Notionals	
$ in millions	Receivable	Payable	Net	Protection Purchased	Protection Sold
Banks and securities firms	**$ 8,516**	**$ 9,397**	**$ (881)**	**$ 319,830**	**$ 273,462**
Insurance and other financial institutions	**3,619**	**3,901**	**(282)**	**144,527**	**151,999**
Non-financial entities	**94**	**127**	**(33)**	**5,832**	**4,269**
Total	**$ 12,229**	**$ 13,425**	**$ (1,196)**	**$ 470,189**	**$ 429,730**

	At December 31, 2015				
	Fair Values[1]			Notionals	
$ in millions	Receivable	Payable	Net	Protection Purchased	Protection Sold
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

1. Our CDSs are classified in either Level 2 or Level 3 of the fair value hierarchy. Approximately 4% and 3%, respectively, of receivable fair values and 7% and 6%, respectively, of payable fair values represented Level 3 amounts at December 31, 2016 and December 31, 2015 (see Note 3 to the consolidated financial statements in Item 8).

The fair values shown in the previous table 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 8.

OTC Derivative Products at Fair Value, Net of Collateral, by Industry

$ in millions	**At December 31, 2016**	At December 31, 2015
Industry[1]		
Funds, exchanges and other financial services[2]	**$ 5,041**	$ 2,029
Banks and securities firms	**2,856**	1,672
Hedge funds	**2,417**	14
Energy	**1,057**	396
Insurance	**988**	380
Utilities	**719**	3,428
Not-for-profit organizations	**708**	794
Materials	**646**	473
Industrials	**528**	2,304
Consumer discretionary	**457**	725
Healthcare	**412**	1,041
Special purpose vehicles	**395**	718
Private individuals	**378**	16
Information technology	**376**	294
Sovereign governments	**264**	524
Regional governments	**256**	1,163
Consumer staples	**219**	506
Mortgage finance	**208**	4
Other	**210**	143
Total[3]	**$ 18,135**	$ 16,624

1. Industry categories are based on the Global Industry Classification Standard®.
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 8.

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.

Our obligor credit evaluation process may also identify indirect exposures whereby an obligor has vulnerability or exposure to another country or jurisdiction. Examples of indirect exposures include mutual funds that invest in a single country, offshore companies whose assets reside in another country to that of the offshore jurisdiction and finance company subsidiaries of corporations. Indirect exposures identified through the credit evaluation process may result in a reclassification of country risk.

We conduct periodic stress testing that seeks to measure the impact on our credit and market exposures of shocks stemming from negative economic or political scenarios. When deemed appropriate by our risk managers, the stress test scenarios include possible contagion effects. Second order risks such as the impact for core European banks of their peripheral exposures may also be considered. This analysis, and results of the stress tests, may result in the amendment of limits or exposure mitigation.

In addition to our country risk exposure, we disclose our cross-border risk exposure in “Financial Statements and Supplementary Data—Financial Data Supplement (Unaudited)” in Item 8. It is based on the Federal Financial Institutions Examination Council’s regulatory guidelines for reporting cross-border information and represents the amounts that we may not be able to obtain from a foreign country due to country-specific events, including unfavorable economic and political conditions, economic and social instability, and changes in government policies.

There can be substantial differences between our country risk exposure and cross-border risk exposure. For instance, unlike the cross-border risk exposure, our country risk exposure includes the effect of certain risk mitigants. In addition, the basis for determining the domicile of the country risk exposure is different from the basis for determining the cross-border risk exposure. Cross-border risk exposure is reported based on the country of jurisdiction for the obligor or guarantor. For country risk exposure, we consider factors in addition to that of country of jurisdiction, including physical location of operations or assets, location and source of cash flows/revenues and location of collateral (if applicable) in order to determine the basis for country risk exposure. Furthermore, cross-border risk exposure incorporates CDS only where protection is purchased, while country risk exposure incorporates CDS where protection is purchased or sold.

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 December 31, 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.

Top Ten Country Exposures at December 31, 2016

$ in millions	Net Inventory[1]	Net Counterparty Exposure[2,3]	Loans	Lending Commitments	Exposure Before Hedges	Hedges[4]	Net Exposure[5]
Country							
United Kingdom:							
Sovereigns	$ (1,220)	$ 9	$ —	$ —	$ (1,211)	$ (255)	$ (1,466)
Non-sovereigns	353	9,264	3,208	5,374	18,199	(2,031)	16,168
Total	$ (867)	$ 9,273	$ 3,208	$ 5,374	$ 16,988	$ (2,286)	$ 14,702
France:							
Sovereigns	$ 3,325	$ 5	$ —	$ —	$ 3,330	$ (50)	$ 3,280
Non-sovereigns	(105)	2,128	168	2,847	5,038	(1,349)	3,689
Total	$ 3,220	$ 2,133	$ 168	$ 2,847	$ 8,368	$ (1,399)	$ 6,969
Brazil:							
Sovereigns	$ 4,644	$ —	$ —	$ —	$ 4,644	$ (11)	$ 4,633
Non-sovereigns	124	232	945	73	1,374	(792)	582
Total	$ 4,768	$ 232	$ 945	$ 73	$ 6,018	$ (803)	$ 5,215
Japan:							
Sovereigns	$ (260)	$ 174	$ —	$ —	$ (86)	$ (82)	$ (168)
Non-sovereigns	486	3,046	319	—	3,851	(141)	3,710
Total	$ 226	$ 3,220	$ 319	$ —	$ 3,765	$ (223)	$ 3,542
Canada:							
Sovereigns	$ 134	$ 56	$ —	$ —	$ 190	$ —	$ 190
Non-sovereigns	(72)	1,462	175	1,473	3,038	(423)	2,615
Total	$ 62	$ 1,518	$ 175	$ 1,473	$ 3,228	$ (423)	$ 2,805
Netherlands:							
Sovereigns	$ (39)	$ —	$ —	$ —	$ (39)	$ (20)	$ (59)
Non-sovereigns	289	728	413	1,420	2,850	(344)	2,506
Total	$ 250	$ 728	$ 413	$ 1,420	$ 2,811	$ (364)	$ 2,447
Italy:							
Sovereigns	$ 1,090	$ (2)	$ —	$ —	$ 1,088	$ 10	$ 1,098
Non-sovereigns	119	556	39	647	1,361	(266)	1,095
Total	$ 1,209	$ 554	$ 39	$ 647	$ 2,449	$ (256)	$ 2,193
China:							
Sovereigns	$ 82	$ 274	$ —	$ —	$ 356	$ (550)	$ (194)
Non-sovereigns	1,036	216	770	257	2,279	(10)	2,269
Total	$ 1,118	$ 490	$ 770	$ 257	$ 2,635	$ (560)	$ 2,075
Singapore:							
Sovereigns	$ 1,600	$ 92	$ —	$ —	$ 1,692	$ —	$ 1,692
Non-sovereigns	70	155	39	38	302	—	302
Total	$ 1,670	$ 247	$ 39	$ 38	$ 1,994	$ —	$ 1,994
United Arab Emirates:							
Sovereigns	$ (27)	$ 1,227	$ —	$ —	$ 1,200	$ (39)	$ 1,161
Non-sovereigns	(13)	278	32	83	380	(15)	365
Total	$ (40)	$ 1,505	$ 32	$ 83	$ 1,580	$ (54)	$ 1,526

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 December 31, 2016, gross purchased protection, gross written protection, and net exposures related to single-name and index credit derivatives for those countries were $(85.3) billion, $83.7 billion and $(1.6) 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.
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 December 31, 2016, the benefit of collateral received against counterparty credit exposure was $9.5 billion in the U.K., with 96% of collateral consisting of cash and government obligations of the U.K., U.S. and France, and $6.6 billion in Japan with nearly all collateral consisting of cash and government obligations of Japan. The benefit of collateral received against counterparty credit exposure in the other countries totaled approximately $10.6 billion, with collateral primarily consisting of cash and government obligations of the U.S. 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 December 31, 2016, we had exposure to these countries for overnight deposits with banks of approximately $10.2 billion.

Country Risk Exposures Related to the United Kingdom. At December 31, 2016, our country risk exposures in the U.K. included net exposures of $14,702 million (shown in the previous table) and overnight deposits of $5,514 million. The $16,168 million (shown in the previous table) of exposures to non-sovereigns were diversified across both names and sectors. Of this exposure, $14,161 million is to investment grade counterparties, with the largest single component ($4,408 million) to exchanges and clearinghouses.

Country Risk Exposures Related to Brazil. At December 31, 2016, our country risk exposures in Brazil included net exposures of $5,215 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 $582 million (shown in the previous table) of exposures to non-sovereigns were diversified across both names and sectors.

Country Risk Exposures Related to China. At December 31, 2016, our country risk exposures in China included net exposures of $2,075 million (shown in the previous table) and overnight deposits with international banks of $159 million. The $2,269 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 or systems, human factors 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 ("BCBS") 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. The revised proposal will be subject to further rulemaking procedures and its timing has not been specified.

We have established an operational risk framework to identify, measure, monitor and control risk across the Firm. Effective operational risk management is essential to reducing the impact of operational risk incidents and mitigating legal, regulatory and reputational risks. The framework is continually evolving to account for changes in the Firm and to respond to the changing regulatory and business environment. We have implemented operational risk data and assessment systems to monitor and analyze internal and external operational risk events, to assess business environment and internal control factors and to perform scenario analysis. The collected data elements are incorporated in the operational risk capital model. The model encompasses both quantitative and qualitative elements. Internal loss data and scenario analysis results are direct inputs to the capital model, while external operational incidents, business environment and internal control factors are evaluated as part of the scenario analysis process.

In addition, we employ a variety of risk processes and mitigants to manage our operational risk exposures. These include a strong governance framework, a comprehensive risk management program and insurance. Operational risks and associated risk exposures are assessed relative to the risk tolerance established by the Board and are prioritized accordingly. The breadth and range of operational risk are such that the types of mitigating activities are wide-ranging. Examples of activities include enhancing defenses against cyberattacks; use of legal agreements and contracts to transfer and/or limit operational risk exposures; due diligence; implementation of enhanced policies and procedures; technology change management controls; exception management processing controls; and segregation of duties.

Primary responsibility for the management of operational risk is with the business segments, the control groups and the business managers therein. The business managers maintain processes and controls designed to identify, assess, manage, mitigate and report operational risk. Each of the business segments has a designated operational risk coordinator. The operational risk coordinator regularly reviews operational risk issues and reports to our senior management within each business. Each control group also has a designated operational risk coordinator and a forum for discussing operational risk matters with our senior management. Oversight of operational risk is provided by the Operational Risk Oversight Committee, legal entity risk committees, regional risk committees and senior management. In the event of a merger; joint venture; divestiture; reorganization; or creation of a new legal entity, a new product or a business activity, operational risks are considered, and any necessary changes in processes or controls are implemented.

The Operational Risk Department is independent of the divisions and reports to the Chief Risk Officer. The Operational Risk Department provides oversight of operational risk management and independently assesses, measures and monitors operational risk. The Operational Risk Department works with the divisions and control groups to help ensure a transparent, consistent and comprehensive framework for managing operational risk within each area and across the Firm. The Operational Risk Department scope includes oversight of the technology and data risk management program (*e.g.*, cybersecurity), fraud risk management and prevention program, and supplier risk management (vendor risk oversight and assessment) program. Furthermore, the Operational Risk Department supports the collection and reporting of operational risk incidents and the execution of operational risk assessments; provides the infrastructure needed for risk measurement and risk management; and ensures ongoing validation and verification of our advanced measurement approach for operational risk capital.

Business Continuity Management is responsible for identifying key risks and threats to our resiliency and planning to ensure that a recovery strategy and required resources are in place for the resumption of critical business functions following a disaster or other business interruption. Disaster recovery plans are in place for critical facilities and resources on a Firm-wide basis, and redundancies are built into the systems as deemed appropriate. The key components of our Business Continuity Management Program include: crisis management; business recovery plans; applications/data recovery; work area recovery; and other elements addressing management, analysis, training and testing.

We maintain an information security program that coordinates the management of information security risks and is designed to address regulatory requirements. Information security policies are designed to protect our information assets against unauthorized disclosure, modification or misuse. These policies cover a broad range of areas, including: application entitlements, data protection, incident response, internet and electronic communications, remote access, mobile banking products, and portable devices. We have also established policies, procedures and technologies to protect our computers and other assets from unauthorized access.

In connection with our ongoing operations, we utilize the services of external vendors, which we anticipate will continue and may increase in the future. These services include, for example, outsourced processing and support functions and other professional services. We manage our exposures to these services through a variety of means such as the performance of due diligence, consideration of operational risk, implementation of service level and other contractual agreements, and ongoing monitoring of the vendors' performance. We maintain a supplier risk management program with policies, procedures, organization, governance and supporting technology that satisfies regulatory requirements. The program is designed to ensure that adequate risk management controls over the services exist, including, but not limited to, information security, operational failure, financial stability, disaster recoverability, reputational risk, safeguards against corruption and termination.

Model Risk

Model risk refers to the potential for adverse consequences from decisions based on incorrect or misused model outputs. Model risk can lead to financial loss, poor business and strategic decision making, or damage to a Firm's reputation. The risk inherent in a model is a function of the materiality, complexity and uncertainty around inputs and assumptions. Model risk is generated from the use of models impacting financial statements, regulatory filings, capital adequacy assessments and the formulation of strategy.

Sound model risk management is an integral part of our Risk Management Framework. Model Risk Management is a distinct department in Risk Management responsible for the independent oversight of model risk. It is independent of the business units and reports to the Chief Risk Officer.

The Model Risk Management Department establishes a model risk tolerance in line with our risk appetite. The tolerance is based on an assessment of the materiality of the risk of financial loss or reputational damage due to errors in design, implementation, and/or inappropriate use of models. The tolerance is monitored through model-specific and aggregate business-level assessments, which are based upon qualitative and quantitative factors.

A guiding principle for managing model risk is the "effective challenge" of models. The effective challenge of models is represented by the critical analysis by objective, informed parties who can identify model limitations and assumptions and drive appropriate changes. The Model Risk Management Department provides effective challenge of models, independently validates and approves models for use, annually recertifies models, reports identified model validation limitations to key stakeholders, tracks remediation plans for model validation limitations, and reports on model risk metrics. The department also develops controls to support a complete and accurate Firm-wide model inventory. The Model Risk Management Department reports on our model risk relative to risk tolerance and presents these reports to the Model Oversight Committee, the FRC, and the Chief Risk Officer. The Chief Risk Officer also provides quarterly updates to the BRC on model risk metrics.

Liquidity Risk

Liquidity 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 our assets. Liquidity risk also encompasses our ability (or perceived ability) to meet our financial obligations without experiencing significant business disruption or reputational damage that may threaten our viability as a going concern. Liquidity risk also encompasses the associated funding risks triggered by the market or idiosyncratic stress events that may negatively affect our liquidity and may impact our ability to raise new funding. Generally, we incur liquidity and funding risk as a result of our trading, lending, investing and client facilitation activities.

Our Liquidity Risk Management Framework is critical to helping ensure that we maintain sufficient liquidity reserves and durable funding sources to meet our daily obligations and to withstand unanticipated stress events. The Liquidity Risk Department is a distinct area in Risk Management responsible for the oversight and monitoring of liquidity risk. The Liquidity Risk Department is independent of the business units and reports to the Chief Risk Officer. The Liquidity Risk Department ensures transparency of material liquidity and funding risks, compliance with established risk limits and escalation of risk concentrations to appropriate senior management. To execute these responsibilities, the Liquidity Risk Department establishes limits in line with our risk appetite, identifies and analyzes emerging liquidity and funding risks to ensure such risks are appropriately mitigated, monitors and reports risk exposures against metrics and limits, and reviews the methodologies and assumptions underpinning our Liquidity Stress Tests to ensure sufficient liquidity and funding under a range of adverse scenarios. The liquidity and funding risks identified by these processes are summarized in reports produced by the Liquidity Risk Department that are circulated to and discussed with senior management, the FRC, the BRC and the Board, as appropriate.

The Treasury Department and applicable business units have primary responsibility for evaluating, monitoring and controlling the liquidity and funding risks arising from our business activities, and for maintaining processes and controls to manage the key risks inherent in their respective areas. The Liquidity Risk Department coordinates with the Treasury Department and these business units to help ensure a consistent and comprehensive framework for managing liquidity and funding risk across the Firm. See also “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources” in Part II, Item 7.

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. We are generally subject to extensive regulation in the different jurisdictions in which we conduct our business (see also “Business—Supervision and Regulation” in Part I, Item 1, and “Risk Factors” in Part I, Item 1A). We have established procedures based on legal and regulatory requirements on a worldwide basis that are designed to facilitate compliance with applicable statutory and regulatory requirements and to require that our policies relating to business conduct, ethics and practices are followed globally. In addition, we have established procedures to mitigate the risk that a counterparty’s performance obligations will be unenforceable, including consideration of counterparty legal authority and capacity, adequacy of legal documentation, the permissibility of a transaction under applicable law and whether applicable bankruptcy or insolvency laws limit or alter contractual remedies. The heightened legal and regulatory focus on the financial services and banking industry presents a continuing business challenge for us.

Item 8. Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Morgan Stanley:

We have audited the accompanying consolidated balance sheets of Morgan Stanley and subsidiaries (the "Firm") as of December 31, 2016 and 2015 and the related consolidated statements of income, comprehensive income, cash flows, and changes in total equity for the years ended December 31, 2016, 2015 and 2014. These consolidated financial statements are the responsibility of the Firm's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of the Firm as of December 31, 2016 and 2015, and the results of their operations and their cash flows for the years ended December 31, 2016, 2015 and 2014, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Firm's internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 27, 2017 expressed an unqualified opinion on the Firm's internal control over financial reporting.

/s/ Deloitte & Touche LLP
New York, New York
February 27, 2017

Consolidated Income Statements

Morgan Stanley

in millions, except per share data	**2016**	2015	2014
Revenues			
Investment banking	**$ 4,933**	$ 5,594	$ 5,948
Trading	**10,209**	10,114	9,377
Investments	**160**	541	836
Commissions and fees	**4,109**	4,554	4,713
Asset management, distribution and administration fees	**10,697**	10,766	10,570
Other	**825**	493	1,096
Total non-interest revenues	**30,933**	32,062	32,540
Interest income	**7,016**	5,835	5,413
Interest expense	**3,318**	2,742	3,678
Net interest	**3,698**	3,093	1,735
Net revenues	**34,631**	35,155	34,275
Non-interest expenses			
Compensation and benefits	**15,878**	16,016	17,824
Occupancy and equipment	**1,308**	1,382	1,433
Brokerage, clearing and exchange fees	**1,920**	1,892	1,806
Information processing and communications	**1,787**	1,767	1,635
Marketing and business development	**587**	681	658
Professional services	**2,128**	2,298	2,117
Other	**2,175**	2,624	5,211
Total non-interest expenses	**25,783**	26,660	30,684
Income from continuing operations before income taxes	**8,848**	8,495	3,591
Provision for (benefit from) income taxes	**2,726**	2,200	(90)
Income from continuing operations	**6,122**	6,295	3,681
Income (loss) from discontinued operations, net of income taxes	**1**	(16)	(14)
Net income	**$ 6,123**	$ 6,279	$ 3,667
Net income applicable to noncontrolling interests	**144**	152	200
Net income applicable to Morgan Stanley	**$ 5,979**	$ 6,127	$ 3,467
Preferred stock dividends and other	**471**	456	315
Earnings applicable to Morgan Stanley common shareholders	**$ 5,508**	$ 5,671	$ 3,152
Earnings per basic common share			
Income from continuing operations	**$ 2.98**	$ 2.98	$ 1.65
Income (loss) from discontinued operations	**—**	(0.01)	(0.01)
Earnings per basic common share	**$ 2.98**	$ 2.97	$ 1.64
Earnings per diluted common share			
Income from continuing operations	**$ 2.92**	$ 2.91	$ 1.61
Income (loss) from discontinued operations	**—**	(0.01)	(0.01)
Earnings per diluted common share	**$ 2.92**	$ 2.90	$ 1.60
Dividends declared per common share	**$ 0.70**	$ 0.55	$ 0.35
Average common shares outstanding			
Basic	**1,849**	1,909	1,924
Diluted	**1,887**	1,953	1,971

Consolidated Comprehensive Income Statements

$ in millions		2016		2015		2014
Net income	**$**	**6,123**	$	6,279	$	3,667
Other comprehensive income (loss), net of tax:						
Foreign currency translation adjustments	**$**	**(11)**	$	(304)	$	(491)
Change in net unrealized gains (losses) on available for sale securities		**(269)**		(246)		209
Pension, postretirement and other		**(100)**		138		33
Change in net debt valuation adjustment		**(296)**		—		—
Total other comprehensive income (loss)	**$**	**(676)**	$	(412)	$	(249)
Comprehensive income	**$**	**5,447**	$	5,867	$	3,418
Net income applicable to noncontrolling interests		**144**		152		200
Other comprehensive income (loss) applicable to noncontrolling interests		**(1)**		(4)		(94)
Comprehensive income applicable to Morgan Stanley	**$**	**5,304**	$	5,719	$	3,312

Consolidated Balance Sheets

Morgan Stanley

$ in millions, except share data	**At December 31, 2016**	At December 31, 2015
Assets		
Cash and due from banks	**$ 22,017**	$ 19,827
Interest bearing deposits with banks	**21,364**	34,256
Trading assets at fair value (**$152,548** and $127,627 were pledged to various parties)	**262,154**	239,505
Investment securities (includes **$63,170** and $66,759 at fair value)	**80,092**	71,983
Securities purchased under agreements to resell (includes **$302** and $806 at fair value)	**101,955**	87,657
Securities borrowed	**125,236**	142,416
Customer and other receivables	**46,460**	45,407
Loans:		
Held for investment (net of allowance of **$274** and $225)	**81,704**	72,559
Held for sale	**12,544**	13,200
Goodwill	**6,577**	6,584
Intangible assets (net of accumulated amortization of **$2,421** and $2,130)	**2,721**	2,984
Other assets	**52,125**	51,087
Total assets	**$ 814,949**	$ 787,465
Liabilities		
Deposits (includes **$63** and $125 at fair value)	**$ 155,863**	$ 156,034
Short-term borrowings (includes **$406** and $1,648 at fair value)	**941**	2,173
Trading liabilities at fair value	**128,194**	128,455
Securities sold under agreements to repurchase (includes **$729** and $683 at fair value)	**54,628**	36,692
Securities loaned	**15,844**	19,358
Other secured financings (includes **$5,041** and $2,854 at fair value)	**11,118**	9,464
Customer and other payables	**190,513**	186,626
Other liabilities and accrued expenses	**15,896**	18,711
Long-term borrowings (includes **$38,736** and $33,045 at fair value)	**164,775**	153,768
Total liabilities	**737,772**	711,281
Commitments and contingent liabilities (see Note 12)		
Equity		
Morgan Stanley shareholders' equity:		
Preferred stock (see Note 15)	**7,520**	7,520
Common stock, $0.01 par value:		
Shares authorized: **3,500,000,000**; Shares issued: **2,038,893,979**; Shares outstanding: **1,852,481,601** and 1,920,024,027	**20**	20
Additional paid-in capital	**23,271**	24,153
Retained earnings	**53,679**	49,204
Employee stock trusts	**2,851**	2,409
Accumulated other comprehensive income (loss)	**(2,643)**	(1,656)
Common stock held in treasury at cost, $0.01 par value (**186,412,378** and 118,869,952 shares)	**(5,797)**	(4,059)
Common stock issued to employee stock trusts	**(2,851)**	(2,409)
Total Morgan Stanley shareholders' equity	**76,050**	75,182
Noncontrolling interests	**1,127**	1,002
Total equity	**77,177**	76,184
Total liabilities and equity	**$ 814,949**	$ 787,465

Consolidated Statements of Changes in Total Equity

$ in millions	Preferred Stock	Common Stock	Additional Paid-in Capital	Retained Earnings	Employee Stock Trusts	Accumulated Other Comprehensive Income (Loss)	Common Stock Held in Treasury at Cost	Common Stock Issued to Employee Stock Trusts	Non-controlling Interests	Total Equity
Balance at December 31, 2013	$ 3,220	$ 20	$ 24,570	$ 42,172	$ 1,718	$ (1,093)	$ (2,968)	$ (1,718)	$ 3,109	$69,030
Net income applicable to Morgan Stanley	—	—	—	3,467	—	—	—	—	—	3,467
Net income applicable to noncontrolling interests	—	—	—	—	—	—	—	—	200	200
Dividends	—	—	—	(1,014)	—	—	—	—	—	(1,014)
Shares issued under employee plans and related tax effects	—	—	(294)	—	409	—	1,660	(409)	—	1,366
Repurchases of common stock and employee tax withholdings	—	—	—	—	—	—	(1,458)	—	—	(1,458)
Net change in Accumulated other comprehensive income (loss)	—	—	—	—	—	(155)	—	—	(94)	(249)
Issuance of preferred stock	2,800	—	(18)	—	—	—	—	—	—	2,782
Deconsolidation of certain legal entities associated with a real estate fund	—	—	—	—	—	—	—	—	(1,606)	(1,606)
Other net decreases	—	—	(9)	—	—	—	—	—	(405)	(414)
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	—	—	—	6,127	—	—	—	—	—	6,127
Net income applicable to noncontrolling interests	—	—	—	—	—	—	—	—	152	152
Dividends	—	—	—	(1,548)	—	—	—	—	—	(1,548)
Shares issued under employee plans and related tax effects	—	—	(79)	—	282	—	1,480	(282)	—	1,401
Repurchases of common stock and employee tax withholdings	—	—	—	—	—	—	(2,773)	—	—	(2,773)
Net change in Accumulated other comprehensive income (loss)	—	—	—	—	—	(408)	—	—	(4)	(412)
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)	—	—	—	—	—	(159)	(169)
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	**—**	**—**	**—**	**5,979**	**—**	**—**	**—**	**—**	**—**	**5,979**
Net income applicable to noncontrolling interests	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**144**	**144**
Dividends	**—**	**—**	**—**	**(1,816)**	**—**	**—**	**—**	**—**	**—**	**(1,816)**
Shares issued under employee plans and related tax effects	**—**	**—**	**(892)**	**—**	**442**	**—**	**2,195**	**(442)**	**—**	**1,303**
Repurchases of common stock and employee tax withholdings	**—**	**—**	**—**	**—**	**—**	**—**	**(3,933)**	**—**	**—**	**(3,933)**
Net change in Accumulated other comprehensive income (loss)	**—**	**—**	**—**	**—**	**—**	**(675)**	**—**	**—**	**(1)**	**(676)**
Other net increases (decreases)	**—**	**—**	**10**	**—**	**—**	**—**	**—**	**—**	**(124)**	**(114)**
Balance at December 31, 2016	**$ 7,520**	**$ 20**	**$ 23,271**	**$ 53,679**	**$ 2,851**	**$ (2,643)**	**$ (5,797)**	**$ (2,851)**	**$ 1,127**	**$77,177**

1. Debt valuation adjustment ("DVA") represents 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 under the fair value option, primarily related to certain Long-term and Short-term borrowings. 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 unrealized 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 15 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 both consolidate and deconsolidate certain entities under the new guidance. See Note 2 for further information.

Consolidated Cash Flow Statements

$ in millions	2016	2015	2014
Cash flows from operating activities			
Net income	**$ 6,123**	$ 6,279	$ 3,667
Adjustments to reconcile net income to net cash provided by (used for) operating activities:			
Deferred income taxes	**1,579**	1,189	(231)
(Income) loss from equity method investments	**79**	(114)	(156)
Compensation payable in common stock and options	**1,136**	1,104	1,260
Depreciation and amortization	**1,736**	1,433	1,161
Net gain on sale of available for sale securities	**(112)**	(84)	(40)
Impairment charges	**130**	69	111
Provision for credit losses on lending activities	**144**	123	23
Other operating adjustments	**(199)**	322	(72)
Changes in assets and liabilities:			
Trading assets, net of Trading liabilities	**(24,395)**	29,471	20,619
Securities borrowed	**17,180**	(5,708)	(7,001)
Securities loaned	**(3,514)**	(5,861)	(7,580)
Customer and other receivables and other assets	**(2,881)**	8,704	2,204
Customer and other payables and other liabilities	**1,803**	4,373	27,971
Securities purchased under agreements to resell	**(14,298)**	(4,369)	34,842
Securities sold under agreements to repurchase	**17,936**	(33,257)	(75,692)
Net cash provided by operating activities	**2,447**	3,674	1,086
Cash flows from investing activities			
Proceeds from (payments for):			
Other assets—Premises, equipment and software, net	**(1,276)**	(1,373)	(992)
Business dispositions, net of cash disposed	**—**	998	989
Changes in loans, net	**(9,604)**	(15,816)	(20,116)
Investment securities:			
Purchases	**(50,911)**	(47,291)	(32,623)
Proceeds from sales	**33,716**	37,926	12,980
Proceeds from paydowns and maturities	**8,367**	5,663	4,651
Other investing activities	**200**	(102)	(213)
Net cash used for investing activities	**(19,508)**	(19,995)	(35,324)
Cash flows from financing activities			
Net proceeds from (payments for):			
Short-term borrowings	**(1,206)**	(88)	119
Noncontrolling interests	**(96)**	(96)	(189)
Other secured financings	**1,333**	(2,370)	(2,189)
Deposits	**(171)**	22,490	21,165
Proceeds from:			
Excess tax benefits associated with stock-based awards	**61**	211	101
Derivatives financing activities	**—**	512	855
Issuance of preferred stock, net of issuance costs	**—**	1,493	2,782
Issuance of long-term borrowings	**43,626**	34,182	36,740
Payments for:			
Long-term borrowings	**(30,390)**	(27,289)	(33,103)
Derivatives financing activities	**(120)**	(452)	(776)
Repurchases of common stock and employee tax withholdings	**(3,933)**	(2,773)	(1,458)
Cash dividends	**(1,746)**	(1,455)	(904)
Other financing activities	**66**	—	—
Net cash provided by financing activities	**7,424**	24,365	23,143
Effect of exchange rate changes on cash and cash equivalents	**(1,065)**	(945)	(1,804)
Net increase (decrease) in cash and cash equivalents	**(10,702)**	7,099	(12,899)
Cash and cash equivalents, at beginning of period	**54,083**	46,984	59,883
Cash and cash equivalents, at end of period	**$ 43,381**	$ 54,083	$ 46,984
Cash and cash equivalents include:			
Cash and due from banks	**$ 22,017**	$ 19,827	$ 21,381
Interest bearing deposits with banks	**21,364**	34,256	25,603
Cash and cash equivalents, at end of period	**$ 43,381**	$ 54,083	$ 46,984

Supplemental Disclosure of Cash Flow Information

Cash payments for interest were **$2,834 million**, $2,672 million and $3,575 million for **2016**, 2015 and 2014, respectively.

Cash payments for income taxes, net of refunds, were **$831 million**, $677 million and $886 million for **2016**, 2015 and 2014, respectively.

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 Company") together with its consolidated subsidiaries.

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

Institutional Securities provides investment banking, sales and trading, lending and other services to corporations, governments, financial institutions, and high to ultra-high net worth clients. Investment banking services consist of 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 and fixed income products, including foreign exchange and commodities, as well as prime brokerage services. Lending services include originating and/or purchasing corporate loans, commercial and residential mortgage lending, asset-backed lending, financing extended to equities and commodities customers, and loans to municipalities. Other activities include 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, 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 include equity, fixed income, liquidity and alternative/other products. Institutional clients include defined benefit/defined contribution plans, 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.

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. Certain reclassifications have been made to prior periods to conform to the current presentation.

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 13). 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 applicable to noncontrolling interests in the consolidated income statements. The portion of shareholders' equity 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 entities where (1) the total equity investment at risk is sufficient to enable the entity to finance its activities without additional subordinated financial support and (2) the equity holders bear the economic residual risks and returns of the entity and have the power to direct the activities of the entity that most significantly affect its economic performance, the Firm consolidates those entities it controls either through a majority voting interest or otherwise. For VIEs (*i.e.*, entities that do not meet these criteria), the Firm consolidates those entities where it has the power to make the decisions that most significantly affect the economic performance of the VIE and has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE, except for certain VIEs that are money market funds, investment companies or entities qualifying for accounting purposes as investment companies. Generally, the Firm

consolidates those entities when it absorbs a majority of the expected losses or a majority of the expected residual returns, or both, of the entities.

For investments in entities in which the Firm does not have a controlling financial interest but has significant influence over operating and financial decisions, it generally applies the equity method of accounting with net gains and losses recorded within Other revenues (see Note 8). Where the Firm has elected to measure certain eligible investments at fair value in accordance with the fair value option, net gains and losses are recorded within Investments revenues (see Note 3).

Equity and partnership interests held by entities qualifying for accounting purposes as investment companies are carried at fair value.

The Firm's significant regulated U.S. and international subsidiaries include Morgan Stanley & Co. LLC ("MS&Co."), Morgan Stanley Smith Barney LLC ("MSSB LLC"), Morgan Stanley & Co. International plc ("MSIP"), Morgan Stanley MUFG Securities Co., Ltd. ("MSMS"), Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA").

Consolidated Cash Flow Statements Presentation

For purposes of the consolidated cash flow statements, cash and cash equivalents consist of Cash and due from banks and Interest bearing deposits with banks, which include highly liquid investments with original maturities of three months or less, that are held for investment purposes and are readily convertible to known amounts of cash.

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. The Firm deconsolidated approximately $244 million and $1.6 billion in 2015 and 2014, respectively, in net assets previously attributable to noncontrolling interests that were primarily related to or associated with real estate funds sponsored by the Firm. The deconsolidations resulted in a noncash reduction of assets of $222 million in 2015 and $1.3 billion in 2014.

Dispositions

The Firm completed the sale of its global oil merchanting unit of the commodities division to Castleton Commodities International LLC on November 1, 2015. The Firm recognized an impairment charge of approximately $71 million in Other revenues. The transaction did not meet the criteria for discontinued operations and did not have a material impact on the Firm's financial results.

On July 1, 2014, the Firm completed the sale of its ownership stake in TransMontaigne Inc., a U.S.-based oil storage, marketing and transportation company, as well as related physical inventory and the assumption of its obligations under certain terminal storage contracts, to NGL Energy Partners LP. The gain on sale of $112 million is recorded in Other revenues.

On March 27, 2014, the Firm completed the sale of Canterm Canadian Terminals Inc., a public storage terminal operator for refined products with two distribution terminals in Canada. The gain on sale was approximately $45 million and is recorded in Other revenues.

2. Significant Accounting Policies

Revenue Recognition

Investment Banking

Underwriting revenues and advisory fees from mergers, acquisitions and restructuring transactions are recorded when services for the transactions are determined to be substantially completed, generally as set forth under the terms of the engagement. Transaction-related expenses, primarily consisting of legal, travel and other costs directly associated with the transaction, are deferred and recognized in the same period as the related investment banking transaction revenues. Underwriting revenues are presented net of related expenses. Non-reimbursed expenses associated with advisory transactions are recorded within Non-interest expenses.

Commissions and Fees

Commission and fee revenues are recognized on trade date. Commission and fee revenues primarily arise from agency transactions in listed and over-the-counter ("OTC") equity securities; services related to sales and trading activities; and sales of mutual funds, futures, insurance products and options.

Asset Management, Distribution and Administration Fees

Asset management, distribution and administration fees are recognized over the relevant contract period. Sales commissions paid by the Firm in connection with the sale of certain classes of shares of its open-end mutual fund products are accounted for as deferred commission assets. The Firm periodically tests deferred commission assets for recoverability based on cash flows expected to be received in future periods.

In certain management fee arrangements, the Firm is entitled to receive performance-based fees (which also may be referred to as incentive fees and which include 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 or fund performance to date versus the performance bench-

mark stated in the investment management agreement. Performance-based fees are recorded within Investments or Asset management, distribution and administration fees depending on the nature of the arrangement.

The Firm's portion of the unrealized cumulative amount of performance-based fee revenues (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 $397 million and $422 million at December 31, 2016 and December 31, 2015, respectively. See Note 12 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.

Fair Value of Financial Instruments

Instruments within Trading assets and Trading liabilities are measured at fair value, either in accordance with accounting guidance or through the fair value option election (discussed below). These financial instruments primarily represent the Firm's trading and investment positions and include both cash and derivative products. In addition, debt securities classified as available-for-sale ("AFS") securities are measured at fair value.

Gains and losses on instruments carried at fair value are reflected in Trading revenues, Investments revenues or Investment banking revenues in the consolidated income statements, except for AFS securities (see "Investment Securities—Available for Sale and Held to Maturity" section herein and Note 5) and derivatives accounted for as hedges (see "Hedge Accounting" section herein and Note 4).

Interest income and interest expense are recorded within the consolidated income statements depending on the nature of the instrument and related market conventions. When interest is included as a component of the instruments' fair value, interest is included within Trading revenues or Investments revenues. Otherwise, it is included within Interest income or Interest expense. Dividend income is recorded in Trading revenues or Investments revenues depending on the business activity.

The fair value of OTC financial instruments, including derivative contracts related to financial instruments and commodities, is presented in the accompanying consolidated balance sheets on a net-by-counterparty basis, when appropriate. Additionally, the Firm nets the fair value of cash collateral paid or received against the fair value amounts recognized for net derivative positions executed with the same counterparty under the same master netting agreement.

Fair Value Option

The fair value option permits the irrevocable fair value option election at initial recognition of an asset or liability or upon an event that gives rise to a new basis of accounting for that instrument. The Firm applies the fair value option for eligible instruments, including certain Securities purchased under agreements to resell, loans and lending commitments, equity method investments, Deposits (structured certificate of deposits), Short-term borrowings (primarily structured notes), Securities sold under agreements to repurchase, Other secured financings and Long-term borrowings (primarily structured notes).

Fair Value Measurement—Definition and Hierarchy

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (*i.e.*, the "exit price") in an orderly transaction between market participants at the measurement date.

In determining fair value, the Firm uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of the Firm. Unobservable inputs are inputs that reflect assumptions the Firm believes other market participants would use in pricing the asset or liability that are developed based on the best information available in the circumstances. The hierarchy is broken down into three levels based on the observability of inputs as follows:

Level 1. Valuations based on quoted prices in active markets that the Firm has the ability to access for identical assets or liabilities. Valuation adjustments and block discounts are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgment.

Level 2. Valuations based on one or more quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

Level 3. Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary from product to product and is affected by a wide variety of factors,

including, for example, the type of product, whether the product is new and not yet established in the marketplace, the liquidity of markets and other characteristics particular to the product. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Firm in determining fair value is greatest for instruments categorized in Level 3 of the fair value hierarchy.

The Firm considers prices and inputs that are current as of the measurement date, including during periods of market dislocation. In periods of market dislocation, the observability of prices and inputs may be reduced for many instruments. This condition could cause an instrument to be reclassified from Level 1 to Level 2 or from Level 2 to Level 3 of the fair value hierarchy (see Note 3).

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement falls in its entirety is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

For assets and liabilities that are transferred between levels in the fair value hierarchy during the period, fair values are ascribed as if the assets or liabilities had been transferred as of the beginning of the period.

Valuation Techniques

Many cash instruments and OTC derivative contracts have bid and ask prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Ask prices represent the lowest price that a party is willing to accept for an asset. The Firm carries positions at the point within the bid-ask range that meet its best estimate of fair value. For offsetting positions in the same financial instrument, the same price within the bid-ask spread is used to measure both the long and short positions.

Fair value for many cash instruments and OTC derivative contracts is derived using pricing models. Pricing models take into account the contract terms, as well as multiple inputs, including, where applicable, commodity prices, equity prices, interest rate yield curves, credit curves, correlation, creditworthiness of the counterparty, creditworthiness of the Firm, option volatility and currency rates.

Where appropriate, valuation adjustments are made to account for various factors such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty and concentration risk. Adjustments for liquidity risk adjust model-derived mid-market levels of Level 2 and Level 3 financial instruments for the bid-mid or mid-ask spread required to properly reflect the exit price of a risk position. Bid-mid and mid-ask spreads are marked to levels observed in trade activity, broker quotes or other external third-party data. Where these spreads are unobservable for the particular position in question, spreads are derived from observable levels of similar positions.

The Firm applies credit-related valuation adjustments to its short-term and long-term borrowings (primarily structured notes) for which the fair value option was elected and to OTC derivatives. The Firm considers the impact of changes in its own credit spreads based upon observations of the secondary bond market spreads when measuring the fair value for short-term and long-term borrowings.

For OTC derivatives, the impact of changes in both the Firm's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure, the Firm simulates the distribution of the future exposure to a counterparty, then applies market-based default probabilities to the future exposure, leveraging external third-party credit default swap ("CDS") spread data. Where CDS spread data are unavailable for a specific counterparty, bond market spreads, CDS spread data based on the counterparty's credit rating or CDS spread data that reference a comparable counterparty may be utilized. The Firm also considers collateral held and legally enforceable master netting agreements that mitigate its exposure to each counterparty.

Adjustments for model uncertainty are taken for positions whose underlying models are reliant on significant inputs that are neither directly nor indirectly observable, hence requiring reliance on established theoretical concepts in their derivation. These adjustments are derived by making assessments of the possible degree of variability using statistical approaches and market-based information where possible.

The Firm may apply a concentration adjustment to certain of its OTC derivatives portfolios to reflect the additional cost of closing out a particularly large risk exposure. Where possible, these adjustments are based on observable market information, but in many instances, significant judgment is required to estimate the costs of closing out concentrated risk exposures due to the lack of liquidity in the marketplace.

The Firm applies funding valuation adjustments ("FVA") into the fair value measurements of OTC uncollateralized or partially collateralized derivatives and in collateralized derivatives where the terms of the agreement do not permit the reuse of the collateral received. The Firm's implementation of FVA reflects the inclusion of FVA in the pricing and valuations by the majority of market participants involved in its principal exit market for these instruments. In general, FVA

reflects a market funding risk premium inherent in the noted derivative instruments. The methodology for measuring FVA leverages the Firm's existing credit-related valuation adjustment calculation methodologies, which apply to both assets and liabilities.

Fair value is a market-based measure considered from the perspective of a market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, assumptions are set to reflect those that the Firm believes market participants would use in pricing the asset or liability at the measurement date. Where the Firm manages a group of financial assets and financial liabilities on the basis of its net exposure to either market risks or credit risk, the Firm measures the fair value of that group of financial instruments consistently with how market participants would price the net risk exposure at the measurement date.

See Note 3 for a description of valuation techniques applied to the major categories of financial instruments measured at fair value.

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

Certain of the Firm's assets and liabilities are measured at fair value on a non-recurring basis. The Firm incurs losses or gains for any adjustments of these assets or liabilities to fair value.

For assets and liabilities measured at fair value on a non-recurring basis, fair value is determined by using various valuation approaches. The same hierarchy for inputs as described above, which maximizes the use of observable inputs and minimizes the use of unobservable inputs by generally requiring that the observable inputs be used when available, is used in measuring fair value for these items.

Valuation Process

The Valuation Review Group ("VRG") within the Firm's Financial Control Group ("FCG") is responsible for the Firm's fair value valuation policies, processes and procedures. VRG is independent of the business units and reports to the Chief Financial Officer ("CFO"), who has final authority over the valuation of the Firm's financial instruments. VRG implements valuation control processes designed to validate the fair value of the Firm's financial instruments measured at fair value, including those derived from pricing models.

Model Review. VRG, in conjunction with the Model Risk Management Department ("MRM"), which reports to the Chief Risk Officer, independently review valuation models' theoretical soundness, the appropriateness of the valuation methodology and calibration techniques developed by the business units using observable inputs. Where inputs are not observable, VRG reviews the appropriateness of the proposed valuation methodology to determine that it is consistent with how a market participant would arrive at the unobservable input. The valuation methodologies utilized in the absence of observable inputs may include extrapolation techniques and the use of comparable observable inputs. As part of the review, VRG develops a methodology to independently verify the fair value generated by the business unit's valuation models. The Firm generally subjects valuations and models to a review process initially and on a periodic basis thereafter.

Independent Price Verification. The business units are responsible for determining the fair value of financial instruments using approved valuation models and valuation methodologies. Generally on a monthly basis, VRG independently validates the fair values of financial instruments determined using valuation models by determining the appropriateness of the inputs used by the business units and by testing compliance with the documented valuation methodologies approved in the model review process described above.

The results of this independent price verification and any adjustments made by VRG to the fair value generated by the business units are presented to management of the Firm's three business segments (*i.e.,* Institutional Securities, Wealth Management and Investment Management), the CFO and the Chief Risk Officer on a regular basis.

VRG uses recently executed transactions, other observable market data such as exchange data, broker-dealer quotes, third-party pricing vendors and aggregation services for validating the fair value of financial instruments generated using valuation models. VRG assesses the external sources and their valuation methodologies to determine if the external providers meet the minimum standards expected of a third-party pricing source. Pricing data provided by approved external sources are evaluated using a number of approaches; for example, by corroborating the external sources' prices to executed trades, by analyzing the methodology and assumptions used by the external source to generate a price, and/or by evaluating how active the third-party pricing source (or originating sources used by the third-party pricing source) is in the market. Based on this analysis, VRG generates a ranking of the observable market data designed to ensure that the highest-ranked market data source is used to validate the business unit's fair value of financial instruments.

VRG reviews the models and valuation methodology used to price new material Level 2 and Level 3 transactions, and both FCG and MRM must approve the fair value of the trade that is initially recognized.

Level 3 Transactions. VRG reviews the business unit's valuation techniques to assess whether these are consistent with market participant assumptions.

For further information on financial assets and liabilities that are measured at fair value on a recurring and non-recurring basis, see Note 3.

Offsetting of Derivative Instruments

In connection with its derivative activities, the Firm generally enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Firm with the right, in the event of a default by the counterparty, to net a counterparty's rights and obligations under the agreement and to liquidate and set off collateral against any net amount owed by the counterparty.

However, in certain circumstances, the Firm may not have such an agreement in place; the relevant insolvency regime may not support the enforceability of the master netting agreement or collateral agreement; or the Firm may not have sought legal advice to support the enforceability of the agreement. In cases where the Firm has not determined an agreement to be enforceable, the related amounts are not offset in the tabular disclosures (see Note 4).

The Firm's policy is generally to receive securities and cash posted as collateral (with rights of rehypothecation), irrespective of the enforceability determination regarding the master netting and collateral agreement. In certain cases, the Firm may agree for such collateral to be posted to a third-party custodian under a control agreement that enables it to take control of such collateral in the event of a counterparty default. The enforceability of the master netting agreement is taken into account in the Firm's risk management practices and application of counterparty credit limits.

For information related to offsetting of derivatives and certain collateralized transactions, see Notes 4 and 6, respectively.

Hedge Accounting

The Firm applies hedge accounting using various derivative financial instruments for the following types of hedges: hedges of changes in fair value of assets and liabilities due to the risk being hedged (fair value hedges); and hedges of net investments in foreign operations whose functional currency is different from the reporting currency of the Parent Company (net investment hedges). These financial instruments are included within Trading assets—Derivative and other contracts or Trading liabilities—Derivative and other contracts in the consolidated balance sheets. For hedges where hedge accounting is being applied, the Firm performs effectiveness testing and other procedures.

Fair Value Hedges—Interest Rate Risk

The Firm's designated fair value hedges consist primarily of interest rate swaps designated as fair value hedges of changes in the benchmark interest rate of fixed rate senior long-term borrowings. The Firm uses regression analysis to perform an ongoing prospective and retrospective assessment of the effectiveness of these hedging relationships. A hedging relationship is deemed effective if the change in fair value of the hedging instrument (derivative) and the change in fair value of the hedged item (debt liability) due to changes in the benchmark interest rate offset within a range of 80% to 125%. The Firm considers the impact of valuation adjustments related to its own credit spreads and counterparty credit spreads to determine whether they would cause the hedging relationship to be ineffective.

For qualifying fair value hedges of benchmark interest rates, the changes in the fair value of the derivative and the changes in the fair value of the hedged liability provide offset of one another and, together with any resulting ineffectiveness, are recorded in Interest expense. When a derivative is de-designated as a hedge, any basis adjustment remaining on the hedged liability is amortized to Interest expense over the remaining life of the liability using the effective interest method.

Net Investment Hedges

The Firm uses forward foreign exchange contracts to manage a portion of the currency exposure relating to its net investments in non-U.S. dollar functional currency operations. To the extent that the notional amounts of the hedging instruments equal the portion of the investments being hedged and the underlying exchange rate of the derivative hedging instrument relates to the exchange rate between the functional currency of the investee and the Parent Company's functional currency, no hedge ineffectiveness is recognized in earnings. If these exchange rates are not the same, the Firm uses regression analysis to assess the prospective and retrospective effectiveness of the hedge relationships, and any ineffectiveness is recognized in Interest income. The gain or loss from revaluing hedges of net investments in foreign operations at the spot rate is reported within AOCI. The forward points on the hedging instruments are excluded from hedge effectiveness testing and are recorded in Interest income.

For further information on derivative instruments and hedging activities, see Note 4.

Loans

The Firm accounts for loans based on the following categories: loans held for investment; loans held for sale; and loans at fair value.

Loans Held for Investment

Loans held for investment are reported at outstanding principal adjusted for any charge-offs, the allowance for loan losses, any unamortized deferred fees or costs for originated loans, and any unamortized premiums or discounts for purchased loans.

Interest Income. Interest income on performing loans held for investment is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Allowance for Loan Losses. The allowance for loan losses estimates probable losses related to loans specifically identified for impairment in addition to the probable losses inherent in the held for investment loan portfolio.

The Firm utilizes the U.S. banking regulators' definition of criticized exposures, which consist of the special mention substandard, doubtful and loss categories as credit quality indicators. For further information on the credit indicators, see Note 7. Substandard loans are regularly reviewed for impairment. Factors considered by management when determining impairment include payment status, fair value of collateral, and probability of collecting scheduled principal and interest payments when due. The impairment analysis required depends on the nature and type of loans. Loans classified as Doubtful or Loss are considered impaired.

There are two components of the allowance for loan losses: the specific allowance component and the inherent allowance component.

The specific allowance component of the allowance for loan losses is used to estimate probable losses for non-homogeneous exposures that have been specifically identified for impairment analysis by the Firm and determined to be impaired. When a loan is specifically identified for impairment, the impairment is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or as a practical expedient, the observable market price of the loan or the fair value of the collateral if the loan is collateral dependent. If 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) is less than the recorded investment in the loan, then the Firm recognizes an allowance and a charge to the provision for loan losses within Other revenues.

The inherent allowance component of the allowance for loan losses is used to estimate the probable losses inherent in the loan portfolio and includes non-homogeneous loans that have not been identified as impaired and portfolios of smaller balance homogeneous loans. The Firm maintains methodologies by loan product for calculating an allowance for loan losses that estimates the inherent losses in the loan portfolio. Generally, inherent losses in the portfolio for non-impaired loans are estimated using statistical analysis and judgment around the exposure at default, the probability of default and the loss given default. Qualitative and environmental factors such as economic and business conditions, nature and volume of the portfolio, and lending terms and volume and severity of past due loans may also be considered in the calculations. The allowance for loan losses is maintained at a level reasonable to ensure that it can adequately absorb the estimated probable losses inherent in the portfolio. The Firm recognizes an allowance and a charge to the provision for loan losses within Other revenues.

Troubled Debt Restructurings. The Firm may modify the terms of certain loans for economic or legal reasons related to a borrower's financial difficulties by granting one or more concessions that the Firm would not otherwise consider. Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired and is evaluated for the extent of impairment using the Firm's specific allowance methodology. TDRs are also generally classified as nonaccrual and may only be returned to accrual status after considering the borrower's sustained repayment performance for a reasonable period.

Nonaccrual Loans. The Firm places loans on nonaccrual status if principal or interest is past due for a period of 90 days or more or payment of principal or interest is in doubt unless the obligation is well-secured and in the process of collection. A loan is considered past due when a payment due according to the contractual terms of the loan agreement has not been remitted by the borrower. Substandard loans, if identified as impaired, are categorized as nonaccrual. Loans classified as Doubtful or Loss are categorized as nonaccrual.

Payments received on nonaccrual loans held for investment are applied to principal if there is doubt regarding the ultimate collectability of principal (*i.e.*, cost recovery method). If collection of the principal of nonaccrual loans held for investment is not in doubt, interest income is recognized on a cash basis. If neither principal nor interest collection is in doubt, loans are on accrual status, and interest income is recognized using the effective interest method. Loans that are on nonac-

crual status may not be restored to accrual status until all delinquent principal and/or interest has been brought current after a reasonable period of performance, typically a minimum of six months.

Charge-offs. The Firm charges off a loan in the period that it is deemed uncollectible and records a reduction in the allowance for loan losses and the balance of the loan. In general, any portion of the recorded investment in a collateral dependent loan (including any capitalized accrued interest, net deferred loan fees or costs, and unamortized premium or discount) in excess of the fair value of the collateral that can be identified as uncollectible, and is therefore deemed a confirmed loss, is charged off against the allowance for loan losses. A loan is collateral dependent if the repayment of the loan is expected to be provided solely by the sale or operation of the underlying collateral. In addition, for loan transfers from loans held for investment to loans held for sale, at the time of transfer, any reduction in the loan value is reflected as a charge-off of the recorded investment, resulting in a new cost basis.

Lending Commitments. The Firm records the liability and related expense for the credit exposure related to commitments to fund loans that will be held for investment in a manner similar to outstanding loans disclosed above. The analysis also incorporates a credit conversion factor, which is the expected utilization of the undrawn commitment. The liability is recorded in Other liabilities and accrued expenses in the consolidated balance sheets, and the expense is recorded in Other non-interest expenses in the consolidated income statements. For more information regarding loan commitments, standby letters of credit and financial guarantees, see Note 12.

Loans Held for Sale

Loans held for sale are measured at the lower of cost or fair value, with valuation changes recorded in Other revenues. The Firm determines the valuation allowance on an individual loan basis, except for residential mortgage loans for which the valuation allowance is determined at the loan product level. Any decreases in fair value below the initial carrying amount and any recoveries in fair value up to the initial carrying amount are recorded in Other revenues. However, increases in fair value above initial carrying value are not recognized.

Interest income on loans held for sale is accrued and recognized based on the contractual rate of interest. Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees or costs and discounts or premiums are an adjustment to the basis of the loan and, therefore, are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Lending Commitments. Commitments to fund non-mortgage loans held for sale are not derivatives. The Firm records the liability and related expense for the fair value exposure (if the fair value is below the cost) related to commitments to fund non-mortgage loans that will be held for sale in Other liabilities and accrued expenses in the consolidated balance sheets with an offset to Other revenues in the consolidated income statements. Commitments to fund mortgage loans held for sale are derivatives. The Firm records the derivative asset or liability exposure in Trading assets or Trading liabilities in the consolidated balance sheets with an offset to Trading revenues in the consolidated income statements.

Loans and lending commitments held for sale are subject to the nonaccrual policies described above. Because loans and lending commitments held for sale are recognized at the lower of cost or fair value, the allowance for loan losses and charge-off policies does not apply to these loans.

Loans at Fair Value

Loans for which the fair value option is elected are carried at fair value, with changes in fair value recognized in earnings. Loans carried at fair value are not evaluated for purposes of recording an allowance for loan losses. For further information on loans carried at fair value and classified as Trading assets and Trading liabilities, see Note 3.

Lending Commitments. The Firm records the liability and related expense for the fair value exposure related to commitments to fund loans that will be measured at fair value. The liability is recorded in Trading liabilities in the consolidated balance sheets, and the expense is recorded in Trading revenues in the consolidated income statements.

For further information on loans, see Note 7.

Transfers of Financial Assets

Transfers of financial assets are accounted for as sales when the Firm has relinquished control over the transferred assets. Any related gain or loss on sale is recorded in Net revenues. Transfers that are not accounted for as sales are treated as a collateralized financing, in certain cases referred to as "failed sales." Securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase are treated as collateralized financings (see Note 6). Securities purchased under agreements to resell ("reverse repurchase agreements") and Securities sold under agreements to repurchase ("repurchase agreements") are carried on the consolidated balance sheets at the amounts of

cash paid or received, plus accrued interest, except for certain repurchase agreements for which the Firm has elected the fair value option (see Note 3). Where appropriate, repurchase agreements and reverse repurchase agreements with the same counterparty are reported on a net basis. Securities borrowed and securities loaned are recorded at the amount of cash collateral advanced or received.

Premises, Equipment and Software Costs

Premises, equipment and software costs consist of buildings, leasehold improvements, furniture, fixtures, computer and communications equipment, power generation assets, terminals, pipelines and software (externally purchased and developed for internal use). Premises, equipment and software costs are stated at cost less accumulated depreciation and amortization and are included in Other assets in the consolidated balance sheets. Depreciation and amortization are provided by the straight-line method over the estimated useful life of the asset. Estimated useful lives are generally as follows: buildings—39 years; furniture and fixtures—7 years; computer and communications equipment—3 to 9 years; power generation assets—15 to 29 years; and terminals, pipelines and equipment—3 to 30 years. Estimated useful lives for software costs are generally 3 to 10 years.

Leasehold improvements are amortized over the lesser of the estimated useful life of the asset or, where applicable, the remaining term of the lease but generally not exceeding 25 years for building structural improvements and 15 years for other improvements.

Premises, equipment and software costs are tested for impairment whenever events or changes in circumstances suggest that an asset's carrying value may not be fully recoverable in accordance with current accounting guidance.

Goodwill and Intangible Assets

The Firm tests goodwill for impairment on an annual basis and on an interim basis when certain events or circumstances exist. The Firm tests for impairment at the reporting unit level, which is generally at the level of or one level below its business segments. For both the annual and interim tests, the Firm has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If after assessing the totality of events or circumstances, the Firm determines it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then performing the two-step impairment test is not required. However, if the Firm concludes otherwise, then it is required to perform the first step of the two-step impairment test.

Goodwill impairment is determined by comparing the estimated fair value of a reporting unit with its respective carrying value. If the estimated fair value exceeds the carrying value, goodwill at the reporting unit level is not deemed to be impaired. If the estimated fair value is below carrying value, however, further analysis is required to determine the amount of the impairment. The estimated fair values of the reporting units are derived based on valuation techniques the Firm believes market participants would use for each of the reporting units.

The estimated fair values are generally determined by utilizing a discounted cash flow methodology or methodologies that incorporate price-to-book and price-to-earnings multiples of certain comparable companies.

Goodwill is not amortized but, as noted above, is reviewed annually (or more frequently when certain events or circumstances exist) for impairment. Other intangible assets are amortized over their estimated useful lives and reviewed for impairment. Impairment losses are recorded within Other expenses in the consolidated income statements.

Income Taxes

The Firm accounts for income tax expense (benefit) using the asset and liability method. Under this method, deferred tax assets and liabilities are recorded based upon the temporary differences between the financial statement and income tax bases of assets and liabilities using currently enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income tax expense (benefit) in the period that includes the enactment date.

The Firm recognizes net deferred tax assets to the extent that it believes these assets are more likely than not to be realized. In making such a determination, the Firm considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and results of recent operations. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. If the Firm determines that it would be able to realize deferred tax assets in the future in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

Uncertain tax positions are recorded on the basis of a two-step process, whereby (1) the Firm determines whether it is more likely than not that the tax positions will be sustained

on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the Firm recognizes the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority. Interest and penalties related to unrecognized tax benefits are classified as provision for income taxes.

Earnings per Common Share

Basic earnings per common share ("EPS") is computed by dividing earnings available to Morgan Stanley common shareholders by the weighted average number of common shares outstanding for the period. Earnings available to Morgan Stanley common shareholders represents net income applicable to Morgan Stanley reduced by preferred stock dividends and allocations of earnings to participating securities. Common shares outstanding include common stock and vested restricted stock units ("RSUs") where recipients have satisfied either the explicit vesting terms or retirement-eligibility requirements. Diluted EPS reflects the assumed conversion of all dilutive securities.

Unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and are included in the computation of EPS pursuant to the two-class method. Share-based payment awards that pay dividend equivalents subject to vesting are not deemed participating securities and are included in diluted shares outstanding (if dilutive) under the treasury stock method.

The Firm has granted performance-based stock units ("PSUs") that vest and convert to shares of common stock only if it satisfies predetermined performance and market goals. Since the issuance of the shares is contingent upon the satisfaction of certain conditions, the PSUs are included in diluted EPS based on the number of shares (if any) that would be issuable if the end of the reporting period was the end of the contingency period.

For the calculation of basic and diluted EPS, see Note 16.

Deferred Compensation

Stock-Based Compensation

The Firm measures compensation cost for stock-based awards at fair value and recognizes compensation cost over the service period, net of estimated forfeitures. The Firm determines the fair value of RSUs (including RSUs with non-market performance conditions) based on the grant-date fair value of its common stock, measured as the volume-weighted average price on the date of grant. RSUs with market-based conditions are valued using a Monte Carlo valuation model. The fair value of stock options is determined using the Black-Scholes valuation model and the single grant life method. Under the single grant life method, option awards with graded vesting are valued using a single weighted average expected option life.

Compensation expense for stock-based compensation awards is recognized using the graded vesting attribution method. Compensation expense for awards with performance conditions is recognized based on the probable outcome of the performance condition at each reporting date. Compensation expense for awards with market-based conditions is recognized irrespective of the probability of the market condition being achieved and is not reversed if the market condition is not met.

The Firm recognizes the expense for stock-based awards over the requisite service period. These awards generally contain clawback and cancellation provisions. Certain awards provide the Firm discretion to cancel all or a portion of the award under specified circumstances. Compensation expense for those awards is adjusted for changes in the fair value of the Firm's common stock or the relevant model valuation, as appropriate, until conversion, exercise or expiration.

For year-end stock-based awards anticipated to be granted to retirement-eligible employees under award terms that do not contain a future service requirement, the Firm accrues the estimated cost over the course of the calendar year preceding the grant date. The Firm believes that this method of recognition for retirement-eligible employees reflects the period over which the compensation is earned.

Employee Stock Trusts

In connection with certain stock-based compensation plans, the Firm maintains and utilizes at its discretion trusts, referred to as "Employee stock trusts." The assets of the Employee stock trusts are consolidated and, as such, are accounted for in a manner similar to treasury stock, where the shares of common stock outstanding are offset by an equal amount in Common stock issued to employee stock trusts.

The Firm uses the grant-date fair value of stock-based compensation as the basis for recognition of the assets in the Employee stock trusts. Subsequent changes in the fair value are not recognized as the Firm's stock-based compensation plans do not permit diversification and must be settled by the delivery of a fixed number of shares of the Firm's common stock.

Deferred Cash-Based Compensation

Compensation expense for deferred cash-based compensation plans is calculated based on the notional value of the award

granted, adjusted for changes in the fair value of the referenced investments. For unvested awards, the expense is recognized over the service period using the graded vesting attribution method. For vested awards with only notional earnings on the referenced investments, the expense is fully recognized in the current period. For year-end awards anticipated to be granted to retirement-eligible employees under award terms that do not contain a future service requirement, the Firm accrues the estimated cost over the course of the calendar year preceding the grant date. The Firm believes that this method of recognition for retirement-eligible employees reflects the period over which the compensation is earned.

The Firm often invests directly, as a principal, in investments or other financial instruments to economically hedge its obligations under its deferred cash-based compensation plans. Changes in value of such investments made by the Firm are recorded in Trading revenues and Investments revenues. Changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments made by the Firm. However, there may be a timing difference between the immediate recognition of gains and losses on the Firm's investments and the deferred recognition of the related compensation expense over the vesting period.

Foreign Currencies

Assets and liabilities of operations having non-U.S. dollar functional currencies are translated at year-end rates of exchange. Gains or losses resulting from translating foreign currency financial statements, net of hedge gains or losses and related tax effects, are reflected in AOCI, a separate component of Morgan Stanley Shareholders' equity on the consolidated balance sheets. Gains or losses resulting from remeasurement of foreign currency transactions are included in net income, and amounts recognized in the income statement are translated at the rate of exchange on the respective date of recognition for each amount.

Investment Securities—Available for Sale and Held to Maturity

AFS securities are reported at fair value in the consolidated balance sheets with unrealized gains and losses reported in AOCI, net of tax. Interest and dividend income, including amortization of premiums and accretion of discounts, is included in Interest income in the consolidated income statements. Realized gains and losses on AFS securities are reported in the consolidated income statements (see Note 5). The Firm utilizes the "first-in, first-out" method as the basis for determining the cost of AFS securities.

Held-to-maturity ("HTM") securities are reported at amortized cost in the consolidated balance sheets. Interest income, including amortization of premiums and accretion of discounts on HTM securities, is included in Interest income in the consolidated income statements.

Other-than-temporary Impairment

AFS debt securities and HTM securities with a current fair value less than their amortized cost are analyzed as part of the Firm's periodic assessment of temporary versus other-than-temporary impairment ("OTTI") at the individual security level. A temporary impairment is recognized in AOCI. OTTI is recognized in the consolidated income statements with the exception of the non-credit portion related to a debt security that the Firm does not intend to sell and is not likely to be required to sell, which is recognized in AOCI.

For AFS debt securities that the Firm either has the intent to sell or that the Firm is likely to be required to sell before recovery of its amortized cost basis, the impairment is considered other-than-temporary.

For those AFS debt securities that the Firm does not have the intent to sell or is not likely to be required to sell, and for all HTM securities, the Firm evaluates whether it expects to recover the entire amortized cost basis of the debt security. If the Firm does not expect to recover the entire amortized cost of those AFS debt securities or HTM securities, the impairment is considered other-than-temporary, and the Firm determines what portion of the impairment relates to a credit loss and what portion relates to non-credit factors.

A credit loss exists if the present value of cash flows expected to be collected (discounted at the implicit interest rate at acquisition of the security or discounted at the effective yield for securities that incorporate changes in prepayment assumptions) is less than the amortized cost basis of the security. Changes in prepayment assumptions alone are not considered to result in a credit loss.

When determining if a credit loss exists, the Firm considers relevant information, including:

- the length of time and the extent to which the fair value has been less than the amortized cost basis;
- adverse conditions specifically related to the security, an industry or geographic area;
- changes in the financial condition of the issuer of the security or, in the case of an asset-backed debt security, changes in the financial condition of the underlying loan obligors;
- the historical and implied volatility of the fair value of the security;

- the payment structure of the debt security and the likelihood of the issuer being able to make payments that increase in the future;
- failure of the issuer of the security to make scheduled interest or principal payments;
- any changes to the rating of the security by a rating agency;
- recoveries or additional declines in fair value after the balance sheet date.

When estimating the present value of expected cash flows, information includes the remaining payment terms of the security, prepayment speeds, financial condition of the issuer(s), expected defaults and the value of any underlying collateral.

For AFS equity securities, the Firm considers various factors, including the intent and ability to hold the equity security for a period of time sufficient to allow for any anticipated recovery in market value in evaluating whether an OTTI exists. If the equity security is considered other-than-temporarily impaired, the entire OTTI (*i.e.*, the difference between the fair value recorded on the balance sheet and the cost basis) will be recognized in the consolidated income statements.

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 changed 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 unrealized 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, but they 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 Firm adopted this guidance on January 1, 2016 by recording a net adjustment to equity on January 1, 2016. This adoption 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.

3. Fair Values

Fair Value Measurements

Valuation Techniques for Assets and Liabilities Measured at Fair Value on a Recurring Basis

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
Trading Assets and Trading Liabilities	
U.S. Treasury Securities • Fair value is determined using quoted market prices; valuation adjustments are not applied.	• Generally Level 1
U.S. Agency Securities • Non-callable agency-issued debt securities are generally valued using quoted market prices, and callable agency-issued debt securities are valued by benchmarking model-derived prices to quoted market prices and trade data for comparable instruments. • The fair value of agency mortgage pass-through pool securities is model-driven based on spreads of a comparable to-be-announced security. • Collateralized mortgage obligations are generally valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments.	• Level 1—non-callable agency-issued debt securities • Generally Level 2—callable agency-issued debt securities, agency mortgage pass-through pool securities and collateralized mortgage obligations • Level 3—in instances where the inputs are unobservable
Other Sovereign Government Obligations • Fair value is determined using quoted prices in active markets when available.	• Generally Level 1 • Level 2—if the market is less active or prices are dispersed • Level 3—in instances where the inputs are unobservable
State and Municipal Securities • Fair value is determined using recently executed transactions, market price quotations or pricing models that factor in, where applicable, interest rates, bond or CDS spreads and volatility and/or volatility skew, adjusted for any basis difference between cash and derivative instruments.	• Generally Level 2—if value based on observable market data for comparable instruments
Residential Mortgage-Backed Securities ("RMBS"), Commercial Mortgage-Backed Securities ("CMBS") and other Asset-Backed Securities ("ABS') • RMBS, CMBS and other ABS may be valued based on price or spread data obtained from observed transactions or independent external parties such as vendors or brokers. • When position-specific external price data are not observable, the fair value determination may require benchmarking to comparable instruments, and/or analyzing expected credit losses, default and recovery rates, and/or applying discounted cash flow techniques. When evaluating the comparable instruments for use in the valuation of each security, security collateral-specific attributes, including payment priority, credit enhancement levels, type of collateral, delinquency rates and loss severity, are considered. In addition, for RMBS borrowers, Fair Isaac Corporation ("FICO") scores and the level of documentation for the loan are considered. • Market standard models, such as Intex, Trepp or others, may be deployed to model the specific collateral composition and cash flow structure of each transaction. Key inputs to these models are market spreads, forecasted credit losses, and default and prepayment rates for each asset category. • Valuation levels of RMBS and CMBS indices are used as an additional data point for benchmarking purposes or to price outright index positions.	• Generally Level 2—if value based on observable market data for comparable instruments • Level 3—if external prices or significant spread inputs are unobservable or if the comparability assessment involves significant subjectivity related to property type differences, cash flows, performance and other inputs
Corporate Bonds • Fair value is determined using recently executed transactions, market price quotations, bond spreads, CDS spreads, or at the money volatility and/or volatility skew obtained from independent external parties, such as vendors and brokers, adjusted for any basis difference between cash and derivative instruments. • The spread data used are for the same maturity as the bond. If the spread data do not reference the issuer, then data that reference a comparable issuer are used. When position-specific external price data are not observable, fair value is determined based on either benchmarking to comparable instruments or cash flow models with yield curves, bond or single name CDS spreads and recovery rates as significant inputs.	• Level 2—if value based on observable market data for comparable instruments • Level 3—in instances where prices or significant spread inputs are unobservable

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
Collateralized Debt Obligations ("CDO") and Collateralized Loan Obligations ("CLO") • The Firm holds cash CDOs/CLOs that typically reference a tranche of an underlying synthetic portfolio of single name CDS spreads collateralized by corporate bonds ("credit-linked notes") or cash portfolio of asset-backed securities/loans ("asset-backed CDOs/CLOs"). • Credit correlation, a primary input used to determine the fair value of credit-linked notes, is usually unobservable and derived using a benchmarking technique. Other model inputs such as credit spreads, including collateral spreads, and interest rates are typically observable. • Asset-backed CDOs/CLOs are valued based on an evaluation of the market and model input parameters sourced from comparable instruments as indicated by market activity. Each asset-backed CDO/CLO position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity.	• Level 2—when either comparable market transactions are observable or credit correlation input is insignificant • Level 3—when either comparable market transactions are unobservable or the credit correlation input is significant
Loans and Lending Commitments • Fair value of corporate loans is determined using recently executed transactions, market price quotations (where observable), implied yields from comparable debt, market observable CDS spread levels obtained from independent external parties adjusted for any basis difference between cash and derivative instruments, along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable. • Fair value of contingent corporate lending commitments is determined by using executed transactions on comparable loans and the anticipated market price based on pricing indications from syndicate banks and customers. The valuation of loans and lending commitments also takes into account fee income that is considered an attribute of the contract. • Fair value of mortgage loans is determined using observable prices based on transactional data or third-party pricing for comparable instruments, when available. • Where position-specific external prices are not observable, fair value is estimated based on benchmarking to prices and rates observed in the primary market for similar loan or borrower types or based on the present value of expected future cash flows using its best estimates of the key assumptions, including forecasted credit losses, prepayment rates, forward yield curves and discount rates commensurate with the risks involved or a methodology that utilizes the capital structure and credit spreads of recent comparable securitization transactions. • Fair value of equity margin loans is determined by discounting future interest cash flows, net of estimated credit losses. The estimated credit losses are derived by benchmarking to market observable CDS spreads, implied debt yields or volatility metrics of the loan collateral company.	• Level 2—if value based on observable market data for comparable instruments • Level 3—in instances where prices or significant spread inputs are unobservable
Corporate Equities • Exchange-traded equity securities are generally valued based on quoted prices from the exchange. To the extent these securities are actively traded, valuation adjustments are not applied. • Unlisted equity securities are generally valued based on an assessment of each underlying security, considering rounds of financing and third-party transactions, discounted cash flow analyses and market- based information, including comparable Firm transactions, trading multiples and changes in market outlook, among other factors. • Listed fund units are generally marked to the exchange-traded price, while listed fund units if not actively traded and unlisted fund units are generally marked to Net Asset Value ("NAV").	• Level 1—exchange-traded securities and fund units if actively traded • Level 2—exchange-traded securities if not actively traded or if undergoing a recent mergers and acquisitions event or corporate action • Level 3—unlisted equity securities and exchange-traded securities if not actively traded or if marked to an aged mergers and acquisitions event or corporate action • Certain fund units that are measured at fair value using the NAV per share are not classified in the fair value hierarchy
Listed Derivative Contracts • Listed derivatives that are actively traded are valued based on quoted prices from the exchange. • Listed derivatives that are not actively traded are valued using the same approaches as those applied to OTC derivatives.	• Level 1—listed derivatives that are actively traded • Level 2—listed derivatives that are not actively traded

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
OTC Derivative Contracts • OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, equity prices or commodity prices. • Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as the methodologies employed do not necessitate significant judgment, since model inputs may be observed from actively quoted markets, as is the case for generic interest rate swaps, many equity, commodity and foreign currency option contracts, and certain CDS. In the case of more established derivative products, the pricing models used by the Firm are widely accepted by the financial services industry. • More complex OTC derivative products are typically less liquid and require more judgment in the implementation of the valuation technique since direct trading activity or quotes are unobservable. This includes certain types of interest rate derivatives with both volatility and correlation exposure, equity, commodity or foreign currency derivatives which are either longer-dated or include exposure to multiple underlyings, and credit derivatives, including CDS on certain mortgage- or asset-backed securities and basket CDS. Where these inputs are unobservable, relationships to observable data points, based on historic and/or implied observations, may be employed as a technique to estimate the model input values. • For further information on the valuation techniques for OTC derivative products, see Note 2. • For further information on derivative instruments and hedging activities, see Note 4.	• Generally Level 2—OTC derivative products valued using observable inputs, or where the unobservable input is not deemed significant. • Level 3—OTC derivative products for which the unobservable input is deemed significant
Investments • Investments include direct investments in equity securities, as well as various investment management funds, which include investments made in connection with certain employee deferred compensation plans. • Direct investments are presented in the fair value hierarchy table as Principal investments and Other. Initially, the transaction price is generally considered by the Firm as the exit price and is its best estimate of fair value. • After initial recognition, in determining the fair value of non-exchange-traded internally and externally managed funds, the Firm generally considers the NAV of the fund provided by the fund manager to be the best estimate of fair value. For non-exchange-traded investments either held directly or held within internally managed funds, fair value after initial recognition is based on an assessment of each underlying investment, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable Firm transactions, trading multiples and changes in market outlook, among other factors. Exchange-traded direct equity investments are generally valued based on quoted prices from the exchange.	• Level 1—exchange-traded direct equity investments in an active market • Level 2—non-exchange-traded direct equity investments and investments in various investment management funds if valued based on rounds of financing or third-party transactions; exchange-traded direct equity investments if not actively traded • Level 3—non-exchange-traded direct equity investments and investments in various investment management funds where rounds of financing or third-party transactions are not available • Certain investments that are measured at fair value using the NAV per share are not classified in the fair value hierarchy. For additional disclosure about such investments, see "Fair Value of Investments Measured at Net Asset Value" herein.
Physical Commodities • The Firm trades various physical commodities, including natural gas and precious metals. • Fair value is determined using observable inputs, including broker quotations and published indices.	• Generally Level 2 if value based on observable inputs
Investment Securities	
AFS Securities • AFS securities are composed of U.S. government and agency securities (*e.g.*, U.S. Treasury securities, agency-issued debt, agency mortgage pass-through securities and collateralized mortgage obligations), CMBS, Federal Family Education Loan Program ("FFELP") student loan ABS, auto loan ABS, corporate bonds, CLOs and actively traded equity securities. • For further information on the determination of fair value, refer to the corresponding asset/liability valuation technique described herein. • For further information on AFS securities, see Note 5.	• For further information on Valuation Hierarchy Classification, see corresponding Valuation Technique described herein.

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
Certificates of Deposit • The Firm issues Federal Deposit Insurance Corporation ("FDIC") insured certificates of deposit that pay either fixed coupons or that have repayment terms linked to the performance of debt or equity securities, indices or currencies. The fair value of these certificates of deposit is determined using valuation models that incorporate observable inputs referencing identical or comparable securities, including prices to which the deposits are linked, interest rate yield curves, option volatility and currency rates, equity prices, and the impact of the Firm's own credit spreads, adjusted for the impact of the FDIC insurance, which is based on vanilla deposit issuance rates.	• Generally Level 2
Short-Term Borrowings/Long-Term Borrowings	
Structured Notes • The Firm issues structured notes that have coupon or repayment terms linked to the performance of debt or equity securities, indices, currencies or commodities. • Fair value of structured notes is determined using valuation models for the derivative and debt portions of the notes. These models incorporate observable inputs referencing identical or comparable securities, including prices to which the notes are linked, interest rate yield curves, option volatility and currency rates, and commodity or equity prices. • Independent, external and traded prices for the notes are considered as well. The impact of the Firm's own credit spreads is also included based on observed secondary bond market spreads.	• Generally Level 2 • Level 3—in instances where the unobservable inputs are deemed significant
Securities Purchased under Agreements to Resell and Securities Sold under Agreements to Repurchase	
• Fair value is computed using a standard cash flow discounting methodology. • The inputs to the valuation include contractual cash flows and collateral funding spreads, which are estimated using various benchmarks, interest rate yield curves and option volatilities.	• Generally Level 2 • Level 3—in instances where the unobservable inputs are deemed significant

Assets and Liabilities Measured at Fair Value on a Recurring Basis

$ in millions	Level 1	Level 2	Level 3	Counterparty and Cash Collateral Netting	At December 31, 2016
Assets at Fair Value					
Trading assets:					
U.S. government and agency securities:					
U.S. Treasury securities	$ 25,457	$ —	$ —	$ —	$ 25,457
U.S. agency securities	2,122	20,392	74	—	22,588
Total U.S. government and agency securities	27,579	20,392	74	—	48,045
Other sovereign government obligations	14,005	5,497	6	—	19,508
Corporate and other debt:					
State and municipal securities	—	2,355	250	—	2,605
Residential mortgage-backed securities	—	767	92	—	859
Commercial mortgage-backed securities	—	715	123	—	838
Asset-backed securities	—	209	2	—	211
Corporate bonds	—	11,051	232	—	11,283
Collateralized debt and loan obligations	—	602	63	—	665
Loans and lending commitments[1]	—	3,580	5,122	—	8,702
Other debt	—	1,360	180	—	1,540
Total corporate and other debt	—	20,639	6,064	—	26,703
Corporate equities[2]	117,857	333	445	—	118,635
Securities received as collateral	13,717	19	1	—	13,737
Derivative and other contracts:					
Interest rate contracts	1,131	300,406	1,373	—	302,910
Credit contracts	—	11,727	502	—	12,229
Foreign exchange contracts	231	74,921	13	—	75,165
Equity contracts	1,185	35,736	1,708	—	38,629
Commodity and other contracts	2,808	6,734	3,977	—	13,519
Netting[3]	(4,378)	(353,543)	(1,944)	(51,381)	(411,246)
Total derivative and other contracts	977	75,981	5,629	(51,381)	31,206
Investments[4]:					
Principal investments	20	—	743	—	763
Private equity funds	—	43	—	—	43
Other	217	154	215	—	586
Total investments	237	197	958	—	1,392
Physical commodities	—	112	—	—	112
Total trading assets[4]	174,372	123,170	13,177	(51,381)	259,338
Investment securities—AFS securities	29,120	34,050	—	—	63,170
Securities purchased under agreements to resell	—	302	—	—	302
Intangible assets	—	3	—	—	3
Total assets measured at fair value	**$ 203,492**	**$ 157,525**	**$ 13,177**	**$ (51,381)**	**$ 322,813**
Liabilities at Fair Value					
Deposits	$ —	$ 21	$ 42	$ —	$ 63
Short-term borrowings	—	404	2	—	406
Trading liabilities:					
U.S. government and agency securities:					
U.S. Treasury securities	10,745	—	—	—	10,745
U.S. agency securities	891	61	—	—	952
Total U.S. government and agency securities	11,636	61	—	—	11,697
Other sovereign government obligations	20,658	2,430	—	—	23,088
Corporate and other debt:					
State and municipal securities	—	1	—	—	1
Asset-backed securities	—	533	—	—	533
Corporate bonds	—	5,572	34	—	5,606
Lending commitments	—	1	—	—	1
Other debt	—	14	2	—	16
Total corporate and other debt	—	6,121	36	—	6,157
Corporate equities[2]	37,611	29	34	—	37,674
Obligation to return securities received as collateral	20,236	25	1	—	20,262
Derivative and other contracts:					
Interest rate contracts	1,244	285,379	953	—	287,576
Credit contracts	—	12,550	875	—	13,425
Foreign exchange contracts	17	75,510	56	—	75,583
Equity contracts	1,162	37,828	1,524	—	40,514
Commodity and other contracts	2,663	6,845	2,377	—	11,885
Netting[3]	(4,378)	(353,543)	(1,944)	(39,803)	(399,668)
Total derivative and other contracts	708	64,569	3,841	(39,803)	29,315
Physical commodities	—	1	—	—	1
Total trading liabilities	90,849	73,236	3,912	(39,803)	128,194
Securities sold under agreements to repurchase	—	580	149	—	729
Other secured financings	—	4,607	434	—	5,041
Long-term borrowings	47	36,677	2,012	—	38,736
Total liabilities measured at fair value	**$ 90,896**	**$ 115,525**	**$ 6,551**	**$ (39,803)**	**$ 173,169**

$ in millions	Level 1	Level 2	Level 3	Counterparty and Cash Collateral Netting	At December 31, 2015
Assets at Fair Value					
Trading assets:					
U.S. government and agency securities:					
U.S. Treasury securities	$ 17,658	$ —	$ —	$ —	$ 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 and other contracts	3,140	10,873	3,358	—	17,371
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
Investment securities—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 and other contracts	3,012	9,474	2,308	—	14,794
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**

1. At December 31, 2016, loans held at fair value consisted of $7,217 million of corporate loans, $966 million of residential real estate loans and $519 million of wholesale real estate loans. At December 31, 2015, loans 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 NAV per share, which are not classified in the fair value hierarchy. 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 2016, 2015 and 2014. 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. Total realized and unrealized gains (losses) are primarily included in Trading revenues in the consolidated income statements.

$ in millions	Beginning Balance at December 31, 2015	Realized and Unrealized Gains (Losses)	Purchases[1]	Sales	Issuances	Settlements	Net Transfers	**Ending Balance at December 31, 2016**	**Unrealized Gains (Losses) at December 31, 2016**
Assets at Fair Value									
Trading assets:									
U.S. agency securities	$ —	$ (4)	$ 72	$ —	$ —	$ —	$ 6	$ 74	$ (4)
Other sovereign government obligations	4	1	4	(7)	—	—	4	6	—
Corporate and other debt:									
State and municipal securities	19	—	249	(18)	—	—	—	250	—
Residential mortgage-backed securities	341	(11)	35	(265)	—	—	(8)	92	(10)
Commercial mortgage-backed securities	72	(56)	46	(39)	—	—	100	123	(66)
Asset-backed securities	25	(2)	1	(19)	—	—	(3)	2	(1)
Corporate bonds	267	9	310	(357)	—	—	3	232	(20)
Collateralized debt and loan obligations	430	11	14	(300)	—	—	(92)	63	(5)
Loans and lending commitments	5,936	(79)	2,261	(954)	—	(1,863)	(179)	5,122	(80)
Other debt	448	20	26	(51)	—	—	(263)	180	(13)
Total corporate and other debt	7,538	(108)	2,942	(2,003)	—	(1,863)	(442)	6,064	(195)
Corporate equities	433	(2)	242	(154)	—	—	(74)	445	—
Securities received as collateral	1	—	—	—	—	—	—	1	—
Net derivative and other contracts[2]:									
Interest rate contracts	260	529	1	—	—	(83)	(287)	420	463
Credit contracts	(844)	(176)	—	—	(4)	623	28	(373)	(167)
Foreign exchange contracts	141	(27)	—	—	—	(220)	63	(43)	(23)
Equity contracts	(2,031)	539	809	(5)	(332)	1,073	131	184	376
Commodity and other contracts	1,050	544	24	—	(114)	(44)	140	1,600	304
Total net derivative and other contracts	(1,424)	1,409	834	(5)	(450)	1,349	75	1,788	953
Investments:									
Principal investments	486	(38)	398	(63)	—	(59)	19	743	(55)
Other	221	6	—	(12)	—	—	—	215	5
Total investments	707	(32)	398	(75)	—	(59)	19	958	(50)
Intangible assets	5	—	—	—	—	—	(5)	—	—
Liabilities at Fair Value									
Deposits	$ 19	$ —	$ —	$ —	$ 23	$ —	$ —	$ 42	$ —
Short-term borrowings	1	—	—	—	2	(1)	—	2	—
Trading liabilities:									
Corporate and other debt:									
Corporate bonds	—	(4)	(97)	145	—	—	(18)	34	—
Other debt	4	—	(2)	—	—	—	—	2	—
Total corporate and other debt	4	(4)	(99)	145	—	—	(18)	36	—
Corporate equities	17	17	(10)	89	—	—	(45)	34	—
Obligation to return securities received as collateral	1	—	—	—	—	—	—	1	—
Securities sold under agreements to repurchase	151	2	—	—	—	—	—	149	2
Other secured financings	461	(5)	—	—	79	(45)	(66)	434	(5)
Long-term borrowings	1,987	(19)	—	—	646	(304)	(336)	2,012	(30)

$ in millions	Beginning Balance at December 31, 2014	Realized and Unrealized Gains (Losses)	Purchases[1]	Sales	Issuances	Settlements	Net Transfers	Ending Balance at December 31, 2015	Unrealized Gains (Losses) at December 31, 2015
Assets at Fair Value									
Trading assets:									
Other sovereign government obligations	$ 41	$ (1)	$ 2	$ (30)	$ —	$ —	$ (8)	$ 4	$ —
Corporate and other debt:									
State and municipal securities	—	2	3	—	—	—	14	19	2
Residential mortgage-backed securities	175	24	176	(83)	—	—	49	341	12
Commercial mortgage-backed securities	96	(28)	27	(23)	—	—	—	72	(32)
Asset-backed securities	76	(9)	23	(30)	—	—	(35)	25	—
Corporate bonds	386	(44)	374	(381)	—	(53)	(15)	267	(44)
Collateralized debt and loan obligations	1,152	123	325	(798)	—	(344)	(28)	430	(19)
Loans and lending commitments	5,874	(42)	3,216	(207)	—	(2,478)	(427)	5,936	(76)
Other debt	285	(23)	131	(5)	—	(81)	141	448	(9)
Total corporate and other debt	8,044	3	4,275	(1,527)	—	(2,956)	(301)	7,538	(166)
Corporate equities	272	(1)	373	(333)	—	—	122	433	11
Securities received as collateral	—	—	1	—	—	—	—	1	—
Net derivative and other contracts[2]:									
Interest rate contracts	(173)	(51)	58	—	(54)	207	273	260	20
Credit contracts	(743)	(172)	19	—	(121)	196	(23)	(844)	(179)
Foreign exchange contracts	151	53	4	—	(2)	(18)	(47)	141	52
Equity contracts	(2,165)	166	81	(1)	(310)	22	176	(2,031)	62
Commodity and other contracts	1,146	433	35	—	(222)	(116)	(226)	1,050	402
Total net derivative and other contracts	(1,784)	429	197	(1)	(709)	291	153	(1,424)	357
Investments:									
Principal investments	835	11	32	(133)	—	(188)	(71)	486	6
Other	323	(12)	1	(6)	—	—	(85)	221	(7)
Total investments	1,158	(1)	33	(139)	—	(188)	(156)	707	(1)
Intangible assets	6	—	—	—	—	(1)	—	5	—
Liabilities at Fair Value									
Deposits	$ —	$ (1)	$ —	$ —	$ 18	$ —	$ —	$ 19	$ (1)
Short-term borrowings	—	—	—	—	1	—	—	1	—
Trading liabilities:									
Corporate and other debt:									
Corporate bonds	78	—	(19)	6	—	(65)	—	—	—
Lending commitments	5	5	—	—	—	—	—	—	5
Other debt	38	—	(1)	7	—	(39)	(1)	4	—
Total corporate and other debt	121	5	(20)	13	—	(104)	(1)	4	5
Corporate equities	45	79	(86)	32	—	—	105	17	79
Obligation to return securities received as collateral	—	—	—	1	—	—	—	1	—
Securities sold under agreements to repurchase	153	2	—	—	—	—	—	151	2
Other secured financings	149	192	—	—	327	(232)	409	461	181
Long-term borrowings	1,934	61	—	—	881	(364)	(403)	1,987	52

$ in millions	Beginning Balance at December 31, 2013	Realized and Unrealized Gains (Losses)	Purchases[1]	Sales	Issuances	Settlements	Net Transfers	Ending Balance at December 31, 2014	Unrealized Gains (Losses) at December 31, 2014
Assets at Fair Value									
Trading assets:									
Other sovereign government obligations	$ 27	$ 1	$ 48	$ (34)	$ —	$ —	$ (1)	$ 41	$ —
Corporate and other debt:									
Residential mortgage-backed securities	47	9	105	(14)	—	—	28	175	4
Commercial mortgage-backed securities	108	65	16	(102)	—	—	9	96	45
Asset-backed securities	103	3	66	(96)	—	—	—	76	9
Corporate bonds	522	86	106	(306)	—	—	(22)	386	66
Collateralized debt and loan obligations	1,468	142	644	(964)	—	(143)	5	1,152	27
Loans and lending commitments	5,129	(87)	3,784	(415)	—	(2,552)	15	5,874	(191)
Other debt	27	21	274	(35)	—	(2)	—	285	20
Total corporate and other debt	7,404	239	4,995	(1,932)	—	(2,697)	35	8,044	(20)
Corporate equities	190	20	146	(102)	—	—	18	272	(3)
Net derivative and other contracts[2, 3]:									
Interest rate contracts	113	(258)	18	—	(14)	(43)	11	(173)	(349)
Credit contracts	(147)	(408)	68	—	(179)	(15)	(62)	(743)	(474)
Foreign exchange contracts	68	(13)	7	—	—	108	(19)	151	(17)
Equity contracts	(831)	(527)	339	(2)	(562)	(46)	(536)	(2,165)	(600)
Commodity and other contracts	876	158	287	—	(52)	(123)	—	1,146	72
Total net derivative and other contracts	79	(1,048)	719	(2)	(807)	(119)	(606)	(1,784)	(1,368)
Investments:									
Principal investments	2,160	53	36	(181)	—	(1,258)	25	835	49
Other	538	17	17	(29)	—	—	(220)	323	24
Total investments	2,698	70	53	(210)	—	(1,258)	(195)	1,158	73
Intangible assets	8	—	—	—	—	(2)	—	6	(1)
Liabilities at Fair Value									
Short-term borrowings	$ 1	$ —	$ —	$ —	$ —	$ (1)	$ —	$ —	$ —
Trading liabilities:									
Corporate and other debt:									
Corporate bonds	22	1	(46)	117	—	—	(14)	78	2
Lending commitments	2	(3)	—	—	—	—	—	5	(3)
Other debt	48	7	(8)	—	—	—	5	38	(2)
Total corporate and other debt	72	5	(54)	117	—	—	(9)	121	(3)
Corporate equities	8	—	(3)	39	—	—	1	45	—
Securities sold under agreements to repurchase	154	1	—	—	—	—	—	153	1
Other secured financings	278	(9)	—	—	21	(201)	42	149	(6)
Long-term borrowings	1,887	109	—	—	791	(391)	(244)	1,934	102

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.
3. During 2014, the Firm incurred a charge of approximately $468 million related to the implementation of the FVA, which was recognized in Trading revenues. For further information on the implementation of FVA, see Note 2.

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. There are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique. A single amount is disclosed when there is no significant difference between the minimum, maximum and average (weighted average or simple average / median).

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

$ in millions	Predominant Valuation Techniques/Significant Unobservable Inputs	Range (Weighted Averages or Simple Averages/Median)[1] At December 31, 2016	At December 31, 2015
Assets at Fair Value			
U.S. agency securities (**$74 million**)			
Comparable pricing:	Comparable bond price	**96 to 105 points (102 points)**	N/M
State and municipal securities (**$250 million** and $19 million)			
Comparable pricing:	Comparable bond price	**53 to 100 points (91 points)**	N/M
Residential mortgage-backed securities (**$92 million** and $341 million)			
Comparable pricing:	Comparable bond price	**0 to 30 points (9 points)**	0 to 75 points (32 points)
Commercial mortgage-backed securities (**$123 million** and $72 million)			
Comparable pricing:	Comparable bond price	**0 to 86 points (36 points)**	0 to 9 points (2 points)
Corporate bonds (**$232 million** and $267 million)			
Comparable pricing:	Comparable bond price	**3 to 130 points (70 points)**	3 to 119 points (90 points)
Option model:	At the money volatility	**23% to 33% (30%)**	N/M
Comparable pricing:	EBITDA multiple	**N/M**	7 to 9 times (8 times)
Structured bond model:	Discount rate	**N/M**	15%
Collateralized debt and loan obligations (**$63 million** and $430 million)			
Comparable pricing:	Comparable bond price	**0 to 103 points (50 points)**	47 to 103 points (67 points)
Correlation model:	Credit correlation	**N/M**	39% to 60% (49%)
Loans and lending commitments (**$5,122 million** and $5,936 million)			
Corporate loan model:	Credit spread	**402 to 672 bps (557 bps)**	250 to 866 bps (531 bps)
Expected recovery:	Asset coverage	**43% to 100% (83%)**	N/M
Margin loan model:	Discount rate	**2% to 8% (3%)**	1% to 4% (2%)
	Volatility skew	**21% to 63% (33%)**	14% to 70% (33%)
	Credit spread	**N/M**	62 to 499 bps (145 bps)
Comparable pricing:	Comparable loan price	**45 to 100 points (84 points)**	35 to 100 points (88 points)
Discounted cash flow:	Implied weighted average cost of capital	**5%**	6% to 8% (7%)
	Capitalization rate	**4% to 10% (4%)**	4% to 10% (4%)
Option model:	Volatility skew	**N/M**	-1%
Other debt (**$180 million** and $448 million)			
Option model:	At the money volatility	**16% to 52% (52%)**	16% to 53% (53%)
Discounted cash flow:	Discount rate	**7% to 12% (11%)**	N/M
Comparable pricing:	Comparable loan price	**1 to 74 points (23 points)**	4 to 84 points (59 points)
Comparable pricing:	Comparable bond price	**N/M**	8 points
Margin loan model:	Discount rate	**N/M**	1%

$ in millions	Predominant Valuation Techniques/Significant Unobservable Inputs	Range (Weighted Averages or Simple Averages/Median)[1] At December 31, 2016	At December 31, 2015
Corporate equities (**$445 million** and $433 million)			
Comparable pricing:	Comparable equity price	**100%**	100%
Comparable pricing:	Comparable price	**N/M**	50% to 80% (72%)
Market approach:	EBITDA multiple	**N/M**	9 times
Net derivative and other contracts[2]:			
Interest rate contracts (**$420 million** and $260 million)			
Option model:	Interest rate - Foreign exchange correlation	**28% to 58% (44% / 43%)**	25% to 62% (43% / 43%)
	Interest rate volatility skew	**19% to 117% (55% / 56%)**	29% to 82% (43% / 40%)
	Interest rate quanto correlation	**-17% to 31% (1% / -5%)**	-8% to 36% (5% / -6%)
	Interest rate curve correlation	**28% to 96% (68% / 72%)**	24% to 95% (60% / 69%)
	Inflation volatility	**23% to 55% (40% / 39%)**	58%
	Interest rate - Inflation correlation	**N/M**	-41% to -39% (-41% / -41%)
	Interest rate volatility concentration liquidity multiple	**N/M**	0 to 3 times (2 times)
Credit contracts (**$(373) million** and $(844) million)			
Comparable pricing:	Cash synthetic basis	**5 to 12 points (11 points)**	5 to 12 points (9 points)
	Comparable bond price	**0 to 70 points (23 points)**	0 to 75 points (24 points)
Correlation model:	Credit correlation	**32% to 70% (45%)**	39% to 97% (57%)
Foreign exchange contracts[3] (**$(43) million** and $141 million)			
Option model:	Interest rate - Foreign exchange correlation	**28% to 58% (44% / 43%)**	25% to 62% (43% / 43%)
	Interest rate volatility skew	**34% to 117% (55% / 56%)**	29% to 82% (43% / 40%)
	Interest rate quanto correlation	**-17% to 31% (1% / -5%)**	N/M
	Interest rate curve	**N/M**	0%
Equity contracts[3] (**$184 million** and $(2,031) million)			
Option model:	At the money volatility	**7% to 66% (33%)**	16% to 65% (32%)
	Volatility skew	**-4% to 0% (-1%)**	-3% to 0% (-1%)
	Equity - Equity correlation	**25% to 99% (73%)**	40% to 99% (71%)
	Equity - Foreign exchange correlation	**-63% to 30% (-43%)**	-60% to -11% (-39%)
	Equity - Interest rate correlation	**-8% to 52% (12% / 4%)**	-29% to 50% (16% / 8%)
Commodity and other contracts (**$1,600 million** and $1,050 million)			
Option model:	Forward power price	**$7 to $90 ($32) per MWh**	$3 to $91 ($32) per MWh
	Commodity volatility	**6% to 130% (18%)**	10% to 92% (18%)
	Cross-commodity correlation	**5% to 99% (92%)**	43% to 99% (93%)
Investments:			
Principal investments (**$743 million** and $486 million)			
Market approach:	EBITDA multiple	**6 to 24 times (12 times)**	8 to 20 times (11 times)
	Forward capacity price	**N/M**	$5 to $9 ($7)
Comparable pricing:	Comparable equity price	**75% to 100% (88%)**	43% to 100% (81%)
Discounted cash flow:	Implied weighted average cost of capital	**N/M**	16%
	Exit multiple	**N/M**	8 to 14 times (9 times)
	Capitalization rate	**N/M**	5% to 9% (6%)
	Equity discount rate	**N/M**	20% to 35% (26%)
Other (**$215 million** and $221 million)			
Discounted cash flow:	Implied weighted average cost of capital	**10%**	10%
	Exit multiple	**10 times**	13 times
Market approach:	EBITDA multiple	**6 to 13 times (11 times)**	7 to 14 times (12 times)
Comparable pricing:	Comparable equity price	**100%**	100%

$ in millions	Predominant Valuation Techniques/Significant Unobservable Inputs	Range (Weighted Averages or Simple Averages/Median)[1] At December 31, 2016	At December 31, 2015
Liabilities at Fair Value			
Securities sold under agreements to repurchase (**$149 million** and $151 million)			
Discounted cash flow:	Funding spread	**118 to 127 bps (121 bps)**	86 to 116 bps (105 bps)
Other secured financings (**$434 million** and $461 million)			
Discounted cash flow:	Funding spread	**63 to 92 bps (78 bps)**	95 to 113 bps (104 bps)
Option model:	Volatility skew	**-1%**	-1%
Discounted cash flow:	Discount rate	**4%**	4% to 13% (4%)
Long-term borrowings (**$2,012 million** and $1,987 million)			
Option model:	At the money volatility	**7% to 42% (30%)**	20% to 50% (29%)
	Volatility skew	**-2% to 0% (-1%)**	-1% to 0% (-1%)
	Equity - Equity correlation	**35% to 99% (84%)**	40% to 97% (77%)
	Equity - Foreign exchange correlation	**-63% to 13% (-40%)**	-70% to -11% (-39%)
Option model:	Interest rate volatility skew	**25%**	50%
	Equity volatility discount	**7% to 11% (10% / 10%)**	10%
Comparable pricing:	Comparable equity price	**N/M**	100%
Correlation model:	Credit correlation	**N/M**	40% to 60% (52%)

bps—Basis points. A basis point equals 1/100th of 1%.
Points—Percentage of par
MWh—Megawatt hours
N/M—Not Meaningful
EBITDA—Earnings before interest, taxes, depreciation and amortization
1. Amounts represent weighted averages except where simple averages and the median of the inputs are provided when more relevant.
2. Credit valuation adjustment ("CVA") and FVA are included in the balance but excluded from the Valuation Technique(s) and Significant Unobservable Inputs 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.
3. Includes derivative contracts with multiple risks (*i.e.*, hybrid products).

Significant Unobservable Inputs — Description	Sensitivity
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).	In general, an increase (decrease) to the asset coverage for an asset would result in a higher (lower) fair value.
Capitalization rate—The ratio between net operating income produced by an asset and its market value at the projected disposition date.	In general, an increase (decrease) to the capitalization rate for an asset would result in a lower (higher) fair value.
Cash synthetic basis—The measure of the price differential between cash financial instruments and their synthetic derivative-based equivalents. The range disclosed in the table above signifies the number of points by which the synthetic bond equivalent price is higher than the quoted price of the underlying cash bonds.	In general, an increase (decrease) to the cash synthetic basis for an asset would result in a lower (higher) fair value.
Comparable bond price—A pricing input used when prices for the identical instrument are not available. Significant subjectivity may be involved when fair value is determined using pricing data available for comparable instruments. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable bond, then adjusting that yield (or spread) to derive a value for the bond. The adjustment to yield (or spread) should account for relevant differences in the bonds such as maturity or credit quality. Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond being valued in order to establish the value of the bond. Additionally, as the probability of default increases for a given bond (*i.e.*, as the bond becomes more distressed), the valuation of that bond will increasingly reflect its expected recovery level assuming default. The decision to use price-to-price or yield/spread comparisons largely reflects trading market convention for the financial instruments in question. Price-to-price comparisons are primarily employed for RMBS, CMBS, ABS, CDOs, CLOs, Other debt, interest rate contracts, foreign exchange contracts, Other secured financings and distressed corporate bonds. Implied yield (or spread over a liquid benchmark) is utilized predominately for non-distressed corporate bonds, loans and credit contracts.	In general, an increase (decrease) to the comparable bond price for an asset would result in a higher (lower) fair value.
Comparable equity price—A price derived from equity raises, share buybacks and external bid levels, etc. A discount or premium may be included in the fair value estimate.	In general, an increase (decrease) to the comparable equity price of an asset would result in a higher (lower) fair value.

Significant Unobservable Inputs—Description	Sensitivity
Correlation—A pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movements of two variables (*i.e.*, how the change in one variable influences a change in the other variable). Credit correlation, for example, is the factor that describes the relationship between the probability of individual entities to default on obligations and the joint probability of multiple entities to default on obligations.	In general, an increase (decrease) to the correlation would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.
Credit spread—The difference in yield between different securities due to differences in credit quality. The credit spread reflects the additional net yield an investor can earn from a security with more credit risk relative to one with less credit risk. The credit spread of a particular security is often quoted in relation to the yield on a credit risk-free benchmark security or reference rate, typically either U.S. Treasury or London Interbank Offered Rate (“LIBOR”).	In general, an increase (decrease) to the credit spread of an asset would result in a lower (higher) fair value.
EBITDA multiple / Exit multiple—The ratio of the Enterprise Value to EBITDA, where the Enterprise Value is the aggregate value of equity and debt minus cash and cash equivalents. The EBITDA multiple reflects the value of the company in terms of its full-year EBITDA, whereas the exit multiple reflects the value of the company in terms of its full-year expected EBITDA at exit. Either multiple allows comparison between companies from an operational perspective as the effect of capital structure, taxation and depreciation/amortization is excluded.	In general, an increase (decrease) to the EBITDA or Exit multiple of an asset would result in a higher (lower) fair value.
Funding spread—The difference between the general collateral rate (which refers to the rate applicable to a broad class of U.S. Treasury issuances) and the specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral, such as a municipal bond). Repurchase agreements and certain other secured financings are discounted based on collateral curves. The curves are constructed as spreads over the corresponding overnight indexed swap (“OIS”) or LIBOR curves, with the short end of the curve representing spreads over the corresponding OIS curves and the long end of the curve representing spreads over LIBOR.	In general, an increase (decrease) to the funding spread of an asset would result in a lower (higher) fair value.
Implied weighted average cost of capital (“WACC”)—The WACC implied by the current value of equity in a discounted cash flow model. The model assumes that the cash flow assumptions, including projections, are fully reflected in the current equity value, while the debt to equity ratio is held constant. The WACC theoretically represents the required rate of return to debt and equity investors.	In general, an increase (decrease) to the Implied weighted cost of capital of an asset would result in a lower (higher) fair value.
Interest rate curve—The term structure of interest rates (relationship between interest rates and the time to maturity) and a market’s measure of future interest rates at the time of observation. An interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is a pricing input used in the discounting of any OTC derivative cash flow.	In general, an increase (decrease) to the interest rate curve would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.
Volatility—The measure of the variability in possible returns for an instrument given how much that instrument changes in value over time. Volatility is a pricing input for options, and, generally, the lower the volatility, the less risky the option. The level of volatility used in the valuation of a particular option depends on a number of factors, including the nature of the risk underlying that option (*e.g.*, the volatility of a particular underlying equity security may be significantly different from that of a particular underlying commodity index), the tenor and the strike price of the option.	In general, an increase (decrease) to the volatility would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.
Volatility skew—The measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes. The implied volatility for an option with a strike price that is above or below the current price of an underlying asset will typically deviate from the implied volatility for an option with a strike price equal to the current price of that same underlying asset.	In general, an increase (decrease) to the volatility skew would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.

Fair Value of Investments Measured at NAV

Investments in Certain Funds Measured at NAV per Share

	At December 31, 2016		At December 31, 2015	
$ in millions	Fair Value	Commitment	Fair Value	Commitment
Private equity funds	**$ 1,566**	**$ 335**	$ 1,917	$ 538
Real estate funds	**1,103**	**136**	1,337	128
Hedge funds	**147**	**4**	589	4
Total	**$ 2,816**	**$ 475**	$ 3,843	$ 670

Private Equity Funds and Real Estate Funds

Private Equity Funds. Funds that pursue multiple strategies, including leveraged buyouts, venture capital, infrastructure growth capital, distressed investments and mezzanine capital. In addition, the funds may be structured with a focus on specific domestic or foreign geographic regions.

Real Estate Funds. Funds that invest in real estate assets such as commercial office buildings, retail properties, multi-family residential properties, developments or hotels. In addition, the funds may be structured with a focus on specific geographic domestic or foreign regions.

Investments in these funds generally are not redeemable due to the closed-ended nature of these funds. Instead, distributions from each fund will be received as the underlying investments of the funds are disposed and monetized.

Nonredeemable Funds by Projected Distribution

	Fair Value at December 31, 2016	
$ in millions	Private Equity	Real Estate
Less than 5 years	**$ 100**	**$ 81**
5-10 years	**837**	**618**
Over 10 years	**629**	**404**
Total	**$ 1,566**	**$ 1,103**

Hedge Funds

Hedge Funds. Funds that pursue various investment strategies, including long-short equity, fixed income/credit, event-driven and multi-strategy.

Restrictions. Investments in hedge funds may be subject to lock-up or gate provisions. A lock-up provision is a provision which provides that during a certain initial period, an investor may not make a withdrawal from the fund. A gate provision restricts the amount of redemption that an investor can demand on any redemption date.

Hedge Funds Redemption Frequency

	Fair Value At December 31, 2016
Quarterly	52%
Every six months	17%
Greater than six months	18%
Subject to lock-up provisions[1]	13%

1. The remaining restriction period for these investments was primarily over three years.

The redemption notice periods for hedge funds were primarily greater than six months. Hedge fund investments representing approximately 20% of the fair value cannot be redeemed as of December 31, 2016 because a gate provision has been imposed by the hedge fund manager primarily for indefinite periods.

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.

Earnings Impact of Instruments under the Fair Value Option

$ in millions	Trading Revenues	Interest Income (Expense)	Gains (Losses) Included in Net Revenues
2016			
Securities purchased under agreements to resell	$ (3)	$ 7	$ 4
Deposits[1]	(1)	(1)	(2)
Short-term borrowings[1]	33	—	33
Securities sold under agreements to repurchase[1]	6	(13)	(7)
Long-term borrowings[1]	(740)	(483)	(1,223)
2015			
Securities purchased under agreements to resell	$ (6)	$ 10	$ 4
Short-term borrowings[2]	63	—	63
Securities sold under agreements to repurchase[2]	13	(6)	7
Long-term borrowings[2]	2,404	(528)	1,876
2014			
Securities purchased under agreements to resell	$ (4)	$ 9	$ 5
Short-term borrowings[2]	(136)	1	(135)
Securities sold under agreements to repurchase[2]	(5)	(6)	(11)
Long-term borrowings[2]	1,867	(638)	1,229

1. Gains (losses) in 2016 are mainly attributable to changes in foreign currency rates or interest rates or movements in the reference price or index for short-term and long-term borrowings before the impact of related hedges. During 2016, 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) were recorded within OCI in the consolidated comprehensive income statements and, as such, are not included in this table. See Notes 2 and 15 for further information.
2. In 2015 and 2014, Gains (losses) recorded in Trading revenues are principally attributable to DVA, with the respective remainder attributable to changes in foreign currency rates or interest rates or movements in the reference price or index for primarily structured notes before the impact of related hedges.

The amounts in the previous table are included within Net revenues and do not reflect any gains or losses on related hedging instruments. In addition to the amounts in the previous table, as discussed in Note 2, instruments within Trading assets or Trading liabilities are measured at fair value.

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

	2016	
$ in millions	**Trading Revenues**	**OCI**
Short-term and long-term borrowings[1]	**$ 31**	**$ (460)**
Loans and other debt[2]	**(71)**	**—**
Lending commitments[3]	**4**	**—**

	2015	
	Trading Revenues	OCI
Short-term and long-term borrowings[1]	$ 618	$ —
Loans and other debt[2]	(193)	—
Lending commitments[3]	12	—

	2014	
	Trading Revenues	OCI
Short-term and long-term borrowings[1]	$ 651	$ —
Loans and other debt[2]	179	—
Lending commitments[3]	30	—

1. In 2016, 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) are recorded in OCI and when such gains (losses) are realized in Trading revenues. For 2015 and 2014, the realized and unrealized DVA gains (losses) are recorded in Trading revenues. The cumulative pre-tax impact of changes in the Firm's DVA recognized in AOCI is an unrealized loss of $921 million at December 31, 2016. See Notes 2 and 15 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 difference between estimated expected client yields and contractual yields at each respective period-end.

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

$ in millions	At December 31, 2016	At December 31, 2015
Business Unit Responsible for Risk Management		
Equity	**$ 21,066**	$ 17,789
Interest rates	**16,051**	14,255
Foreign exchange	**1,114**	1,866
Credit	**647**	400
Commodities	**264**	383
Total	**$ 39,142**	$ 34,693

Net Difference of Contractual Principal Amount Over Fair Value

$ in millions	At December 31, 2016	At December 31, 2015
Loans and other debt[1]	**$ 13,495**	$ 14,095
Loans 90 or more days past due and/or on nonaccrual status[1]	**11,502**	11,651
Short-term and long-term borrowings[2]	**720**	508

1. The majority of the difference between principal and fair value amounts for loans and other debt relates to distressed debt positions purchased 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 a reference price or index.

Fair Value of Loans in Nonaccrual Status

$ in millions	At December 31, 2016	At December 31, 2015
Aggregate fair value of loans in nonaccrual status[1]	**$ 1,536**	$ 1,853

1. Includes all loans 90 or more days past due in the amount of $787 million and $885 million at December 31, 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.

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

	December 31, 2016					
		Fair Value by Level				
$ in millions	Carrying Value	Level 1	Level 2	Level 3	Gains (Losses) for **2016**	Income Statement Classification
Assets						
Loans[1]	**$ 4,913**	**$ —**	**$ 2,470**	**$ 2,443**	**$ 40**	Other revenues
Other assets—Other investments[2]	**123**	**—**	**—**	**123**	**(52)**	Other revenues
Other assets—Premises, equipment and software costs[3]	**25**	**—**	**22**	**3**	**(76)**	Other revenues if held for sale, otherwise Other expenses
Intangible assets[4]	**—**	**—**	**—**	**—**	**(2)**	Other revenues if held for sale, otherwise Other expenses
Total assets	**$ 5,061**	**$ —**	**$ 2,492**	**$ 2,569**	**$ (90)**	
Liabilities						
Other liabilities and accrued expenses[1]	**$ 226**	**$ —**	**$ 166**	**$ 60**	**$ 121**	Other revenues if held for sale, otherwise Other expenses
Total liabilities	**$ 226**	**$ —**	**$ 166**	**$ 60**	**$ 121**	

$ in millions	December 31, 2015 Carrying Value	Fair Value by Level Level 1	Level 2	Level 3	Gains (Losses) for 2015	Income Statement Classification
Assets						
Loans[1]	$ 5,850	$ —	$ 3,400	$ 2,450	$ (220)	Other revenues
Other assets—Other investments[2]	—	—	—	—	(3)	Other revenues
Other assets—Premises, equipment and software costs[3]	—	—	—	—	(44)	Other revenues if held for sale, otherwise Other expenses
Other assets[5]	31	—	31	—	(22)	Other revenues if held for sale, otherwise Other expenses
Total assets	$ 5,881	$ —	$ 3,431	$ 2,450	$ (289)	
Liabilities						
Other liabilities and accrued expenses[1]	$ 476	$ —	$ 418	$ 58	$ (207)	Other revenues if held for sale, otherwise Other expenses
Total liabilities	$ 476	$ —	$ 418	$ 58	$ (207)	

$ in millions	December 31, 2014 Carrying Value	Fair Value by Level Level 1	Level 2	Level 3	Gains (Losses) for 2014	Income Statement Classification
Assets						
Loans[1]	$ 3,336	$ —	$ 2,386	$ 950	$ (165)	Other revenues
Other Assets—Other investments[2]	46	—	—	46	(38)	Other revenues
Other assets—Premises, equipment and software costs[3]	—	—	—	—	(58)	Other revenues if held for sale, otherwise Other expenses
Intangible assets[4]	46	—	—	46	(6)	Other revenues if held for sale, otherwise Other expenses
Other assets[5]	—	—	—	—	(9)	Other revenues if held for sale, otherwise Other expenses
Total assets	$ 3,428	$ —	$ 2,386	$ 1,042	$ (276)	
Liabilities						
Other liabilities and accrued expenses[1]	$ 219	$ —	$ 178	$ 41	$ (165)	Other revenues if held for sale, otherwise Other expenses
Total liabilities	$ 219	$ —	$ 178	$ 41	$ (165)	

1. Non-recurring changes in the fair value of loans and lending commitments: held for investment were calculated using the value of the underlying collateral; and 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.
2. Losses related to Other assets—Other investments were determined using techniques that included discounted cash flow models, methodologies that incorporate multiples of certain comparable companies and recently executed transactions. Included in these losses was a loss of approximately $35 million in 2016 in connection with the sale of solar investments and impairments of the remaining unsold solar investments accounted for under the equity method.
3. Losses related to Other assets—Premises, equipment and software costs were determined using techniques that included a default recovery analysis and recently executed transactions. Included in these losses was an impairment charge of approximately $31 million in 2016 in connection with an oil terminal facility to reduce the carrying value to its estimated fair value less costs to sell.
4. Losses related to Intangible assets were determined using techniques that included discounted cash flow models and methodologies that incorporate multiples of certain comparable companies.
5. Losses related to Other assets were determined primarily using a default recovery analysis.

Valuation Techniques for Assets and Liabilities Not Measured at Fair Value

Asset and Liability / Valuation Technique
Securities purchased under agreements to resell/Securities sold under agreements to repurchase, Securities borrowed/Securities loaned and Other secured financings • Typically longer dated instruments for which the fair value is determined using standard cash flow discounting methodology. • The inputs to the valuation include contractual cash flows and collateral funding spreads, which are estimated using various benchmarks and interest rate yield curves.
Investment securities—HTM securities • Fair value is determined using quoted market prices.
Customer and other receivables • For the portion of the customer and other receivables where fair value does not equal carrying value, the fair value is determined using collateral information, historical resolution and recovery rates and employee termination data. The cash flow is then discounted using a market observable spread over LIBOR.
Loans • The fair value of consumer and residential real estate loans and lending commitments where position-specific external price data are not observable is determined based on the credit risks of the borrower using a probability of default and loss given default method, discounted at the estimated external cost of funding level. • The fair value of corporate loans and lending commitments is determined using recently executed transactions, market price quotations (where observable), implied yields from comparable debt, market observable credit default swap spread levels along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable.
Long-term borrowings • The fair value is generally determined based on transactional data or third-party pricing for identical or comparable instruments, when available. Where position-specific external prices are not observable, fair value is determined based on current interest rates and credit spreads for debt instruments with similar terms and maturity.
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.

Financial Instruments Not Measured at Fair Value

	At December 31, 2016		Fair Value by Level		
$ in millions	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Financial Assets					
Cash and due from banks	**$ 22,017**	**$ 22,017**	**$ 22,017**	**$ —**	**$ —**
Interest bearing deposits with banks	**21,364**	**21,364**	**21,364**	**—**	**—**
Investment securities—HTM securities	**16,922**	**16,453**	**5,557**	**10,896**	**—**
Securities purchased under agreements to resell	**101,653**	**101,655**	**—**	**97,825**	**3,830**
Securities borrowed	**125,236**	**125,240**	**—**	**125,093**	**147**
Customer and other receivables[1]	**42,463**	**42,321**	**—**	**37,746**	**4,575**
Loans[2]	**94,248**	**95,027**	**—**	**20,906**	**74,121**
Other assets—Cash deposited with clearing organizations or segregated under federal and other regulations or requirements	**33,979**	**33,979**	**33,979**	**—**	**—**
Financial Liabilities					
Deposits	**$ 155,800**	**$ 155,800**	**$ —**	**$ 155,800**	**$ —**
Short-term borrowings	**535**	**535**	**—**	**535**	**—**
Securities sold under agreements to repurchase	**53,899**	**53,913**	**—**	**50,941**	**2,972**
Securities loaned	**15,844**	**15,853**	**—**	**15,853**	**—**
Other secured financings	**6,077**	**6,082**	**—**	**4,792**	**1,290**
Customer and other payables[1]	**187,671**	**187,671**	**—**	**187,671**	**—**
Long-term borrowings	**126,039**	**129,877**	**—**	**129,826**	**51**

$ in millions	At December 31, 2015 Carrying Value	Fair Value	Fair Value by Level Level 1	Level 2	Level 3
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 organizations or segregated under 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	—

1. Accrued interest, fees, and dividend receivables and payables where carrying value approximates fair value have been excluded.
2. Amounts include loans measured at fair value on a non-recurring basis.

At December 31, 2016 and December 31, 2015, notional amounts of approximately $97.4 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 $1,241 million and $2,172 million at December 31, 2016 and December 31, 2015, respectively. Had these commitments been accounted for at fair value, $973 million would have been categorized in Level 2 and $268 million in Level 3 at December 31, 2016, and $1,791 million would have been categorized in Level 2 and $381 million in Level 3 at December 31, 2015.

The previous 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.

4. Derivative Instruments and Hedging Activities

The Firm trades and makes markets globally in listed futures, OTC swaps, forwards, options and other derivatives referencing, among other things, interest rates, currencies, investment grade and non-investment grade corporate credits, loans, bonds, U.S. and other sovereign securities, emerging market bonds and loans, credit indices, asset-backed security indices, property indices, mortgage-related and other asset-backed securities, and real estate loan products. The Firm uses these instruments for market-making, foreign currency exposure management, and asset and liability management.

The Firm manages its market-making 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). The Firm manages the market risk associated with its market-making activities on a Firm-wide basis, on a worldwide trading division level and on an individual product basis.

Derivative Assets and Liabilities

$ in millions	Derivative Assets at December 31, 2016 Fair Value Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Notional Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Derivatives designated as accounting hedges								
Interest rate contracts	$ 1,924	$ 1,049	$ —	$ 2,973	$ 30,280	$ 37,632	$ —	$ 67,912
Foreign exchange contracts	249	18	—	267	6,400	339	—	6,739
Total	2,173	1,067	—	3,240	36,680	37,971	—	74,651
Derivatives not designated as accounting hedges[1]								
Interest rate contracts	200,336	99,217	384	299,937	3,586,279	6,224,104	2,585,772	12,396,155
Credit contracts	9,837	2,392	—	12,229	332,641	111,954	—	444,595
Foreign exchange contracts	73,645	1,022	231	74,898	1,579,718	51,775	13,038	1,644,531
Equity contracts	20,710	—	17,919	38,629	337,791	—	241,837	579,628
Commodity and other contracts	9,792	—	3,727	13,519	67,216	—	79,670	146,886
Total	314,320	102,631	22,261	439,212	5,903,645	6,387,833	2,920,317	15,211,795
Total gross derivatives[2]	$ 316,493	$ 103,698	$ 22,261	$ 442,452	$ 5,940,325	$ 6,425,804	$ 2,920,317	$ 15,286,446
Amounts offset								
Counterparty netting	(243,488)	(100,477)	(19,607)	(363,572)				
Cash collateral netting	(45,875)	(1,799)	—	(47,674)				
Total derivative assets in Trading assets	$ 27,130	$ 1,422	$ 2,654	$ 31,206				
Amounts not offset[3]								
Financial instruments collateral	(10,293)	—	—	(10,293)				
Other cash collateral	(124)	—	—	(124)				
Net amounts	$ 16,713	$ 1,422	$ 2,654	$ 20,789				

$ in millions	Derivative Liabilities at December 31, 2016 Fair Value Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Notional Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Derivatives designated as accounting hedges								
Interest rate contracts	$ 77	$ 647	$ —	$ 724	$ 2,024	$ 51,934	$ —	$ 53,958
Foreign exchange contracts	15	25	—	40	1,480	1,071	—	2,551
Total	92	672	—	764	3,504	53,005	—	56,509
Derivatives not designated as accounting hedges[1]								
Interest rate contracts	183,063	103,392	397	286,852	3,461,927	6,086,774	896,971	10,445,672
Credit contracts	11,024	2,401	—	13,425	358,927	96,397	—	455,324
Foreign exchange contracts	74,575	952	16	75,543	1,556,918	47,647	14,338	1,618,903
Equity contracts	22,531	—	17,983	40,514	320,520	—	272,669	593,189
Commodity and other contracts	8,303	—	3,582	11,885	77,527	—	59,387	136,914
Total	299,496	106,745	21,978	428,219	5,775,819	6,230,818	1,243,365	13,250,002
Total gross derivatives[2]	$ 299,588	$ 107,417	$ 21,978	$ 428,983	$ 5,779,323	$ 6,283,823	$ 1,243,365	$ 13,306,511
Amounts offset								
Counterparty netting	(243,488)	(100,477)	(19,607)	(363,572)				
Cash collateral netting	(30,405)	(5,691)	—	(36,096)				
Total derivative liabilities in Trading liabilities	$ 25,695	$ 1,249	$ 2,371	$ 29,315				
Amounts not offset[3]								
Financial instruments collateral	(7,638)	—	(585)	(8,223)				
Other cash collateral	(10)	(1)	—	(11)				
Net amounts	$ 18,047	$ 1,248	$ 1,786	$ 21,081				

$ in millions	Derivative Assets at December 31, 2015							
	Fair Value				Notional			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
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	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	5,748,525	1,218,645	11,315,172
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 and other contracts	13,333	—	4,038	17,371	73,133	—	82,313	155,446
Total	337,582	105,180	24,382	467,144	7,230,926	5,901,228	1,538,532	14,670,686
Total gross derivatives[2]	$ 340,573	$ 106,623	$ 24,382	$ 471,578	$ 7,273,921	$ 5,936,757	$ 1,538,532	$ 14,749,210
Amounts offset								
Counterparty netting	(265,707)	(104,294)	(21,592)	(391,593)				
Cash collateral netting	(50,335)	(1,037)	—	(51,372)				
Total derivative assets in Trading assets	$ 24,531	$ 1,292	$ 2,790	$ 28,613				
Amounts not offset[3]								
Financial instruments collateral	(9,190)	—	—	(9,190)				
Other cash collateral	(9)	—	—	(9)				
Net amounts	$ 15,332	$ 1,292	$ 2,790	$ 19,414				

$ in millions	Derivative Liabilities at December 31, 2015							
	Fair Value				Notional			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
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	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	10,790,071
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 and other contracts	10,907	—	3,887	14,794	63,283	—	62,974	126,257
Total	324,595	107,807	24,616	457,018	6,856,098	5,827,032	1,372,605	14,055,735
Total gross derivatives[2]	$ 324,671	$ 108,063	$ 24,616	$ 457,350	$ 6,864,262	$ 5,837,356	$ 1,372,605	$ 14,074,223
Amounts offset								
Counterparty netting	(265,707)	(104,294)	(21,592)	(391,593)				
Cash collateral netting	(33,332)	(2,951)	—	(36,283)				
Total derivative liabilities 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 amounts	$ 20,243	$ 818	$ 2,619	$ 23,680				

1. Notional amounts include gross notionals related to open long and short futures contracts of $2,088.0 billion and $332.4 billion, respectively. The unsettled fair value on these futures contracts (excluded from this table) of $784 million and $174 million is included in Customer and other receivables and Customer and other payables, respectively, in the consolidated balance sheets.
2. Amounts include transactions that 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: $3.7 billion of derivative assets and $3.5 billion of derivative liabilities at December 31, 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

	Gains (Losses) Recognized in Interest Expense		
$ in millions	**2016**	2015	2014
Derivatives	**$ (1,738)**	$ (700)	$ 1,462
Borrowings	**1,541**	461	(1,616)
Total	**$ (197)**	$ (239)	$ (154)

Gains (Losses) on Effective Portion of Net Investment Hedges

	Gains (Losses) Recognized in OCI		
$ in millions	**2016**	2015	2014
Foreign exchange contracts[1]	**$ (1)**	$ 434	$ 606

1. Losses of $74 million in 2016, $149 million in 2015 and $186 million in 2014 recognized in Interest income were related to the forward points on the hedging instruments that were excluded from hedge effectiveness testing.

Trading Revenues by Product Type

$ in millions	**2016**	2015	2014
Interest rate contracts	**$ 1,522**	$ 1,249	$ 1,065
Foreign exchange contracts	**1,156**	984	729
Equity security and index contracts[1]	**5,690**	5,695	4,603
Commodity and other contracts	**56**	793	1,055
Credit contracts	**1,785**	775	1,274
Subtotal	**$ 10,209**	$ 9,496	$ 8,726
Debt valuation adjustment[2]	**—**	618	651
Total trading revenues	**$ 10,209**	$ 10,114	$ 9,377

1. Dividend income is included within equity security and index contracts.
2. In 2016, 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) are recorded within OCI in the consolidated comprehensive income statements. In 2015 and 2014, the DVA gains (losses) were recorded within Trading revenues in the consolidated income statements. See Notes 2 and 15 for further information.

The previous table summarizes gains and losses included in Trading revenues in the consolidated income statements 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 previous 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.

OTC Derivative Products—Trading Assets

Counterparty Credit Rating and Remaining Maturity of OTC Derivative Assets

	Fair Value at December 31, 2016[1]						
	Contractual Years to Maturity						
$ in millions	Less than 1	1-3	3-5	Over 5	Cross-Maturity and Cash Collateral Netting[2]	Net Amounts Post-cash Collateral	Net Amounts Post-collateral[3]
Credit Rating[4]							
AAA	**$ 150**	**$ 428**	**$ 918**	**$ 2,931**	**$ (3,900)**	**$ 527**	**$ 485**
AA	**3,177**	**2,383**	**2,942**	**10,194**	**(11,813)**	**6,883**	**4,114**
A	**9,244**	**6,676**	**5,495**	**21,322**	**(31,425)**	**11,312**	**6,769**
BBB	**4,423**	**3,085**	**2,434**	**13,023**	**(16,629)**	**6,336**	**4,852**
Non-investment grade	**2,283**	**1,702**	**1,722**	**1,794**	**(4,131)**	**3,370**	**1,915**
Total	**$ 19,277**	**$14,274**	**$13,511**	**$49,264**	**$ (67,898)**	**$ 28,428**	**$ 18,135**

	Fair Value at December 31, 2015[1]						
	Contractual Years to Maturity						
$ in millions	Less than 1	1-3	3-5	Over 5	Cross-Maturity and Cash Collateral Netting[2]	Net Amounts Post-cash Collateral	Net Amounts Post-collateral[3]
Credit Rating[4]							
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. 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.
3. Fair value is shown, net of collateral received (primarily cash and U.S. government and agency securities).
4. Obligor credit ratings are determined internally by the Credit Risk Management Department.

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.

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.

Net Derivative Liabilities and Collateral Posted

$ in millions	At December 31, 2016	At December 31, 2015
Net derivative liabilities with credit risk-related contingent features	**$ 22,939**	$ 23,526
Collateral posted	**17,040**	19,070

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 Global Ratings ("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

$ in millions	At December 31, 2016[1]
One-notch downgrade	$1,269
Two-notch downgrade	692

1. Amounts include $1,231 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 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 for these derivatives are banks, broker-dealers, and insurance and other financial institutions.

Protection Sold and Purchased with Credit Default Swaps

	At December 31, 2016			
	Protection Sold		Protection Purchased	
$ in millions	Notional	Fair Value (Asset)/ Liability	Notional	Fair Value (Asset)/ Liability
Credit default swaps				
Single name	**$266,918**	**$ (753)**	**$269,623**	**$ 826**
Index and basket	**130,383**	**374**	**122,061**	**(481)**
Tranched index and basket	**32,429**	**(670)**	**78,505**	**1,900**
Total	**$429,730**	**$ (1,049)**	**$470,189**	**$ 2,245**

	At December 31, 2015			
	Protection Sold		Protection Purchased	
$ in millions	Notional	Fair Value (Asset)/ Liability	Notional	Fair Value (Asset)/ Liability
Credit default swaps				
Single name	$420,806	$ 1,980	$405,361	$ (2,079)
Index and basket	199,688	(102)	173,936	(82)
Tranched index and basket	69,025	(1,093)	149,631	2,122
Total	$689,519	$ 785	$728,928	$ (39)

For single name and non-tranched index and basket credit default swaps, the Firm has purchased protection with a notional amount of approximately $389.2 billion and $577.7 billion at December 31, 2016 and December 31, 2015, respectively, compared with a notional amount of approximately $395.5 billion and $619.5 billion (included in the following tables) at December 31, 2016 and December 31, 2015, respectively, of credit protection sold with identical underlying reference obligations.

The purchase of credit protection does not represent the sole manner in which the Firm risk manages its exposure to credit derivatives. The Firm manages its exposure to these derivative contracts through a variety of risk mitigation strategies, which include managing the credit and correlation risk across single name, non-tranched indices and baskets, tranched indices and baskets, and cash positions. Aggregate market risk limits have been established for credit derivatives, and market risk measures are routinely monitored against these limits. The Firm may also recover amounts on the underlying reference obligation delivered to the Firm under credit default swaps where credit protection was sold.

Credit Ratings of Reference Obligation and Maturities of Credit Protection Sold

	At December 31, 2016					
	Maximum Potential Payout/Notional					Fair Value (Asset)/ Liability[1]
	Years to Maturity					
$ in millions	Less than 1	1-3	3-5	Over 5	Total	
Single name credit default swaps[2]						
Investment grade	**$ 79,449**	**$ 70,796**	**$ 34,529**	**$10,293**	**$195,067**	**$ (1,060)**
Non-investment grade	**34,571**	**25,820**	**10,436**	**1,024**	**71,851**	**307**
Total single name credit default swaps	**$ 114,020**	**$ 96,616**	**$ 44,965**	**$11,317**	**$266,918**	**$ (753)**
Index and basket credit default swaps[2]						
Investment grade	**$ 26,530**	**$ 21,388**	**$ 35,060**	**$ 9,096**	**$ 92,074**	**$ (846)**
Non-investment grade	**26,135**	**22,983**	**11,759**	**9,861**	**70,738**	**550**
Total index and basket credit default swaps	**$ 52,665**	**$ 44,371**	**$ 46,819**	**$18,957**	**$162,812**	**$ (296)**
Total credit default swaps sold	**$ 166,685**	**$140,987**	**$ 91,784**	**$30,274**	**$429,730**	**$ (1,049)**
Other credit contracts	**49**	**6**	**—**	**215**	**270**	**—**
Total credit derivatives and other credit contracts	**$ 166,734**	**$140,993**	**$ 91,784**	**$30,489**	**$430,000**	**$ (1,049)**

	At December 31, 2015					
	Maximum Potential Payout/Notional					Fair Value (Asset)/ Liability[1]
	Years to Maturity					
$ in millions	Less than 1	1-3	3-5	Over 5	Total	
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 single name credit default swaps	$ 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 index and basket credit default swaps	$ 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.

Single Name Credit Default Swaps

A credit default swap protects the buyer against the loss of principal on a bond or loan in case of a default by the issuer. The protection buyer pays a periodic premium (generally quarterly) over the life of the contract and is protected for the period. The Firm, in turn, performs under a credit default swap if a credit event as defined under the contract occurs. Typical credit events include bankruptcy, dissolution or insolvency of the referenced entity, failure to pay and restructuring of the obligations of the referenced entity.

Index and Basket Credit Default Swaps

Index and basket credit default swaps are products where credit protection is provided on a portfolio of single name credit default swaps. Generally, in the event of a default on one of the underlying names, the Firm pays a pro rata portion of the total notional amount of the credit default swap.

The Firm also enters into tranched index and basket credit default swaps where credit protection is provided on a particular portion of the portfolio loss distribution. The most junior tranches cover initial defaults, and once losses exceed the notional of the tranche, they are passed on to the next most senior tranche in the capital structure.

Credit Protection Sold through CLNs and CDOs

The Firm has invested in credit-linked notes ("CLNs") and CDOs, which are hybrid instruments containing embedded derivatives, in which credit protection has been sold to the issuer of the note. If there is a credit event of a reference entity underlying the instrument, the principal balance of the note may not be repaid in full to the Firm.

5. Investment Securities

AFS and HTM Securities

$ in millions	At December 31, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS debt securities				
U.S. government and agency securities:				
U.S. Treasury securities	**$ 28,371**	**$ 1**	**$ 545**	**$ 27,827**
U.S. agency securities[1]	**22,348**	**14**	**278**	**22,084**
Total U.S. government and agency securities	**50,719**	**15**	**823**	**49,911**
Corporate and other debt:				
Commercial mortgage-backed securities:				
Agency	**1,850**	**2**	**44**	**1,808**
Non-agency	**2,250**	**11**	**16**	**2,245**
Auto loan asset-backed securities	**1,509**	**1**	**1**	**1,509**
Corporate bonds	**3,836**	**7**	**22**	**3,821**
Collateralized loan obligations	**540**	**—**	**1**	**539**
FFELP student loan asset-backed securities[2]	**3,387**	**5**	**61**	**3,331**
Total corporate and other debt	**13,372**	**26**	**145**	**13,253**
Total AFS debt securities	**64,091**	**41**	**968**	**63,164**
AFS equity securities	**15**	**—**	**9**	**6**
Total AFS securities	**64,106**	**41**	**977**	**63,170**
HTM securities				
U.S. government securities:				
U.S. Treasury securities	**5,839**	**1**	**283**	**5,557**
U.S. agency securities[1]	**11,083**	**1**	**188**	**10,896**
Total HTM securities	**16,922**	**2**	**471**	**16,453**
Total Investment securities	**$ 81,028**	**$ 43**	**$ 1,448**	**$ 79,623**

$ in millions	At December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
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

1. U.S. agency securities consist mainly of agency-issued debt, agency mortgage pass-through pool securities and collateralized mortgage obligations.
2. 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.

Investment Securities in an Unrealized Loss Position

	At December 31, 2016					
	Less than 12 Months		12 Months or Longer		Total	
$ in millions	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
AFS debt securities						
U.S. government and agency securities:						
U.S. Treasury securities	**$ 25,323**	**$ 545**	**$ —**	**$ —**	**$ 25,323**	**$ 545**
U.S. agency securities	**16,760**	**278**	**125**	**—**	**16,885**	**278**
Total U.S. government and agency securities	**42,083**	**823**	**125**	**—**	**42,208**	**823**
Corporate and other debt:						
Commercial mortgage-backed securities:						
Agency	**1,245**	**44**	**—**	**—**	**1,245**	**44**
Non-agency	**763**	**11**	**594**	**5**	**1,357**	**16**
Auto loan asset-backed securities	**659**	**1**	**123**	**—**	**782**	**1**
Corporate bonds	**2,050**	**21**	**142**	**1**	**2,192**	**22**
Collateralized loan obligations	**178**	**—**	**239**	**1**	**417**	**1**
FFELP student loan asset-backed securities	**2,612**	**61**	**—**	**—**	**2,612**	**61**
Total corporate and other debt	**7,507**	**138**	**1,098**	**7**	**8,605**	**145**
Total AFS debt securities	**49,590**	**961**	**1,223**	**7**	**50,813**	**968**
AFS equity securities	**6**	**9**	**—**	**—**	**6**	**9**
Total AFS securities	**49,596**	**970**	**1,223**	**7**	**50,819**	**977**
HTM securities						
U.S. government and agency securities:						
U.S. Treasury securities	**5,057**	**283**	**—**	**—**	**5,057**	**283**
U.S. agency securities	**10,612**	**188**	**—**	**—**	**10,612**	**188**
Total HTM securities	**15,669**	**471**	**—**	**—**	**15,669**	**471**
Total Investment securities	**$ 65,265**	**$ 1,441**	**$ 1,223**	**$ 7**	**$ 66,488**	**$ 1,448**

	At December 31, 2015					
	Less than 12 Months		12 Months or Longer		Total	
$ in millions	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
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

The Firm believes there are no securities in an unrealized loss position that are other-than-temporarily-impaired at December 31, 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), 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 the Firm's agency securities, as well as ABS, CMBS and 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 13 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.

Investment Securities by Contractual Maturity

	At December 31, 2016		
$ in millions	Amortized Cost	Fair Value	Average Yield
AFS debt securities			
U.S. government and agency securities:			
U.S. Treasury securities:			
Due within 1 year	**$ 2,162**	**$ 2,160**	**0.8%**
After 1 year through 5 years	**20,280**	**20,089**	**1.1%**
After 5 years through 10 years	**5,929**	**5,578**	**1.4%**
Total	**28,371**	**27,827**	
U.S. agency securities:			
Due within 1 year	**36**	**36**	**0.7%**
After 1 year through 5 years	**3,581**	**3,570**	**0.7%**
After 5 years through 10 years	**1,255**	**1,251**	**2.0%**
After 10 years	**17,476**	**17,227**	**1.8%**
Total	**22,348**	**22,084**	
Total U.S. government and agency securities	**50,719**	**49,911**	**1.4%**
Corporate and other debt:			
Commercial mortgage-backed securities:			
Agency:			
Due within 1 year	**116**	**116**	**1.1%**
After 1 year through 5 years	**267**	**267**	**1.2%**
After 5 years through 10 years	**546**	**546**	**1.2%**
After 10 years	**921**	**879**	**1.6%**
Total	**1,850**	**1,808**	
Non-agency:			
After 5 years through 10 years	**35**	**34**	**2.5%**
After 10 years	**2,215**	**2,211**	**2.0%**
Total	**2,250**	**2,245**	
Auto loan asset-backed securities:			
Due within 1 year	**84**	**84**	**1.3%**
After 1 year through 5 years	**1,363**	**1,363**	**1.4%**
After 5 years through 10 years	**62**	**62**	**1.6%**
Total	**1,509**	**1,509**	
Corporate bonds:			
Due within 1 year	**860**	**859**	**1.3%**
After 1 year through 5 years	**2,270**	**2,265**	**2.0%**
After 5 years through 10 years	**706**	**697**	**2.4%**
Total	**3,836**	**3,821**	
Collateralized loan obligations:			
After 5 years through 10 years	**362**	**361**	**1.5%**
After 10 years	**178**	**178**	**2.4%**
Total	**540**	**539**	
FFELP student loan asset-backed securities:			
After 1 year through 5 years	**70**	**70**	**0.7%**
After 5 years through 10 years	**806**	**785**	**0.9%**
After 10 years	**2,511**	**2,476**	**1.0%**
Total	**3,387**	**3,331**	
Total corporate and other debt	**13,372**	**13,253**	**1.6%**
Total AFS debt securities	**64,091**	**63,164**	**1.4%**
AFS equity securities	**15**	**6**	**— %**
Total AFS securities	**64,106**	**63,170**	**1.4%**
HTM securities			
U.S. government securities:			
U.S. Treasury securities:			
Due within 1 year	**500**	**500**	**0.7%**
After 1 year through 5 years	**2,013**	**2,003**	**1.3%**
After 5 years through 10 years	**2,600**	**2,433**	**1.6%**
After 10 years	**726**	**621**	**2.3%**
Total	**5,839**	**5,557**	
U.S. agency securities:			
After 10 years	**11,083**	**10,896**	**2.4%**
Total	**11,083**	**10,896**	
Total HTM securities	**16,922**	**16,453**	**2.1%**
Total Investment securities	**$ 81,028**	**$ 79,623**	**1.6%**

Gross Realized Gains and Losses on Sales of AFS Securities

$ in millions	**2016**	2015	2014
Gross realized gains	**$133**	$116	$ 41
Gross realized (losses)	**(21)**	(32)	(1)
Total	**$112**	$ 84	$ 40

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

6. Collateralized Transactions

The Firm enters into securities purchased under agreements to resell, securities sold under agreements to repurchase, 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.

The Firm manages credit exposure arising from such transactions by, in appropriate circumstances, entering into master netting agreements and collateral agreements with counterparties that provide the Firm, in the event of a counterparty default (such as bankruptcy or a counterparty's failure to pay or perform), with the right to net a counterparty's rights and obligations under such agreement and liquidate and set off collateral held by the Firm against the net amount owed by the counterparty.

The Firm's policy is generally to take possession of securities purchased or borrowed in connection with securities purchased under agreements to resell and securities borrowed transactions, respectively, and to receive cash and securities delivered under securities sold under agreements to repurchase or securities loaned transactions (with rights of rehypothecation). In certain cases, the Firm may be permitted to post collateral to a third-party custodian under a tri-party arrangement that enables the Firm to take control of such collateral in the event of a counterparty default.

The Firm also monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral as provided under the applicable agreement to ensure such transactions are adequately collateralized or the return of excess collateral.

The risk related to a decline in the market value of collateral (pledged or received) is managed by setting appropriate market-based haircuts. Increases in collateral margin calls on secured financing due to market value declines may be mitigated by increases in collateral margin calls on securities purchased under agreements to resell and securities borrowed transactions with similar quality collateral. Additionally, the Firm may request lower quality collateral pledged be replaced with higher quality collateral through collateral substitution rights in the underlying agreements.

The Firm actively manages its secured financing in a manner that reduces the potential refinancing risk of secured financing for less liquid assets. The Firm considers the quality of collateral when negotiating collateral eligibility with counterparties, as defined by its fundability criteria. The Firm utilizes shorter-term secured financing for highly liquid assets and has established longer tenor limits for less liquid assets, for which funding may be at risk in the event of a market disruption.

Offsetting of Certain Collateralized Transactions

	At December 31, 2016				
$ in millions	Gross Amounts[1]	Amounts Offset	Net Amounts Presented	Amounts Not Offset[2]	Net Amounts
Assets					
Securities purchased under agreements to resell	**$ 182,888**	**$ (80,933)**	**$ 101,955**	**$ (93,365)**	**$ 8,590**
Securities borrowed	**129,934**	**(4,698)**	**125,236**	**(118,974)**	**6,262**
Liabilities					
Securities sold under agreements to repurchase	**$ 135,561**	**$ (80,933)**	**$ 54,628**	**$ (47,933)**	**$ 6,695**
Securities loaned	**20,542**	**(4,698)**	**15,844**	**(15,670)**	**174**

	At December 31, 2015				
$ in millions	Gross Amounts[1]	Amounts Offset	Net Amounts Presented	Amounts Not Offset[2]	Net Amounts
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 that 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: $7.8 billion of Securities purchased under agreements to resell, $2.6 billion of Securities borrowed, $6.5 billion of Securities sold under agreements to repurchase and $0.2 billion of Securities loaned at December 31, 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.

Maturities and Collateral Pledged

Gross Secured Financing Balances by Remaining Contractual Maturity

$ in millions	At December 31, 2016				
	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Securities sold under agreements to repurchase[1]	**$ 41,549**	**$ 36,703**	**$ 24,648**	**$ 32,661**	**$ 135,561**
Securities loaned[1]	**9,487**	**851**	**2,863**	**7,341**	**20,542**
Gross amount of secured financing included in the offsetting disclosure	**$ 51,036**	**$ 37,554**	**$ 27,511**	**$ 40,002**	**$ 156,103**
Trading liabilities—Obligation to return securities received as collateral	**20,262**	**—**	**—**	**—**	**20,262**
Total	**$ 71,298**	**$ 37,554**	**$ 27,511**	**$ 40,002**	**$ 176,365**

$ in millions	At December 31, 2015				
	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
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
Trading liabilities—Obligation to return securities received as collateral	19,316	—	—	—	19,316
Total	$ 51,973	$ 25,723	$ 15,377	$ 35,379	$ 128,452

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

Gross Secured Financing Balances by Class of Collateral Pledged

$ in millions	At December 31, 2016	At December 31, 2015
Securities sold under agreements to repurchase[1]		
U.S. government and agency securities	**$ 56,372**	$ 36,609
State and municipal securities	**1,363**	173
Other sovereign government obligations	**42,790**	24,820
Asset-backed securities	**1,918**	441
Corporate and other debt	**9,086**	4,020
Corporate equities	**23,152**	18,473
Other	**880**	213
Total securities sold under agreements to repurchase	**$ 135,561**	$ 84,749
Securities loaned[1]		
U.S. government and agency securities	**$ 1**	$ —
Other sovereign government obligations	**4,762**	7,336
Corporate and other debt	**73**	71
Corporate equities	**15,693**	16,972
Other	**13**	8
Total securities loaned	**$ 20,542**	$ 24,387
Gross amount of secured financing included in the offsetting disclosure	**$ 156,103**	$ 109,136
Trading liabilities—Obligation to return securities received as collateral		
Corporate and other debt	**$ —**	$ 3
Corporate equities	**20,247**	19,313
Other	**15**	—
Total Trading liabilities—obligation to return securities received as collateral	**$ 20,262**	$ 19,316
Total	**$ 176,365**	$ 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 securities sold under agreements to repurchase, securities loaned 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 December 31, 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, was $41.4 billion and $35.0 billion, respectively.

Collateral Received

The Firm receives collateral in the form of securities in connection with securities purchased under agreements to resell, 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 securities sold under agreements to repurchase, 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 instances where the Firm is the lender and 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 December 31, 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 $561.2 billion and $522.6 billion, respectively, and the fair value of the portion that had been sold or repledged was $430.9 billion and $398.1 billion, respectively.

Concentration Risk

The Firm is subject to concentration risk by holding large positions in certain types of securities, loans or commitments to purchase securities of a single issuer, including sovereign governments and other entities, issuers located in a particular country or geographic area, public and private issuers involving developing countries or issuers engaged in a particular industry.

Trading assets owned by the Firm include U.S. government and agency securities and securities issued by other sovereign governments (principally the United Kingdom ("U.K."), Brazil and Japan), which, in the aggregate, represented approximately 8% and 7% of the Firm's total assets at December 31, 2016 and December 31, 2015, respectively. In addition, substantially all of the collateral held by the Firm for resale agreements or bonds borrowed, which together represented approximately 18% and 15% of the Firm's total assets at December 31, 2016 and December 31, 2015, respectively, consists of securities issued by the U.S. government, federal agencies or other sovereign government obligations.

Positions taken and commitments made by the Firm, including positions taken and underwriting and financing commitments made in connection with its private equity, principal investment and lending activities, often involve substantial amounts and significant exposure to individual issuers and businesses, including non-investment grade issuers. In addition, the Firm may originate and/or purchase certain residential and commercial mortgage loans that could contain certain terms and features that may result in additional credit risk as compared with more traditional types of mortgages. Such terms and features may include loans made to borrowers subject to payment increases or loans with high loan-to-value ratios.

Customer Margin Lending

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

Margin loans are extended on a demand basis and are not committed facilities. Factors considered in the review of margin loans are the amount of the loan, the intended purpose, the degree of leverage being employed in the account, and overall evaluation of the portfolio to ensure proper diversification or, in the case of concentrated positions, appropriate liquidity of the underlying collateral or potential hedging strategies to reduce risk.

Underlying collateral for margin loans is reviewed with respect to the liquidity of the proposed collateral positions, valuation of securities, historic trading range, volatility analysis and an evaluation of industry concentrations. For these transactions, adherence to the Firm's collateral policies significantly limits its credit exposure in the event of a customer default. The Firm may request additional margin collateral from customers, if appropriate, and, if necessary,

may sell securities that have not been paid for or purchase securities sold but not delivered from customers. At December 31, 2016 and December 31, 2015, the amounts related to margin lending were approximately $24.4 billion and $25.3 billion, respectively.

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, and certain equity-linked notes ("ELN") and other secured borrowings. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets (see Notes 11 and 13).

Cash and Securities Deposited with Clearing Organizations or Segregated

$ in millions	At December 31, 2016	At December 31, 2015
Securities[1]	$ 23,756	$ 14,390
Other assets—Cash deposited with clearing organizations or segregated under federal and other regulations or requirements	33,979	31,469
Total	$ 57,735	$ 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 loan portfolio consists of the following:

- *Corporate*. Corporate loans primarily include commercial and industrial lending used for general corporate purposes, working capital and liquidity, event-driven loans and asset-backed lending products. Event-driven loans support client merger, acquisition, recapitalization, or project finance activities. Corporate loans are structured as revolving lines of credit, letter of credit facilities, term loans and bridge loans. Risk factors considered in determining the allowance for corporate loans include the borrower's financial strength, seniority of the loan, collateral type, volatility of collateral value, debt cushion, covenants and counterparty type.
- *Consumer*. Consumer loans include unsecured loans and securities-based lending that allows clients to borrow money against the value of qualifying securities for any suitable purpose other than purchasing, trading, or carrying securities or refinancing margin debt. The majority of consumer loans are structured as revolving lines of credit and letter of credit facilities and are primarily offered through the Firm's Portfolio Loan Account ("PLA") and Liquidity Access Line ("LAL") programs. The allowance methodology for unsecured loans considers the specific attributes of the loan as well as the borrower's source of repayment. The allowance methodology for securities-based lending considers the collateral type underlying the loan (*e.g.*, diversified securities, concentrated securities or restricted stock).
- *Residential Real Estate*. Residential real estate loans mainly include non-conforming loans and home equity lines of credit. The allowance methodology for non-conforming residential mortgage loans considers several factors, including, but not limited to, loan-to-value ratio, FICO score, home price index and delinquency status. The methodology for home equity lines of credit considers credit limits and utilization rates in addition to the factors considered for non-conforming residential mortgages.
- *Wholesale Real Estate*. Wholesale real estate loans include owner-occupied loans and income-producing loans. The principal risk factors for determining the allowance for wholesale real estate loans are the underlying collateral type, loan-to-value ratio and debt service ratio.

Loans Held for Investment and Held for Sale

$ in millions	At December 31, 2016 Loans Held for Investment	Loans Held for Sale	Total Loans[1, 2]
Loans by Product Type			
Corporate loans	$ 25,025	$ 10,710	$ 35,735
Consumer loans	24,866	—	24,866
Residential real estate loans	24,385	61	24,446
Wholesale real estate loans	7,702	1,773	9,475
Total loans, gross	81,978	12,544	94,522
Allowance for loan losses	(274)	—	(274)
Total loans, net	$ 81,704	$ 12,544	$ 94,248

$ in millions	At December 31, 2015 Loans Held for Investment	Loans Held for Sale	Total Loans[1, 2]
Loans by Product Type			
Corporate loans	$ 23,554	$11,924	$ 35,478
Consumer loans	21,528	—	21,528
Residential real estate loans	20,863	104	20,967
Wholesale real estate loans	6,839	1,172	8,011
Total loans, gross	72,784	13,200	85,984
Allowance for loan losses	(225)	—	(225)
Total loans, net	$ 72,559	$13,200	$ 85,759

1. Amounts include loans that are made to non-U.S. borrowers of $9,388 million and $9,789 million at December 31, 2016 and December 31, 2015, respectively.
2. Loans at fixed interest rates and floating or adjustable interest rates were $11,895 million and $82,353 million at December 31, 2016, respectively, and $8,471 million and $77,288 million, at December 31, 2015, respectively.

See Note 3 for further information regarding Loans and lending commitments held at fair value.

Credit Quality

The Credit Risk Management Department evaluates new obligors before credit transactions are initially approved and at least annually thereafter for corporate and wholesale real estate loans. For corporate loans, credit evaluations typically involve the evaluation of financial statements; assessment of leverage, liquidity, capital strength, asset composition and quality; market capitalization and access to capital markets; cash flow projections and debt service requirements; and the adequacy of collateral, if applicable. The Credit Risk Management Department also evaluates strategy, market position, industry dynamics, obligor's management and other factors that could affect an obligor's risk profile. For wholesale real estate loans, the credit evaluation is focused on property and transaction metrics, including property type, loan-to-value ratio, occupancy levels, debt service ratio, prevailing capitalization rates and market dynamics. For residential real estate and consumer loans, the initial credit evaluation typically includes, but is not limited to, review of the obligor's income, net worth, liquidity, collateral, loan-to-value ratio and credit bureau information. Subsequent credit monitoring for residential real estate loans is performed at the portfolio level. Consumer loan collateral values are monitored on an ongoing basis.

The Firm utilizes the following credit quality indicators, which are consistent with U.S. banking regulators' definitions of criticized exposures, in its credit monitoring process for loans held for investment:

- *Pass*. A credit exposure rated pass has a continued expectation of timely repayment, all obligations of the borrower are current, and the obligor complies with material terms and conditions of the lending agreement.
- *Special Mention*. Extensions of credit that have potential weakness that deserve management's close attention and, if left uncorrected, may, at some future date, result in the deterioration of the repayment prospects or collateral position.
- *Substandard*. Obligor has a well-defined weakness that jeopardizes the repayment of the debt and has a high probability of payment default with the distinct possibility that the Firm will sustain some loss if noted deficiencies are not corrected.
- *Doubtful*. Inherent weakness in the exposure makes the collection or repayment in full, based on existing facts, conditions and circumstances, highly improbable, and the amount of loss is uncertain.
- *Loss*. Extensions of credit classified as loss are considered uncollectible and are charged off.

Loans considered as doubtful or loss are considered impaired. Substandard loans are regularly reviewed for impairment. When a loan is impaired, the impairment is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or, as a practical expedient, the observable market price of the loan or the fair value of the collateral if the loan is collateral dependent. For further information, see Note 2.

Loans Held for Investment before Allowance by Credit Quality

	At December 31, 2016				
$ in millions	Corporate	Consumer	Residential Real Estate	Wholesale Real Estate	Total
Pass	**$ 23,409**	**$ 24,853**	**$ 24,345**	**$ 7,294**	**$79,901**
Special mention	**288**	**13**	**—**	**218**	**519**
Substandard	**1,259**	**—**	**40**	**190**	**1,489**
Doubtful	**69**	**—**	**—**	**—**	**69**
Loss	**—**	**—**	**—**	**—**	**—**
Total loans	**$ 25,025**	**$ 24,866**	**$ 24,385**	**$ 7,702**	**$81,978**

	At December 31, 2015				
$ in millions	Corporate	Consumer	Residential 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	—	—	—	—	—
Total loans	$ 23,554	$ 21,528	$ 20,863	$ 6,839	$72,784

Impaired Loans Before Allowance by Product Type

	At December 31, 2016		
$ in millions	Corporate	Residential Real Estate	Total
Impaired loans with allowance	**$ 104**	**$ —**	**$104**
Impaired loans without allowance[1]	**206**	**35**	**241**
Impaired loans unpaid principal balance[2]	**316**	**38**	**354**

$ in millions	At December 31, 2015 Corporate	Residential Real Estate	Total
Impaired loans with allowance	$ 39	$ —	$ 39
Impaired loans without allowance[1]	89	17	106
Impaired loans unpaid principal balance[2]	130	19	149

1. At December 31, 2016 and December 31, 2015, no allowance was recorded 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.

Allowance for Credit Losses on Lending Activities

Allowance for Loan Losses

$ in millions	Corporate	Consumer	Residential Real Estate	Wholesale Real Estate	Total
Rollforward					
Balance at December 31, 2015	$ 166	$ 5	$ 17	$ 37	$ 225
Gross charge-offs	**(16)**	**—**	**(1)**	**—**	**(17)**
Gross recoveries	**3**	**—**	**—**	**—**	**3**
Net recoveries/ (charge-offs)	**(13)**	**—**	**(1)**	**—**	**(14)**
Provision for (release of) loan losses	**110**	**(1)**	**4**	**18**	**131**
Other[1]	**(68)**	**—**	**—**	**—**	**(68)**
Balance at December 31, 2016	**$ 195**	**$ 4**	**$ 20**	**$ 55**	**$ 274**
Allowance by Impairment Methodology					
Inherent	**$ 133**	**$ 4**	**$ 20**	**$ 55**	**$ 212**
Specific	**62**	**—**	**—**	**—**	**62**
Total allowance at December 31, 2016	**$ 195**	**$ 4**	**$ 20**	**$ 55**	**$ 274**
Loans by Impairment Methodology[2]					
Inherent	**$ 24,715**	**$ 24,866**	**$ 24,350**	**$ 7,702**	**$81,633**
Specific	**310**	**—**	**35**	**—**	**345**
Total loans at December 31, 2016	**$ 25,025**	**$ 24,866**	**$ 24,385**	**$ 7,702**	**$81,978**

Select Loan Information by Region

$ in millions	At December 31, 2016 Americas	EMEA	Asia-Pacific	Total
Impaired loans	**$ 320**	**$ 9**	**$ 16**	**$345**
Allowance for loan losses	**245**	**28**	**1**	**274**

$ in millions	At December 31, 2015 Americas	EMEA	Asia-Pacific	Total
Impaired loans	$ 108	$ 12	$ 25	$145
Allowance for loan losses	183	34	8	225

EMEA—Europe, Middle East and Africa

$ in millions	Corporate	Consumer	Residential Real Estate	Wholesale Real Estate	Total
Rollforward					
Balance at December 31, 2014	$ 118	$ 2	$ 8	$ 21	$ 149
Gross charge-offs	—	—	(1)	—	(1)
Gross recoveries	1	—	—	—	1
Net recoveries/ (charge-offs)	1	—	(1)	—	—
Provision for loan losses	58	3	10	16	87
Other	(11)	—	—	—	(11)
Balance at December 31, 2015	$ 166	$ 5	$ 17	$ 37	$ 225
Allowance by Impairment Methodology					
Inherent	$ 156	$ 5	$ 17	$ 37	$ 215
Specific	10	—	—	—	10
Total allowance at December 31, 2015	$ 166	$ 5	$ 17	$ 37	$ 225
Loans by Impairment Methodology[2]					
Inherent	$ 23,426	$ 21,528	$ 20,846	$ 6,839	$72,639
Specific	128	—	17	—	145
Total loans at December 31, 2015	$ 23,554	$ 21,528	$ 20,863	$ 6,839	$72,784

Allowance for Lending Commitments

$ in millions	Corporate	Consumer	Residential Real Estate	Wholesale Real Estate	Total
Rollforward					
Balance at December 31, 2015	$ 180	$ 1	$ —	$ 4	$ 185
Provision for lending commitments	**13**	**—**	**—**	**—**	**13**
Other	**(8)**	**—**	**—**	**—**	**(8)**
Balance at December 31, 2016	**$ 185**	**$ 1**	**$ —**	**$ 4**	**$ 190**
Allowance by Impairment Methodology					
Inherent	**$ 185**	**$ 1**	**$ —**	**$ 4**	**$ 190**
Specific	**—**	**—**	**—**	**—**	**—**
Total allowance at December 31, 2016	**$ 185**	**$ 1**	**$ —**	**$ 4**	**$ 190**
Lending Commitments by Impairment Methodology[2]					
Inherent	**$ 63,078**	**$ 6,031**	**$ 322**	**$ 527**	**$ 69,958**
Specific	**89**	**—**	**—**	**—**	**89**
Total lending commitments at December 31, 2016	**$ 63,167**	**$ 6,031**	**$ 322**	**$ 527**	**$ 70,047**

$ in millions	Corporate	Consumer	Residential Real Estate	Wholesale Real Estate	Total
Rollforward					
Balance at December 31, 2014	$ 147	$ —	$ —	$ 2	$ 149
Provision for lending commitments	33	1	—	2	36
Balance at December 31, 2015	$ 180	$ 1	$ —	$ 4	$ 185
Allowance by Impairment Methodology					
Inherent	$ 173	$ 1	$ —	$ 4	$ 178
Specific	7	—	—	—	7
Total allowance at December 31, 2015	$ 180	$ 1	$ —	$ 4	$ 185
Lending Commitments by Impairment Methodology[2]					
Inherent	$ 63,873	$ 4,856	$ 312	$ 381	$ 69,422
Specific	126	—	—	—	126
Total lending commitments at December 31, 2015	$ 63,999	$ 4,856	$ 312	$ 381	$ 69,548

1. Reduction related to loans of $492 million that were transferred to loans held for sale during 2016.
2. Loan balances are gross of the allowance for loan losses, and lending commitments are gross of the allowance for lending commitments.

Troubled Debt Restructurings

At December 31, 2016 and December 31, 2015, the impaired loans and lending commitments classified as held for investment include troubled debt restructurings of $67.4 million and $44.0 million related to loans, respectively, and $13.9 million and $34.8 million related to lending commitments, respectively, within corporate loans. At December 31, 2016 the Firm did not record an allowance related to these troubled debt restructurings. At December 31, 2015, an allowance of $5.1 million was recorded. These restructurings typically include modifications of interest rates, collateral requirements, other loan covenants and payment extensions.

Employee Loans

Employee loans are granted 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 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 December 31, 2016, the Firm had $4,715 million of employee loans, net of an allowance of approximately $89 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) of $2,837 million and $3,144 million at December 31, 2016 and December 31, 2015, respectively, included in Other Assets—Other investments in the consolidated balance sheets. Income (loss) from equity method investments was $(79) million, $114 million and $156 million for 2016, 2015 and 2014, respectively, and is included in Other revenues in the consolidated income statements.

Japanese Securities Joint Venture

The Firm holds a 40% voting interest (“40% interest”) and Mitsubishi UFJ Financial Group, Inc. (“MUFG”) holds a 60% voting interest in Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (“MUMSS”). The Firm accounts for its equity method investment in MUMSS within the Institutional Securities business segment. During 2016, 2015 and 2014, the Firm recorded income from its 40% interest of $93 million, $220 million and $224 million, respectively, within Other revenues in the consolidated income statements. At December 31, 2016 and December 31, 2015, the book value of this investment was $1,581 million and $1,457 million, respectively. The book value of this investee exceeds the Firm’s share of net assets, reflecting equity method intangible assets and equity method goodwill.

Summarized Financial Data for MUMSS

$ in millions	At December 31, 2016	2015
Total assets	**$120,991**	$135,398
Total liabilities	**117,798**	132,492
Noncontrolling interests	**29**	29

$ in millions	2016	2015	2014
Net revenues	**$2,527**	$2,961	$2,961
Income from continuing operations before income taxes	**369**	845	908
Net income	**246**	589	595
Net income applicable to MUMSS	**233**	565	582

In addition to MUMSS, the Firm held other equity method investments that were not individually significant.

9. Goodwill and Intangible Assets

Goodwill

The Firm completed its annual goodwill impairment testing as of July 1, 2016 and July 1, 2015. The Firm's impairment testing for each period did not indicate any goodwill impairment as each of the Firm's reporting units with goodwill had a fair value that was substantially in excess of its carrying value.

Goodwill Rollforward

$ in millions	Institutional Securities	Wealth Management	Investment Management	Total
At December 31, 2014[1]	$ 286	$ 5,533	$ 769	$6,588
Foreign currency and other	(15)	—	—	(15)
Acquired	11	—	—	11
At December 31, 2015[1]	$ 282	$ 5,533	$ 769	$6,584
Foreign currency and other	(7)	—	—	(7)
At December 31, 2016[1]	**$ 275**	**$ 5,533**	**$ 769**	**$6,577**

1. The amount of the Firm's goodwill before accumulated impairments of $700 million, which included $673 million related to the Institutional Securities business segment and $27 million related to the Investment Management business segment, was $7,277 million and $7,284 million at December 31, 2016 and December 31, 2015, respectively.

Intangible Assets

$ in millions	Institutional Securities	Wealth Management	Investment Management	Total
Amortizable intangibles	$ 327	$ 2,632	$ 20	$ 2,979
Mortgage servicing rights	—	5	—	5
At December 31, 2015	$ 327	$ 2,637	$ 20	$ 2,984
Amortizable intangibles	**$ 346**	**$ 2,361**	**$ 11**	**$ 2,718**
Mortgage servicing rights	**—**	**3**	**—**	**3**
At December 31, 2016	**$ 346**	**$ 2,364**	**$ 11**	**$ 2,721**

Gross Amortizable Intangible Assets by Type

	At December 31, 2016		At December 31, 2015	
$ in millions	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Trademarks	**$ 1**	**$ —**	$ 1	$ —
Tradename	**283**	**40**	280	31
Customer relationships	**4,059**	**1,939**	4,059	1,686
Management contracts	**467**	**275**	478	250
Other	**329**	**167**	291	163
Total	**$ 5,139**	**$ 2,421**	$ 5,109	$ 2,130

Amortization expense associated with intangible assets is estimated to be approximately $298 million per year over the next five years.

Net Amortizable Intangible Assets Rollforward

$ in millions	Institutional Securities	Wealth Management	Investment Management	Total
At December 31, 2014	$ 221	$ 2,905	$ 27	$ 3,153
Acquired[1]	160	—	—	160
Amortization expense	(26)	(273)	(7)	(306)
Other	(28)	—	—	(28)
At December 31, 2015	$ 327	$ 2,632	$ 20	$ 2,979
Acquired	**43**	**—**	**—**	**43**
Disposals	**(11)**	**—**	**—**	**(11)**
Amortization expense	**(11)**	**(271)**	**(9)**	**(291)**
Impairment losses	**(2)**	**—**	**—**	**(2)**
At December 31, 2016	**$ 346**	**$ 2,361**	**$ 11**	**$ 2,718**

1. Includes a $159 million net increase in Intangible assets related to a Commodities division transaction, which also resulted in a gain of $78 million recorded in Other revenues in the consolidated income statements.

10. Deposits

Deposits

$ in millions	**At December 31, 2016[1]**	At December 31, 2015[1]
Savings and demand deposits	**$ 154,559**	$ 153,346
Time deposits[2]	**1,304**	2,688
Total[3]	**$ 155,863**	$ 156,034

1. Total deposits subject to FDIC insurance at December 31, 2016 and December 31, 2015 were $128 billion and $113 billion, respectively. Of the total time deposits subject to FDIC insurance at December 31, 2016 and December 31, 2015, $46 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 December 31, 2016 included $154,529 million of savings deposits payable upon demand and $1,204 million of time deposits maturing in 2017 and $43 million of time deposits maturing in 2018.

The vast majority of deposits in MSBNA and MSPBNA (collectively, "U.S. Bank Subsidiaries") are sourced from the Firm's retail brokerage accounts.

11. Borrowings and Other Secured Financings

Short-Term Borrowings

At December 31, 2016 and December 31, 2015, the Firm had $941 million and $2,173 million, respectively, of Short-term borrowings. These borrowings included primarily structured notes, bank loans and bank notes with original maturities of 12 months or less. Certain structured short-term borrowings are carried at fair value under the fair value option (see Note 3).

Long-Term Borrowings

Maturities and Terms of Long-Term Borrowings

$ in millions	Parent Company Fixed Rate[1]	Parent Company Variable Rate[2]	Subsidiaries Fixed Rate[1]	Subsidiaries Variable Rate[2]	At December 31, 2016[3]	At December 31, 2015
Due in 2016	$ —	$ —	$ —	$ —	$ —	$ 22,396
Due in 2017	14,120	7,369	16	4,622	26,127	22,266
Due in 2018	12,942	4,698	13	1,639	19,292	17,937
Due in 2019	13,049	8,340	38	970	22,397	18,568
Due in 2020	11,128	4,570	13	1,025	16,736	17,005
Due in 2021	13,614	2,044	17	1,504	17,179	9,142
Thereafter	43,076	15,385	244	4,339	63,044	46,454
Total	$107,929	$42,406	$ 341	$14,099	$ 164,775	$ 153,768
Weighted average coupon at period-end[4]	4.1%	1.4%	6.0%	N/M	3.7%	4.0%

N/M—Not Meaningful
1. Amounts include an increase of approximately $1.1 billion at December 31, 2016 to the carrying amount of certain of the long-term borrowings associated with fair value hedges. The increase to the carrying value associated with fair value hedges by year due was approximately $0.2 billion due in 2017, $0.2 billion due in 2018, $0.3 billion due in 2019, $0.3 billion due in 2020, $0.2 billion due in 2021 and ($0.1) billion due thereafter.
2. Variable rate borrowings bear interest based on a variety of money market indices, including LIBOR and federal funds rates. Amounts include borrowings that are linked to equity, credit, commodity or other indices.
3. Amounts include a decrease of approximately $0.7 billion at December 31, 2016 to the carrying amounts of certain of the long-term borrowings for which the fair value option was elected (see Note 3).
4. Weighted average coupon was calculated utilizing U.S. and non-U.S. dollar interest rates and excludes financial instruments for which the fair value option was elected. Virtually all of the variable rate notes issued by subsidiaries are carried at fair value so a weighted average coupon is not meaningful.

Long-Term Borrowings by Type

$ in millions	At December 31, 2016	At December 31, 2015
Senior debt	$ 154,472	$ 140,494
Subordinated debt	10,303	10,404
Junior subordinated debentures	—	2,870
Total	$ 164,775	$ 153,768

During 2016 and 2015, the Firm issued notes with a principal amount of approximately $43.6 billion and $34.2 billion, respectively, and approximately $30.4 billion and $27.3 billion, respectively, in aggregate long-term borrowings matured or retired.

Certain senior debt securities are denominated in various non-U.S. dollar currencies and may be structured to provide a return that is linked to equity, credit, commodity or other indices (*e.g.*, the consumer price index). Senior debt also may be structured to be callable by the Firm or extendible at the option of holders of the senior debt securities.

Debt containing provisions that effectively allow the holders to put the notes aggregated $3,156 million at December 31, 2016 and $2,902 million at December 31, 2015. In addition, in certain circumstances, certain purchasers may be entitled to cause the repurchase of the notes. The aggregated value of notes subject to these arrangements was $1,117 million at December 31, 2016 and $650 million at December 31, 2015. Subordinated debt and junior subordinated debentures generally are issued to meet the capital requirements of the Firm or its regulated subsidiaries and primarily are U.S. dollar denominated.

The weighted average maturity of long-term borrowings, based upon stated maturity dates, was approximately 5.9 years and 6.1 years at December 31, 2016 and December 31, 2015, respectively.

Trust Preferred Securities

During 2016, Morgan Stanley Capital Trust III, Morgan Stanley Capital Trust IV, Morgan Stanley Capital Trust V and Morgan Stanley Capital Trust VIII redeemed all of their issued and outstanding Capital Securities pursuant to the optional redemption provisions provided in the respective governing documents. In the aggregate, $2.8 billion was redeemed. The Firm concurrently redeemed the related underlying junior subordinated debentures.

During 2015, Morgan Stanley Capital Trusts VI and VII redeemed all of their issued and outstanding 6.60% Capital Securities, respectively, and the Firm concurrently redeemed the related underlying junior subordinated debentures.

Senior Debt—Structured Borrowings

The Firm's index-linked, equity-linked or credit-linked borrowings include various structured instruments whose payments and redemption values are linked to the performance of a specific index (*e.g.,* Standard & Poor's 500), a basket of stocks, a specific equity security, a credit exposure or basket of credit exposures. To minimize the exposure from such instruments, the Firm has entered into various swap

contracts and purchased options that effectively convert the borrowing costs into floating rates based upon LIBOR. The Firm generally carries the entire structured borrowings at fair value. The swaps and purchased options used to economically hedge the embedded features are derivatives and also are carried at fair value. Changes in fair value related to the notes and economic hedges are reported in Trading revenues. See Note 3 for further information on structured borrowings.

Subordinated Debt

Subordinated notes included in long-term borrowings have a contractual weighted average coupon of 4.5% at both December 31, 2016 and December 31, 2015. Maturities of subordinated notes range from 2022 to 2027.

Asset and Liability Management

In general, other than securities inventories financed by secured funding sources, the majority of the Firm's assets are financed with a combination of deposits, short-term funding, floating rate long-term debt or fixed rate long-term debt swapped to a floating rate. The Firm uses interest rate swaps to more closely match these borrowings to the duration, holding period and interest rate characteristics of the assets being funded and to manage interest rate risk. These swaps effectively convert certain of the Firm's fixed rate borrowings into floating rate obligations. In addition, for non-U.S. dollar currency borrowings that are not used to fund assets in the same currency, the Firm has entered into currency swaps that effectively convert the borrowings into U.S. dollar obligations.

The Firm's use of swaps for asset and liability management affected its effective average borrowing rate.

Rates for Long-Term Borrowings at Period End

	2016	2015	2014
Weighted average coupon[1]	**3.7%**	4.0%	4.2%
Effective average after swaps[1]	**2.5%**	2.1%	2.3%

1. Weighted average coupon was calculated utilizing U.S. and non-U.S. dollar interest rates and excludes financial instruments for which the fair value option was elected.

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. See Note 13 for further information on other secured financings related to VIEs and securitization activities.

Other Secured Financings by Type

$ in millions	**At December 31, 2016**	At December 31, 2015
Secured Financings		
Original maturities greater than one year	**$ 9,404**	$ 7,629
Original maturities one year or less[1]	**1,429**	1,435
Failed sales[2]	**285**	400
Total	**$ 11,118**	$ 9,464

1. Amounts include approximately $1,389 million of variable rate financings and approximately $40 million in fixed rate financings at December 31, 2016 and approximately $1,401 million of variable rate financings and approximately $34 million in fixed rate financings at December 31, 2015.
2. For more information on failed sales, see Note 13.

Secured Financings with Original Maturities Greater than One Year by Maturity and Rate Type

	At December 31, 2016			At December 31, 2015
$ in millions	Fixed Rate	Variable Rate[1]	Total	
Due in 2016	**$ —**	**$ —**	**$ —**	$ 2,333
Due in 2017	**86**	**3,291**	**3,377**	2,122
Due in 2018	**—**	**2,738**	**2,738**	1,553
Due in 2019	**1**	**2,812**	**2,813**	1,148
Due in 2020	**58**	**212**	**270**	142
Due in 2021	**—**	**—**	**—**	—
Thereafter	**94**	**112**	**206**	331
Total	**$ 239**	**$ 9,165**	**$9,404**	$ 7,629
Weighted average coupon rate at period-end[2]	**2.5%**	**1.0%**	**1.0%**	1.2%

1. Variable rate borrowings bear interest based on a variety of indices, including LIBOR. Amounts include borrowings that are equity-linked, credit-linked, commodity-linked or linked to some other index.
2. Weighted average coupon was calculated utilizing U.S. and non-U.S. dollar interest rates and excludes secured financings that are linked to non-interest indices and for which fair value option was elected.

Failed Sales by Maturity

$ in millions	**At December 31, 2016**	At December 31, 2015
Due in 2016	**$ —**	$ 69
Due in 2017	**112**	168
Due in 2018	**17**	1
Due in 2019	**53**	54
Due in 2020	**55**	104
Due in 2021	**28**	—
Thereafter	**20**	4
Total	**$ 285**	$ 400

For more information on failed sales, see Note 13.

12. 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 December 31, 2016				
$ in millions	Less than 1	1-3	3-5	Over 5	Total
Letters of credit and other financial guarantees	$ 83	$ —	$ 1	$ 39	$ 123
Investment activities	517	132	13	246	908
Corporate lending[1]	15,156	24,144	47,725	4,421	91,446
Consumer lending	6,024	3	—	4	6,031
Residential real estate lending	88	10	100	220	418
Wholesale real estate lending	79	368	32	68	547
Forward-starting secured financing receivables[2]	71,194	—	—	—	71,194
Underwriting	1,845	—	—	—	1,845
Total	**$94,986**	**$24,657**	**$47,871**	**$ 4,998**	**$172,512**

1. Due to the nature of the Firm's obligations under the commitments, these amounts include certain commitments participated to third parties of $5.6 billion.
2. Represents forward-starting securities purchased under agreements to resell and securities borrowed agreements, of which $68.8 billion settled within three business days.

Types of Commitments

Letters of Credit and Other Financial Guarantees. The Firm has outstanding letters of credit and other financial guarantees issued by third-party banks to certain of the Firm's counterparties. The Firm is contingently liable for these letters of credit and other financial guarantees, which are primarily used to provide collateral for securities and commodities borrowed and to satisfy various margin requirements in lieu of depositing cash or securities with these counterparties.

Investment Activities. The Firm sponsors several non-consolidated investment management 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 (the "Board"), may participate on the same terms and conditions as other investors in certain of these funds that the Firm sponsors 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 and counterparty arrangements with respect to these investment management funds.

Lending Commitments. Lending commitments represent the notional amount of legally binding obligations to provide funding to clients for different types of loan transactions. For syndications led by the Firm, 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 the Firm participates in and does not lead, lending commitments accepted by the borrower but not yet closed include only the amount that the Firm expects it will be allocated from the lead syndicate bank. Due to the nature of the Firm's obligations under the commitments, these amounts include certain commitments participated to third parties. See Note 7 for further information.

Forward-Starting Secured Financing Receivables. The Firm has entered into forward-starting securities purchased under agreements to resell and securities borrowed (agreements that have a trade date at or prior to December 31, 2016 and settle subsequent to period-end) that are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations.

Underwriting Commitments. The Firm provides underwriting commitments in connection with its capital raising sources to a diverse group of corporate and other institutional clients.

Premises and Equipment. The Firm has non-cancelable operating leases covering premises and equipment. At December 31, 2016, future minimum rental commitments under such leases (net of sublease commitments, principally on office rentals) were as follows:

Operating Premises Leases

$ in millions	At December 31, 2016
2017	$ 649
2018	627
2019	549
2020	505
2021	444
Thereafter	2,958
Total	**$ 5,732**

The total of minimum rental income to be received in the future under non-cancelable operating subleases at December 31, 2016 was $22 million.

Occupancy lease agreements, in addition to base rentals, generally provide for rent and operating expense escalations resulting from increased assessments for real estate taxes and other charges. Total rent expense was $689 million, $705 million and $715 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Guarantees

Obligations under Guarantee Arrangements at December 31, 2016

	Maximum Potential Payout/Notional					Carrying Amount (Asset)/ Liability	Collateral/ Recourse
	Years to Maturity						
$ in millions	Less than 1	1-3	3-5	Over 5	Total		
Credit derivatives[1]	**$ 166,685**	**$ 140,987**	**$ 91,784**	**$ 30,274**	**$ 429,730**	**$ (1,049)**	**$ —**
Other credit contracts	**49**	**6**	**—**	**215**	**270**	**—**	**—**
Non-credit derivatives[1]	**1,466,131**	**779,057**	**325,616**	**541,369**	**3,112,173**	**55,476**	**—**
Standby letters of credit and other financial guarantees issued[2]	**1,052**	**753**	**1,472**	**5,611**	**8,888**	**(164)**	**7,009**
Market value guarantees	**38**	**133**	**71**	**8**	**250**	**2**	**4**
Liquidity facilities	**2,812**	**—**	**—**	**—**	**2,812**	**(5)**	**4,854**
Whole loan sales guarantees	**—**	**—**	**2**	**23,321**	**23,323**	**8**	**—**
Securitization representations and warranties	**—**	**—**	**—**	**59,704**	**59,704**	**103**	**—**
General partner guarantees	**3**	**30**	**124**	**237**	**394**	**44**	**—**

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 $0.9 billion due to the nature of the Firm's obligations under these arrangements.

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 non-occurrence 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.

Types of Guarantees

Derivative Contracts. Certain derivative contracts meet the accounting definition of a guarantee, including certain written options, contingent forward contracts and credit default swaps (see Note 4 regarding credit derivatives in which the Firm has sold credit protection to the counterparty). The Firm has disclosed information regarding all derivative contracts that could meet the accounting definition of a guarantee and has used the notional amount as the maximum potential payout for certain derivative contracts, such as written interest rate caps and written foreign currency options.

In certain situations, collateral may be held by the Firm for those contracts that meet the definition of a guarantee. Generally, the Firm sets collateral requirements by counterparty so that the collateral covers various transactions and products and is not allocated specifically to individual contracts. Also, the Firm may recover amounts related to the underlying asset delivered to the Firm under the derivative contract.

The Firm records derivative contracts at fair value. Aggregate market risk limits have been established, and market risk measures are routinely monitored against these limits. The Firm also manages its exposure to these derivative contracts through a variety of risk mitigation strategies, including, but not limited to, entering into offsetting economic hedge positions. The Firm believes that the notional amounts of the derivative contracts generally overstate its exposure.

Standby Letters of Credit and Other Financial Guarantees Issued. In connection with its corporate lending business and other corporate activities, the Firm provides standby letters of credit and other financial guarantees to counterparties. Such arrangements represent obligations to make payments to third parties if the counterparty fails to fulfill its obligation under a borrowing arrangement or other contractual obligation. A majority of the Firm's standby letters of credit are provided on behalf of counterparties that are investment grade.

Market Value Guarantees. Market value guarantees are issued to guarantee timely payment of a specified return to investors in certain affordable housing tax credit funds. These guarantees are designed to return an investor's contribution to a fund and the investor's share of tax losses and tax credits expected to be generated by a fund. From time to time, the Firm may also guarantee return of principal invested, potentially including a specified rate of return, to fund investors.

Liquidity Facilities. The Firm has entered into liquidity facilities with special purpose entities ("SPEs") and other counterparties, whereby the Firm is required to make certain payments if losses or defaults occur. Primarily, the Firm acts as liquidity provider to municipal bond securitization SPEs and for standalone municipal bonds in which the holders of beneficial interests issued by these SPEs or the holders of the individual bonds, respectively, have the right to tender their interests for purchase by the Firm on specified dates at a specified price. The Firm often may have recourse to the underlying assets held by the SPEs in the event payments are required under such liquidity facilities, as well as make-whole or recourse provisions with the trust sponsors. Primarily all of the underlying assets in the SPEs are investment grade. Liquidity facilities provided to municipal tender option bond trusts are classified as derivatives.

Whole Loan Sales Guarantees. The Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain whole loan sales. Under certain circumstances, the Firm may be required to repurchase such assets or make other payments related to such assets if such representations and warranties are breached. The Firm maximum potential payout related to such representations and warranties is equal to the current unpaid principal balance ("UPB") of such loans. The Firm has information on the current UPB only when it services the loans. The amount included in the previous table for the maximum potential payout of $23.3 billion includes the current UPB when known of $4.4 billion and the UPB at the time of sale of $18.9 billion when the current UPB is not known. The UPB at the time of the sale of all loans covered by these representations and warranties was approximately $42.7 billion. The related liability primarily relates to sales of loans to the federal mortgage agencies.

Securitization Representations and Warranties. As part of the Firm's 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. The extent and nature of the representations and warranties, if any, vary among different securitizations. Under certain circumstances, the Firm may be required to repurchase such assets or make other payments

related to such assets if such representations and warranties are breached. The maximum potential amount of future payments the Firm could be required to make would be equal to the current outstanding balances of, or losses associated with, the assets subject to breaches of such representations and warranties. The amount included in the previous table for the maximum potential payout includes the current UPB where known and the UPB at the time of sale when the current UPB is not known.

At December 31, 2016, there were approximately $147.9 billion of outstanding RMBS primarily containing U.S. residential loans that the Firm had sponsored between 2004 and 2016. Of that amount, the Firm made representations and warranties relating to approximately $47.0 billion of loans and agreed to be responsible for the representations and warranties made by third-party sellers, many of which are now insolvent, on approximately $21.0 billion of loans. At December 31, 2016, the Firm had reserved $103 million in its consolidated financial statements for payments owed as a result of breach of representations and warranties made in connection with these residential mortgages. At December 31, 2016, the current UPB for all the residential assets subject to such representations and warranties was approximately $11.6 billion, and the cumulative losses associated with U.S. RMBS were approximately $15.2 billion. The Firm did not make, or otherwise agree to be responsible for, the representations and warranties made by third-party sellers on approximately $79.9 billion of residential loans that it securitized during that time period.

The Firm also made representations and warranties in connection with its role as an originator of certain commercial mortgage loans that it securitized in CMBS. At December 31, 2016, there were outstanding Firm sponsored CMBS in which the Firm had originated and placed between 2004 and 2016, U.S. and non-U.S. commercial mortgage loans of approximately $37.3 billion and $6.2 billion, respectively. At December 31, 2016, the Firm had not accrued any amounts in the consolidated financial statements for payments owed as a result of breach of representations and warranties made in connection with these commercial mortgages. At December 31, 2016, the current UPB for all U.S. commercial mortgage loans subject to such representations and warranties was $31.7 billion. For the non-U.S. commercial mortgage loans, the amount included in the previous table for the maximum potential payout includes the current UPB when known of $0.8 billion and the UPB at the time of sale of $0.4 billion when the current UPB is not known.

General Partner Guarantees. As a general partner in certain investment management funds, the Firm receives certain distributions from the partnerships related to achieving certain return hurdles according to the provisions of the partnership agreements. The Firm may be required to return all or a portion of such distributions to the limited partners in the event the limited partners do not achieve a certain return as specified in the various partnership agreements, subject to certain limitations.

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 indemnities, exchange/clearinghouse member guarantees and merger and acquisition guarantees are described below:

- *Indemnities.* The Firm provides standard indemnities to counterparties for certain contingent exposures and taxes, including U.S. and foreign withholding taxes, on interest and other payments made on derivatives, securities and stock lending transactions, certain annuity products and other financial arrangements. These indemnity payments could be required based on a change in the tax laws, a change in interpretation of applicable tax rulings or a change in factual circumstances. Certain contracts contain provisions that enable the Firm to terminate the agreement upon the occurrence of such events. The maximum potential amount of future payments that the Firm could be required to make under these indemnifications cannot be estimated.

- *Exchange/Clearinghouse Member Guarantees.* The Firm is a member of various U.S. and non-U.S. exchanges and clearinghouses that trade and clear securities and/or derivative contracts. Associated with its membership, the Firm may be required to pay a certain amount as determined by the exchange or the clearinghouse in case of a default of any of its members or pay a proportionate share of the financial obligations of another member that may default on its obligations to the exchange or the clearinghouse. While the rules governing different exchange or clearinghouse memberships and the forms of these guarantees may vary, in general the Firm's obligations under these rules would arise only if the exchange or clearinghouse had previously exhausted its resources.

  In addition, some clearinghouse rules require members to assume a proportionate share of losses resulting from the clearinghouse's investment of guarantee fund contributions and initial margin, and of other losses unrelated to the default of a clearing member, if such losses exceed the specified resources allocated for such purpose by the clearinghouse.

  The maximum potential payout under these rules cannot be estimated. The Firm has not recorded any contingent liability in its consolidated financial statements for these agreements and believes that any potential requirement to make payments under these agreements is remote.

- *Merger and Acquisition Guarantees.* The Firm may, from time to time, in its role as investment banking advisor be required to provide guarantees in connection with certain European merger and acquisition transactions. If required by the regulating authorities, the Firm provides a guarantee that the acquirer in the merger and acquisition transaction has or will have sufficient funds to complete the transaction and would then be required to make the acquisition payments in the event the acquirer's funds are insufficient at the completion date of the transaction. These arrangements generally cover the time frame from the transaction offer date to its closing date and, therefore, are generally short term in nature. The Firm believes the likelihood of any payment by the Firm under these arrangements is remote given the level of its due diligence with its role as investment banking advisor.

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.

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 will continue to be the subject of elevated 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 incurred legal expenses of $263 million in 2016, $563 million in 2015 and $3,364 million in 2014. 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 post-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 styled *Morgan Stanley Mortgage Loan Trust 2006-4SL, et al. v. 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 $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 the complaint. On December 2, 2016, the Firm moved for summary judgment and the plaintiff moved for partial summary judgment. 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. On August 16, 2016, the Firm moved for summary judgment and the plaintiffs moved for partial summary judgment. 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 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 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, which plaintiff appealed. On August 11, 2016, the Appellate Division, First Department reversed in part the trial court's order that granted the Firm's motion to dismiss. On December 13, 2016, the Appellate Division granted the Firm's motion for leave to appeal to the New York Court of Appeals. The Firm filed its opening letter brief with the Court of Appeals on February 6, 2017. 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 Zentral-Genossenschaftsbank 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 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 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 December 25, 2016, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately $247 million, and the certificates had incurred actual losses of approximately $86 million. Based on currently available information, the Firm believes it could incur a loss in this action up to the difference between the $247 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 post-judgment 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 for Morgan Stanley Mortgage Loan Trust 2007-12, filed a complaint against the Firm styled *Wilmington Trust Company v. Morgan Stanley Mortgage Capital Holdings LLC et al.*, 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, interest and costs. 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 United States District Court for the Southern District of New York. 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 September 19, 2014, Financial Guaranty Insurance Company ("FGIC") filed a complaint against the Firm in the Supreme Court of NY, styled *Financial Guaranty Insurance Company v. Morgan Stanley ABS Capital I Inc. et al.* relating to a securitization issued by Basket of Aggregated Residential NIMS 2007-1 Ltd. The complaint asserts claims for breach of contract and alleges, among other things, that the net interest margin securities ("NIMS") in the trust breached various representations and warranties. FGIC issued a financial guaranty policy with respect to certain notes that had an original balance of approximately $475 million. The complaint seeks, among other relief, specific performance of the NIMS breach remedy procedures in the transaction documents, unspecified damages, reimbursement of certain payments made pursuant to the transaction documents, attorneys' fees and interest. On November 24, 2014, the Firm filed a motion to dismiss the complaint, which the court denied on January 19, 2017. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately $126 million, the unpaid balance of these notes, plus pre- and post-judgment interest, fees and costs, as well as claim payments that FGIC has made and will make in the future.

On September 23, 2014, FGIC filed a complaint against the Firm in the Supreme Court of NY styled *Financial Guaranty Insurance Company v. Morgan Stanley ABS Capital I Inc. et al*. relating to the Morgan Stanley ABS Capital I Inc. Trust 2007-NC4. The complaint asserts claims for breach of contract and fraudulent inducement and alleges, among other things, that the loans in the trust breached various representations and warranties and defendants made untrue statements and material omissions to induce FGIC to issue a financial guaranty policy on certain classes of certificates that had an original balance of approximately $876 million. The complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, compensatory, consequential and punitive damages, attorneys' fees and interest. On January 23, 2017, the court denied 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 FGIC that the Firm did not repurchase, plus pre- and post-judgment interest, fees and costs, as well as claim payments that FGIC has made and will make in the future. In addition, 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 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 December 11, 2015, the court granted in part and denied in part the Firm's motion to dismiss the complaint. On February 11, 2016, plaintiff filed a notice of appeal of that order. 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.

In May 2016, the Austrian state of Land Salzburg filed a claim against the Firm in Germany (the "German Proceedings") seeking €209 million (approximately $220 million) relating to certain fixed income and commodities derivative transactions which Land Salzburg entered into with the Firm between 2005 and 2012. Land Salzburg has alleged that it had neither the capacity nor authority to enter into such transactions, which should be set aside, and that the Firm breached certain advisory and other duties which the Firm had owed to it. In April 2016, the Firm filed a pre-emptive claim against Land Salzburg in the English courts (the "English Proceedings") in which the Firm is seeking declarations that Land Salzburg had both the capacity and authority to enter into the transactions, and that the Firm has no liability to Land Salzburg arising from them. In July 2016, the Firm filed an application with the German court to stay the German Proceedings on the basis that the English court was first seized of the dispute between the parties and, pending determination of that application, filed its statement of defense on December 23, 2016. On December 8, 2016,

Land Salzburg filed an application with the English court challenging its jurisdiction to determine the English Proceedings. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately €209 million, plus interest and costs.

13. Variable Interest Entities and Securitization Activities

Overview

The Firm is involved with various SPEs in the normal course of business. In most cases, these entities are deemed to be VIEs.

The Firm's variable interests in VIEs include debt and equity interests, commitments, guarantees, derivative instruments and certain fees. The Firm's involvement with VIEs arises primarily from:

- Interests purchased in connection with market-making activities, securities held in its Investment securities portfolio and retained interests held as a result of securitization activities, including re-securitization transactions.
- Guarantees issued and residual interests retained in connection with municipal bond securitizations.
- Loans made to and investments in VIEs that hold debt, equity, real estate or other assets.
- Derivatives entered into with VIEs.
- Structuring of CLNs or other asset-repackaged notes designed to meet the investment objectives of clients.
- Other structured transactions designed to provide tax-efficient yields to the Firm or its clients.

The Firm determines whether it is the primary beneficiary of a VIE upon its initial involvement with the VIE and reassesses whether it is the primary beneficiary on an ongoing basis as long as it has any continuing involvement with the VIE. This determination is based upon an analysis of the design of the VIE, including the VIE's structure and activities, the power to make significant economic decisions held by the Firm and by other parties, and the variable interests owned by the Firm and other parties.

The power to make the most significant economic decisions may take a number of different forms in different types of VIEs. The Firm considers servicing or collateral management decisions as representing the power to make the most significant economic decisions in transactions such as securitizations or CDOs. As a result, the Firm does not consolidate securitizations or CDOs for which it does not act as the servicer or collateral manager unless it holds certain other rights to replace the servicer or collateral manager or to require the liquidation of the entity. If the Firm serves as servicer or collateral manager, or has certain other rights described in the previous sentence, the Firm analyzes the interests in the VIE that it holds and consolidates only those VIEs for which it holds a potentially significant interest of the VIE.

The structure of securitization vehicles and CDOs is driven by several parties, including loan seller(s) in securitization transactions, the collateral manager in a CDO, one or more rating agencies, a financial guarantor in some transactions and the underwriter(s) of the transactions, that serve to reflect specific investor demand. In addition, subordinate investors, such as the "B-piece" buyer (*i.e.,* investors in most subordinated bond classes) in commercial mortgage-backed securitizations or equity investors in CDOs, can influence whether specific loans are excluded from a CMBS transaction or investment criteria in a CDO.

For many transactions, such as re-securitization transactions, CLNs and other asset-repackaged notes, there are no significant economic decisions made on an ongoing basis. In these cases, the Firm focuses its analysis on decisions made prior to the initial closing of the transaction and at the termination of the transaction. Based upon factors, which include an analysis of the nature of the assets, including whether the assets were issued in a transaction sponsored by the Firm and the extent of the information available to the Firm and to investors, the number, nature and involvement of investors, other rights held by the Firm and investors, the standardization of the legal documentation and the level of continuing involvement by the Firm, including the amount and type of interests owned by the Firm and by other investors, the Firm concluded in most of these transactions that decisions made prior to the initial closing were shared between the Firm and the initial investors. The Firm focused its control decision on any right held by the Firm or investors related to the termination of the VIE. Most re-securitization transactions, CLNs and other asset-repackaged notes have no such termination rights.

Consolidated VIEs

Except for consolidated VIEs included in other structured financings and managed real estate partnerships in the tables below, the Firm accounts for the assets held by the entities primarily in Trading assets and the liabilities of the entities in Other secured financings in its consolidated balance sheets. For consolidated VIEs included in other structured financings, the Firm accounts for the assets held by the entities primarily in Premises, equipment and software costs, and

Other assets in its consolidated balance sheets. For consolidated VIEs included in managed real estate partnerships, the Firm accounts for the assets held by the entities primarily in Trading assets in its consolidated balance sheets. Except for consolidated VIEs included in other structured financings, the assets and liabilities are measured at fair value, with changes in fair value reflected in earnings.

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 12).

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 December 31, 2016. See Note 2 for further information.

Assets and Liabilities by Type of Activity

	At December 31, 2016		At December 31, 2015	
$ in millions	VIE Assets	VIE Liabilities	VIE Assets	VIE Liabilities
Credit-linked notes	**$ 501**	**$ —**	$ 900	$ —
Other structured financings	**602**	**10**	787	13
Asset-backed securitizations[1]	**397**	**283**	668	423
Other[2]	**910**	**25**	245	—
Total	**$ 2,410**	**$ 318**	$ 2,600	$ 436

1. Asset-backed securitizations include transactions backed by residential mortgage loans, commercial mortgage loans and other types of assets, including consumer or commercial assets. 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.

Assets and Liabilities by Balance Sheet Caption

$ in millions	**At December 31, 2016**	At December 31, 2015
Assets		
Cash and due from banks	**$ 74**	$ 14
Trading assets at fair value	**1,295**	1,842
Customer and other receivables	**13**	3
Goodwill	**18**	—
Intangible assets	**177**	—
Other assets	**833**	741
Total	**$ 2,410**	$ 2,600
Liabilities		
Other secured financings at fair value	**$ 289**	$ 431
Other liabilities and accrued expenses	**29**	5
Total	**$ 318**	$ 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.

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 December 31, 2016 and December 31, 2015, noncontrolling interests in the consolidated financial statements related to consolidated VIEs were $228 million and $37 million, respectively. The Firm also had additional maximum exposure to losses of approximately $78 million and $72 million at December 31, 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 and exclude exposure to loss from liabilities due to immateriality. 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.

Non-consolidated VIE Assets, Maximum and Carrying Value of Exposure to Loss

$ in millions	At December 31, 2016				
	Mortgage and Asset-Backed Securitizations	Collateralized Debt Obligations	Municipal Tender Option Bonds	Other Structured Financings	Other
VIE assets that the Firm does not consolidate (unpaid principal balance)	**$ 101,916**	**$ 11,341**	**$ 4,857**	**$ 4,293**	**$ 39,077**
Maximum exposure to loss					
Debt and equity interests	**$ 11,243**	**$ 1,245**	**$ 50**	**$ 1,570**	**$ 4,877**
Derivative and other contracts	**—**	**—**	**2,812**	**—**	**45**
Commitments, guarantees and other	**684**	**99**	**—**	**187**	**228**
Total	**$ 11,927**	**$ 1,344**	**$ 2,862**	**$ 1,757**	**$ 5,150**
Carrying value of exposure to loss—Assets					
Debt and equity interests	**$ 11,243**	**$ 1,245**	**$ 49**	**$ 1,183**	**$ 4,877**
Derivative and other contracts	**—**	**—**	**5**	**—**	**18**
Total	**$ 11,243**	**$ 1,245**	**$ 54**	**$ 1,183**	**$ 4,895**

$ in millions	At December 31, 2015				
	Mortgage and Asset-Backed Securitizations	Collateralized Debt Obligations	Municipal Tender Option Bonds	Other Structured Financings	Other
VIE assets that the Firm does not consolidate (unpaid principal balance)	$ 126,872	$ 8,805	$ 4,654	$ 2,201	$ 20,775
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	$ 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	$ 13,361	$ 1,259	$ 6	$ 685	$ 3,867

Non-consolidated VIE Mortgage- and Asset-Backed Securitization Assets

$ in millions	At December 31, 2016		At December 31, 2015	
	Unpaid Principal Balance	Debt and Equity Interests	Unpaid Principal Balance	Debt and Equity Interests
Residential mortgages	**$ 4,775**	**$ 458**	$ 13,787	$ 1,012
Commercial mortgages	**54,021**	**2,656**	57,313	2,871
U.S. agency collateralized mortgage obligations	**14,796**	**2,758**	13,236	2,763
Other consumer or commercial loans	**28,324**	**5,371**	42,536	6,715
Total	**$ 101,916**	**$ 11,243**	$ 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 securitization SPEs for which the maximum exposure to loss is less than specific thresholds. These additional assets totaled $11.7 billion and $12.9 billion at December 31, 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 December 31, 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.

Securitization Activities

In a securitization transaction, the Firm transfers assets (generally commercial or residential mortgage loans or U.S. agency securities) to an SPE, sells to investors most of the beneficial interests, such as notes or certificates, issued by the SPE, and, in many cases, retains other beneficial interests. In many securitization transactions involving commercial mortgage loans, the Firm transfers a portion of the assets to the SPE with unrelated parties transferring the remaining assets.

The purchase of the transferred assets by the SPE is financed through the sale of these interests. In some of these transactions, primarily involving residential mortgage loans in the U.S., the Firm serves as servicer for some or all of the transferred loans. In many securitizations, particularly involving residential mortgage loans, the Firm also enters into derivative transactions, primarily interest rate swaps or interest rate caps, with the SPE.

Although not obligated, the Firm generally makes a market in the securities issued by SPEs in these transactions. As a market maker, the Firm offers to buy these securities from, and sell these securities to, investors. Securities purchased through these market-making activities are not considered to be retained interests, although these beneficial interests generally are included in Trading assets—Corporate and other debt and are measured at fair value.

The Firm enters into derivatives, generally interest rate swaps and interest rate caps, with a senior payment priority in many securitization transactions. The risks associated with these and similar derivatives with SPEs are essentially the same as similar derivatives with non-SPE counterparties and are managed as part of the Firm's overall exposure. See Note 4 for further information on derivative instruments and hedging activities.

Available for Sale Securities

In the AFS securities within the Investment securities portfolio, the Firm holds securities issued by VIEs not sponsored by the Firm. These securities include government-guaranteed securities issued in transactions sponsored by the federal mortgage agencies and the most senior securities issued by VIEs in which the securities are backed by student loans, automobile loans, commercial mortgage loans or CLOs (see Note 5).

Municipal Tender Option Bond Trusts

In a municipal tender option bond transaction, the Firm, generally on behalf of a client, transfers a municipal bond to a trust. The trust issues short-term securities that the Firm, as the remarketing agent, sells to investors. The client retains a residual interest. The short-term securities are supported by a liquidity facility pursuant to which the investors may put their short-term interests. In some programs, the Firm provides this liquidity facility; in most programs, a third-party provider will provide such liquidity facility. The Firm may purchase short-term securities in its role either as remarketing agent or as liquidity provider. The client can generally terminate the transaction at any time. The liquidity provider can generally terminate the transaction upon the occurrence of certain events. When the transaction is terminated, the municipal bond is generally sold or returned to the client. Any losses suffered by the liquidity provider upon the sale of the bond are the responsibility of the client. This obligation generally is collateralized. Liquidity facilities provided to municipal tender option bond trusts are classified as derivatives. The Firm consolidates any municipal tender option bond trusts in which it holds the residual interest.

Credit Protection Purchased through CLNs

In a CLN transaction, the Firm transfers assets (generally high-quality securities or money market investments) to an SPE, enters into a derivative transaction in which the SPE writes protection on an unrelated reference asset or group of assets, through a credit default swap, a total return swap or similar instrument, and sells to investors the securities issued by the SPE. In some transactions, the Firm may also enter into interest rate or currency swaps with the SPE. Upon the

occurrence of a credit event related to the reference asset, the SPE will deliver collateral securities as payment to the Firm. The Firm is generally exposed to price changes on the collateral securities in the event of a credit event and subsequent sale. These transactions are designed to provide investors with exposure to certain credit risk on the reference asset. In some transactions, the assets and liabilities of the SPE are recognized in the Firm's consolidated balance sheets. In other transactions, the transfer of the collateral securities is accounted for as a sale of assets, and the SPE is not consolidated. The structure of the transaction determines the accounting treatment.

The derivatives in CLN transactions consist of total return swaps, credit default swaps or similar contracts in which the Firm has purchased protection on a reference asset or group of assets. Payments by the SPE are collateralized. The risks associated with these and similar derivatives with SPEs are essentially the same as similar derivatives with non-SPE counterparties and are managed as part of the Firm's overall exposure.

Other Structured Financings

The Firm primarily invests in equity interests issued by entities that develop and own low-income communities (including low-income housing projects) and entities that construct and own facilities that will generate energy from renewable resources. The equity interests entitle the Firm to its share of tax credits and tax losses generated by these projects. In addition, the Firm has issued guarantees to investors in certain low-income housing funds. The guarantees are designed to return an investor's contribution to a fund and the investor's share of tax losses and tax credits expected to be generated by the fund. The Firm is also involved with entities designed to provide tax-efficient yields to the Firm or its clients.

Collateralized Loan and Debt Obligations

A CLO or a CDO is an SPE that purchases a pool of assets, consisting of corporate loans, corporate bonds, asset-backed securities or synthetic exposures on similar assets through derivatives, and issues multiple tranches of debt and equity securities to investors. The Firm underwrites the securities issued in CLO transactions on behalf of unaffiliated sponsors and provides advisory services to these unaffiliated sponsors. The Firm sells corporate loans to many of these SPEs, in some cases representing a significant portion of the total assets purchased. If necessary, the Firm may retain unsold securities issued in these transactions. Although not obligated, the Firm generally makes a market in the securities issued by SPEs in these transactions. These beneficial interests are included in Trading assets and are measured at fair value.

Equity-Linked Notes

In an ELN transaction, the Firm typically transfers to an SPE either (1) a note issued by the Firm, the payments on which are linked to the performance of a specific equity security, equity index, or other index or (2) debt securities issued by other companies and a derivative contract, the terms of which will relate to the performance of a specific equity security, equity index or other index. These transactions are designed to provide investors with exposure to certain risks related to the specific equity security, equity index or other index. ELN transactions with SPEs were not consolidated at December 31, 2016 and December 31, 2015.

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

Transfers of Assets with Continuing Involvement

$ in millions	At December 31, 2016			
	Residential Mortgage Loans	Commercial Mortgage Loans	U.S. Agency Collateralized Mortgage Obligations	Credit-Linked Notes and Other[1]
SPE assets (unpaid principal balance)[2]	**$ 19,381**	**$ 43,104**	**$ 11,092**	**$ 11,613**
Retained interests (fair value)				
Investment grade	**$ —**	**$ 22**	**$ 375**	**$ —**
Non-investment grade	**4**	**79**	**—**	**826**
Total	**$ 4**	**$ 101**	**$ 375**	**$ 826**
Interests purchased in the secondary market (fair value)				
Investment grade	**$ —**	**$ 30**	**$ 26**	**$ —**
Non-investment grade	**23**	**75**	**—**	**—**
Total	**$ 23**	**$ 105**	**$ 26**	**$ —**
Derivative assets (fair value)	**$ —**	**$ 261**	**$ —**	**$ 89**
Derivative liabilities (fair value)	**—**	**—**	**—**	**459**

$ in millions	At December 31, 2015			
	Residential Mortgage Loans	Commercial Mortgage Loans	U.S. Agency Collateralized Mortgage Obligations	Credit-Linked Notes and Other[1]
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	$ 160	$ 301	$ 649	$ 1,136
Interests purchased in the secondary market (fair value)				
Investment grade	$ —	$ 88	$ 99	$ —
Non-investment grade	60	63	—	10
Total	$ 60	$ 151	$ 99	$ 10
Derivative assets (fair value)	$ —	$ 343	$ —	$ 151
Derivative liabilities (fair value)	—	—	—	449

1. Amounts include CLO transactions managed by unrelated third parties.
2. Amounts include assets transferred by unrelated transferors.

$ in millions	At December 31, 2016 Level 2	Level 3	Total
Retained interests (fair value)			
Investment grade	**$ 385**	**$ 12**	**$ 397**
Non-investment grade	**14**	**895**	**909**
Total	**$ 399**	**$ 907**	**$ 1,306**
Interests purchased in the secondary market (fair value)			
Investment grade	**$ 56**	**$ —**	**$ 56**
Non-investment grade	**84**	**14**	**98**
Total	**$ 140**	**$ 14**	**$ 154**
Derivative assets (fair value)	**$ 348**	**$ 2**	**$ 350**
Derivative liabilities (fair value)	**98**	**361**	**459**

$ in millions	At December 31, 2015 Level 2	Level 3	Total
Retained interests (fair value)			
Investment grade	$ 886	$ 1	$ 887
Non-investment grade	17	1,342	1,359
Total	$ 903	$ 1,343	$ 2,246
Interests purchased in the secondary market (fair value)			
Investment grade	$ 187	$ —	$ 187
Non-investment grade	112	21	133
Total	$ 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 income statements. 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. Any changes in the fair value of such retained interests are recognized in the consolidated income statements.

Proceeds from New Securitization Transactions and Retained Interests in Securitization Transactions

$ in millions	2016	2015	2014
New transactions	**$ 18,975**	$ 21,243	$ 20,553
Retained interests	**2,701**	3,062	3,041

Net gains on sale of assets in securitization transactions at the time of the sale were not material for all periods presented.

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 12).

Proceeds from Sales to CLO Entities Sponsored by Non-Affiliates

$ in millions	2016	2015	2014
Proceeds from sale of corporate loans sold to those SPEs	**$ 475**	$ 1,110	$ 2,388

Net gains on sale of corporate loans to CLO transactions at the time of sale were not material for all periods presented.

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.

Carrying and Fair Value of Assets Sold and Retained Interest Exposure

$ in millions	At December 31, 2016	At December 31, 2015
Carrying value of assets derecognized at the time of sale and gross cash proceeds	**$ 11,209**	$ 7,878
Fair value of assets sold	**11,301**	7,935
Fair value of derivative assets recognized in the consolidated balance sheets	**128**	97
Fair value of derivative liabilities recognized in the consolidated balance sheets	**36**	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 11).

The assets transferred to certain 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 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 December 31, 2016		At December 31, 2015	
$ in millions	Assets	Liabilities	Assets	Liabilities
Failed sales	**$ 285**	**$ 285**	$ 400	$ 400

14. Regulatory Requirements

Regulatory Capital Framework

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

Regulatory Capital Requirements

The Firm is 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.

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 goodwill, intangibles, certain deferred tax assets, other amounts in AOCI 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, 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 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 ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers.

Risk-Weighted Assets

RWAs reflect both the Firm's 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 obligations to the Firm;
- Market risk: Adverse changes in the level of one or more market prices, rates, indices, implied volatilities, correlations or other market factors, such as market liquidity; and
- Operational risk: Inadequate or failed processes or systems, human factors or from external events (*e.g.*, fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets).

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 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").

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.

The Firm's Regulatory Capital and Capital Ratios

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

Regulatory Capital

$ in millions	At December 31, 2016 Amount	Ratio	Minimum Ratio[1]
Regulatory capital and capital ratios			
Common Equity Tier 1 capital	**$ 60,398**	**16.9%**	**5.9%**
Tier 1 capital	**68,097**	**19.0%**	**7.4%**
Total capital	**78,642**	**22.0%**	**9.4%**
Tier 1 leverage[2]	**—**	**8.4%**	**4.0%**
Assets			
Total RWAs	**$ 358,141**	**N/A**	**N/A**
Adjusted average assets[3]	**811,402**	**N/A**	**N/A**

$ in millions	At December 31, 2015 Amount	Ratio	Minimum Ratio[1]
Regulatory capital and capital ratios			
Common Equity Tier 1 capital	$ 59,409	15.5%	4.5%
Tier 1 capital	66,722	17.4%	6.0%
Total capital	79,403	20.7%	8.0%
Tier 1 leverage[2]	—	8.3%	4.0%
Assets			
Total RWAs	$ 384,162	N/A	N/A
Adjusted average assets[3]	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 the 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 ended December 31 2016 and December 31, 2015, respectively, 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

The Firm's 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 U.S. Bank Subsidiaries' financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, each of the 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.

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. Under regulatory capital requirements adopted by the U.S. federal banking agencies, U.S. depository institutions must maintain certain minimum capital ratios in order to be considered well-capitalized. At December 31, 2016 and December 31, 2015, the Firm's U.S. Bank Subsidiaries maintained capital at levels sufficiently in excess of the universally mandated well-capitalized requirements to address any additional capital needs and requirements identified by the U.S. federal banking regulators.

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

MSBNA's Regulatory Capital

$ in millions	At December 31, 2016 Amount	Ratio	Required Capital Ratio[1]
Common Equity Tier 1 capital	**$ 13,398**	**16.9%**	**6.5%**
Tier 1 capital	**13,398**	**16.9%**	**8.0%**
Total capital	**14,858**	**18.7%**	**10.0%**
Tier 1 leverage	**13,398**	**10.5%**	**5.0%**

$ in millions	At December 31, 2015 Amount	Ratio	Required Capital Ratio[1]
Common Equity Tier 1 capital	$ 13,333	15.1%	6.5%
Tier 1 capital	13,333	15.1%	8.0%
Total capital	15,097	17.1%	10.0%
Tier 1 leverage	13,333	10.2%	5.0%

1. Capital ratios that are required in order to be considered well-capitalized for U.S. regulatory purposes.

MSPBNA's Regulatory Capital

$ in millions	At December 31, 2016 Amount	Ratio	Required Capital Ratio[1]
Common Equity Tier 1 capital	**$ 5,589**	**26.1%**	**6.5%**
Tier 1 capital	**5,589**	**26.1%**	**8.0%**
Total capital	**5,626**	**26.3%**	**10.0%**
Tier 1 leverage	**5,589**	**10.6%**	**5.0%**

$ in millions	At December 31, 2015 Amount	Ratio	Required Capital Ratio[1]
Common Equity Tier 1 capital	$ 4,197	26.5%	6.5%
Tier 1 capital	4,197	26.5%	8.0%
Total capital	4,225	26.7%	10.0%
Tier 1 leverage	4,197	10.5%	5.0%

1. Capital ratios that are required in order to be considered well-capitalized for U.S. regulatory purposes.

Broker-Dealer Regulatory Capital Requirements

MS&Co. is a registered U.S. 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 $10,311 million and $10,254 million at December 31, 2016 and December 31, 2015, respectively, which exceeded the amount required by $8,034 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 December 31, 2016 and December 31, 2015, MS&Co. had tentative net capital in excess of the minimum and the notification requirements.

MSSB LLC is a registered U.S. broker-dealer and introducing broker for the futures business and, accordingly, is subject to the minimum net capital requirements of the SEC. MSSB LLC has consistently operated with capital in excess of its regulatory capital requirements. MSSB LLC's net capital totaled $3,946 million and $3,613 million at December 31, 2016 and December 31, 2015, respectively, which exceeded the amount required by $3,797 million and $3,459 million, respectively.

MSIP, a London-based broker-dealer subsidiary, is subject to the capital requirements of the Prudential Regulation Authority, and 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.

The regulatory capital requirements referred to above, and certain covenants contained in various agreements governing indebtedness of the Firm, may restrict the Firm's ability to withdraw capital from its subsidiaries. At December 31, 2016 and December 31, 2015, approximately $25.3 billion and $28.6 billion, respectively, of net assets of consolidated subsidiaries may be restricted as to the payment of cash dividends and advances to the Parent Company.

15. Total Equity

Morgan Stanley Shareholders' Equity

Common Stock

Changes in Shares of Common Stock Outstanding

in millions	**2016**	2015
Shares outstanding at beginning of period	**1,920**	1,951
Treasury stock purchases[1]	**(133)**	(78)
Other[2]	**65**	47
Shares outstanding at end of period	**1,852**	1,920

1. In addition to the Firm's share repurchase program, Treasury stock purchases include repurchases of common stock for employee tax withholding.
2. Other includes net shares issued to and forfeited from Employee stock trusts and issued for RSU conversions.

Dividends and Share Repurchases

The Firm repurchased approximately $3,500 million of its outstanding common stock as part of its share repurchase program during 2016, and the Firm repurchased approximately $2,125 million during 2015.

In June 2016, the Firm received a conditional non-objection 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 $0.15 per share during the period beginning with the dividend declared on July 20, 2016.

Pursuant to the share repurchase program, the Firm considers, among other things, business segment capital needs as well as stock-based compensation and benefit plan requirements. Share repurchases under the program will be exercised from time to time at prices the Firm deems appropriate subject to various factors, including the Firm's 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 by the Firm are subject to regulatory approval.

Employee Stock Trusts

The Firm has established Employee stock trusts to provide common stock voting rights to certain employees who hold outstanding RSUs. The assets of the Employee stock trusts are consolidated with those of the Firm, and the value of the stock held in the Employee stock trusts is classified in Morgan Stanley shareholders' equity and generally accounted for in a manner similar to treasury stock.

Preferred Stock

Dividends declared on the Firm's outstanding preferred stock were $468 million, $452 million and $311 million in 2016, 2015 and 2014, respectively. On December 15, 2016, the Firm announced that the Board declared quarterly dividends for preferred stock shareholders of record on December 30, 2016 that were paid on January 17, 2017. 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 14).

Series K Preferred Stock. In January 2017, the Firm issued 40,000,000 Depositary Shares, for an aggregate price of $1,000 million. Each Depositary Share represents a 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K, $0.01 par value ("Series K Preferred Stock"). The Series K Preferred Stock is redeemable at the Firm's option, (i) in whole or in part, from time to time, on any dividend payment date on or after April 15, 2027 or (ii) in whole but not in part at any time within 90 days following a regulatory capital treatment event (as described in the terms of that series), in each case at a redemption price of $25,000 per share (equivalent to $25 per Depositary Share), plus any declared and unpaid dividends to, but excluding, the date fixed for redemption, without accumulation of any undeclared dividends. The Series K Preferred Stock also has a preference over the Firm's common stock upon liquidation. The Series K Preferred Stock offering (net of related issuance costs) resulted in proceeds of approximately $969 million.

Preferred Stock Outstanding

$ in millions, except per share data	Shares Outstanding	Liquidation Preference per Share	Carrying Value	
	At December 31, 2016		**At December 31, 2016**	At December 31, 2015
Series				
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

1. Series C is composed 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.

Preferred Stock Issuance Description

Series	Issuance Date	Preferred Stock Issuance Description	Redemption Price per Share[1]	Redeemable on or after Date	Dividend per Share[2]
A[3]	July 2006	44,000,000 Depositary Shares, each representing a 1/1,000th of a share of Floating Rate Non-Cumulative Preferred Stock, $0.01 par value	$ 25,000	July 15, 2011	$ 255.56
C[3, 4]	October 13, 2008	10% Perpetual Non-Cumulative Non-Voting Preferred Stock	1,100	October 15, 2011	25.00
E[5]	September 30, 2013	34,500,000 Depositary Shares, each representing a 1/1,000th interest in a share of perpetual Fixed-to-Floating Rate Non-Cumulative Preferred Stock, $0.01 par value	25,000	October 15, 2023	445.31
F[5]	December 10, 2013	34,000,000 Depositary Shares, each representing a 1/1,000th interest in a share of perpetual Fixed-to-Floating Rate Non-Cumulative Preferred Stock, $0.01 par value	25,000	January 15, 2024	429.69
G[5]	April 29, 2014	20,000,000 Depositary Shares, each representing a 1/1,000th interest in a share of perpetual 6.625% Non-Cumulative Preferred Stock, $0.01 par value	25,000	July 15, 2019	414.06
H[5, 6]	April 29, 2014	1,300,000 Depositary Shares, each representing a 1/25th interest in a share of perpetual Fixed-to-Floating Rate Non-Cumulative Preferred Stock, $0.01 par value	25,000	July 15, 2019	681.25
I[5]	September 18, 2014	40,000,000 Depositary Shares, each representing a 1/1,000th interest in a share of perpetual Fixed-to-Floating Rate Non-Cumulative Preferred Stock, $0.01 par value	25,000	October 15, 2024	398.44
J[5, 7]	March 19, 2015	1,500,000 Depositary Shares, each representing a 1/25th interest in a share of perpetual Fixed-to-Floating Rate Non-Cumulative Preferred Stock, $0.01 par value	25,000	July 15, 2020	693.75

1. The redemption price per share for Series A, E, F, G and I is equivalent to $25.00 per Depositary Share. The redemption price per share for Series H and J is equivalent to $1,000 per Depositary Share.
2. Quarterly (unless noted otherwise) dividends declared in December 2016 were paid on January 17, 2017 to preferred shareholders of record on December 30, 2016.
3. The preferred stock is redeemable at the Firm’s option, in whole or in part, on or after the redemption date.
4. Dividends on the Series C preferred stock are payable, on a non-cumulative basis, as and if declared by the Board, in cash, at the rate of 10% per annum of the liquidation preference of $1,000 per share.
5. The preferred stock is redeemable at the Firm’s option (i) in whole or in part, from time to time, on any dividend payment date on or after the redemption date or (ii) in whole but not in part at any time within 90 days following a regulatory capital treatment event (as described in the terms of that series).
6. Dividend on Series H preferred stock is payable semiannually until July 15, 2019 and quarterly thereafter.
7. Dividend on Series J preferred stock is payable semiannually until July 15, 2020 and quarterly thereafter. In addition to the redemption price per share, the redemption price includes any declared and unpaid dividends up to, but excluding, the date fixed for redemption, without accumulation of any undeclared dividends.

Accumulated Other Comprehensive Income (Loss)

$ in millions	Foreign Currency Translation Adjustments	AFS Securities	Pensions, Postretirement and Other	DVA	Total
December 31, 2013	$ (266)	$ (282)	$ (545)	$ —	$ (1,093)
OCI during the period[1]	(397)	209	33	—	(155)
December 31, 2014	(663)	(73)	(512)	—	(1,248)
OCI during the period[1]	(300)	(246)	138	—	(408)
December 31, 2015	(963)	(319)	(374)	—	(1,656)
Cumulative adjustment for accounting change related to DVA[2]	**—**	**—**	**—**	**(312)**	**(312)**
OCI during the period[1]	**(23)**	**(269)**	**(100)**	**(283)**	**(675)**
December 31, 2016	**$ (986)**	**$ (588)**	**$ (474)**	**$ (595)**	**$ (2,643)**

1. Amounts net of tax and noncontrolling interests.
2. 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 unrealized 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.

Period Changes in OCI Components

	2016[1]				
$ in millions	Pre-tax gain (loss)	Income tax benefit (provision)	After-tax gain (loss)	Non-controlling interest	Net
Foreign currency translation adjustments					
OCI activity	**$ (24)**	**$ 9**	**$ (15)**	**$ 12**	**$ (27)**
Reclassified to earnings	**4**	**—**	**4**	**—**	**4**
Net OCI	**(20)**	**9**	**(11)**	**12**	**(23)**
Change in net unrealized gains (losses) on AFS securities					
OCI activity	**$ (313)**	**$ 116**	**$ (197)**	**$ —**	**$ (197)**
Reclassified to earnings[2]	**(113)**	**41**	**(72)**	**—**	**(72)**
Net OCI	**(426)**	**157**	**(269)**	**—**	**(269)**
Pension, postretirement and other					
OCI activity	**$ (162)**	**$ 64**	**$ (98)**	**$ —**	**$ (98)**
Reclassified to earnings[2]	**(3)**	**1**	**(2)**	**—**	**(2)**
Net OCI	**(165)**	**65**	**(100)**	**—**	**(100)**
Change in net DVA					
OCI activity	**$ (429)**	**$ 153**	**$ (276)**	**$ (13)**	**$ (263)**
Reclassified to earnings[2]	**(31)**	**11**	**(20)**	**—**	**(20)**
Net OCI	**(460)**	**164**	**(296)**	**(13)**	**(283)**

	2015				
$ in millions	Pre-tax gain (loss)	Income tax benefit (provision)	After-tax gain (loss)	Non-controlling interest	Net
Foreign currency translation adjustments					
OCI activity	$ (119)	$ (185)	$ (304)	$ (4)	$(300)
Reclassified to earnings	—	—	—	—	—
Net OCI	(119)	(185)	(304)	(4)	(300)
Change in net unrealized gains (losses) on AFS securities					
OCI activity	$ (305)	$ 112	$ (193)	$ —	$(193)
Reclassified to earnings[2]	(84)	31	(53)	—	(53)
Net OCI	(389)	143	(246)	—	(246)
Pension, postretirement and other					
OCI activity	$ 202	$ (70)	$ 132	$ —	$ 132
Reclassified to earnings[2]	9	(3)	6	—	6
Net OCI	211	(73)	138	—	138

	2014				
$ in millions	Pre-tax gain (loss)	Income tax benefit (provision)	After-tax gain (loss)	Non-controlling interest	Net
Foreign currency translation adjustments					
OCI activity	$ (139)	$ (352)	$ (491)	$ (94)	$(397)
Reclassified to earnings	—	—	—	—	—
Net OCI	(139)	(352)	(491)	(94)	(397)
Change in net unrealized gains (losses) on AFS securities					
OCI activity	$ 391	$ (158)	$ 233	$ —	$ 233
Reclassified to earnings[2]	(40)	16	(24)	—	(24)
Net OCI	351	(142)	209	—	209
Pension, postretirement and other					
OCI activity	$ 41	$ (17)	$ 24	$ —	$ 24
Reclassified to earnings[2]	12	(3)	9	—	9
Net OCI	53	(20)	33	—	33

1. Exclusive of 2016 cumulative adjustment for accounting change related to DVA.
2. Amounts reclassified to earnings related to: realized gains and losses from sales of AFS securities are classified within Other revenues in the consolidated income statements; Pension, postretirement and other are classified within Compensation and benefits expenses in the consolidated income statements; and realization of DVA are classified within Trading revenues in the consolidated income statements.

Cumulative Foreign Currency Translation Adjustments

Cumulative foreign currency translation adjustments include gains or losses resulting from translating foreign currency financial statements from their respective functional currencies to U.S. dollars, net of hedge gains or losses and related tax effects. The Firm uses foreign currency contracts to manage the currency exposure relating to its net investments in non-U.S. dollar functional currency subsidiaries. Increases or decreases in the value of net foreign investments generally are tax deferred for U.S. purposes, but the related hedge gains and losses are taxable currently. The Firm may elect not to hedge its net investments in certain foreign operations due to market conditions or other reasons, including the availability of various currency contracts at acceptable costs. Information at December 31, 2016 and December 31, 2015 relating to the effects on cumulative foreign currency translation adjustments that resulted from the translation of foreign currency financial statements and from gains and losses from hedges of the Firm's net investments in non-U.S. dollar functional currency subsidiaries is summarized in the following table.

Cumulative Foreign Currency Translation Adjustments

$ in millions	**At December 31, 2016**	At December 31, 2015
Resulting from net investments in subsidiaries with a non-U.S. dollar functional currency	**$ (2,018)**	$ (1,996)
Resulting from realized or unrealized losses on hedges, net of tax	**1,032**	1,033
Total	**$ (986)**	$ (963)

Net investments in non-U.S. dollar functional currency subsidiaries subject to hedges were $8,856 million and $8,170 million at December 31, 2016 and December 31, 2015, respectively.

Noncontrolling Interests

Noncontrolling interests were $1,127 million and $1,002 million at December 31, 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 and the increase in net income attributable to noncontrolling interests. See Note 2 for further information on the adoption of the accounting update *Amendments to the Consolidation Analysis*.

16. Earnings per Common Share

Calculation of Basic and Diluted EPS

in millions, except for per share data	**2016**	2015	2014
Basic EPS			
Income from continuing operations	**$ 6,122**	$ 6,295	$ 3,681
Income (loss) from discontinued operations	**1**	(16)	(14)
Net income	**6,123**	6,279	3,667
Net income applicable to noncontrolling interests	**144**	152	200
Net income applicable to Morgan Stanley	**5,979**	6,127	3,467
Less: Preferred stock dividends	**(468)**	(452)	(311)
Less: Allocation of (earnings) loss to participating RSUs[1]	**(3)**	(4)	(4)
Earnings applicable to Morgan Stanley common shareholders	**$ 5,508**	$ 5,671	$ 3,152
Weighted average common shares outstanding	**1,849**	1,909	1,924
Earnings per basic common share			
Income from continuing operations	**$ 2.98**	$ 2.98	$ 1.65
Income (loss) from discontinued operations	**—**	(0.01)	(0.01)
Earnings per basic common share	**$ 2.98**	$ 2.97	$ 1.64
Diluted EPS			
Earnings applicable to Morgan Stanley common shareholders	**$ 5,508**	$ 5,671	$ 3,152
Weighted average common shares outstanding	**1,849**	1,909	1,924
Effect of dilutive securities:			
Stock options and RSUs[1]	**38**	44	47
Weighted average common shares outstanding and common stock equivalents	**1,887**	1,953	1,971
Earnings per diluted common share			
Income from continuing operations	**$ 2.92**	$ 2.91	$ 1.61
Income (loss) from discontinued operations	**—**	(0.01)	(0.01)
Earnings per diluted common share	**$ 2.92**	$ 2.90	$ 1.60

1. 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 13 million shares during 2016, 12 million shares during 2015 and 15 million shares during 2014.

17. Interest Income and Interest Expense

$ in millions	**2016**	2015	2014
Interest income[1]			
Investment securities	**$ 1,142**	$ 876	$ 613
Loans	**2,724**	2,163	1,690
Interest bearing deposits with banks	**170**	108	109
Securities purchased under agreements to resell and Securities borrowed[2]	**(374)**	(560)	(298)
Trading assets, net of Trading liabilities[3]	**2,131**	2,262	2,109
Customer receivables and Other[4]	**1,223**	986	1,190
Total interest income	**$ 7,016**	$ 5,835	$ 5,413
Interest expense[1]			
Deposits	**$ 83**	$ 78	$ 106
Short-term and Long-term borrowings	**3,606**	3,497	3,613
Securities sold under agreements to repurchase and Securities loaned[5]	**977**	1,024	1,216
Customer payables and Other[6]	**(1,348)**	(1,857)	(1,257)
Total interest expense	**$ 3,318**	$ 2,742	$ 3,678
Net interest	**$ 3,698**	$ 3,093	$ 1,735

1. Interest income and Interest expense are recorded within the consolidated income statements 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. Includes fees paid on Securities borrowed.
3. Interest expense on Trading liabilities is reported as a reduction to Interest income on Trading assets.
4. Includes interest from customer receivables and cash deposited with clearing organizations or segregated under federal and other regulations or requirements.
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.

18. Deferred Compensation Plans

The Firm maintains various deferred stock-based and cash-based compensation plans for the benefit of certain current and former employees.

Stock-Based Compensation Plans

The components of the Firm's stock-based compensation expense (net of cancellations) are presented in the following table:

Stock-Based Compensation Expense

$ in millions	**2016**	2015	2014
Restricted stock units	**$ 1,054**	$ 1,080	$ 1,212
Stock options	**2**	(3)	5
Performance-based stock units	**81**	26	45
Total[1]	**$ 1,137**	$ 1,103	$ 1,262

1. Amounts for 2016, 2015 and 2014 include $73 million, $68 million and $31 million, respectively, related to stock-based awards that were granted in 2017, 2016 and 2015, respectively, to employees who satisfied retirement-eligible requirements under award terms that do not contain a service period.

The tax benefit related to stock-based compensation expense was $381 million, $369 million and $404 million for 2016, 2015 and 2014, respectively.

At December 31, 2016, the Firm had $619 million of unrecognized compensation cost related to unvested stock-based awards. Absent forfeitures or cancellations, this amount of unrecognized compensation cost will be recognized as $415 million in 2017, $175 million in 2018 and $29 million thereafter. These amounts do not include 2016 performance year awards granted in January 2017, which will begin to be amortized in 2017 (see "2016 Performance Year Deferred Compensation Awards" herein).

In connection with awards under its stock-based compensation plans, the Firm is authorized to issue shares of its common stock held in treasury or newly issued shares. At December 31, 2016, approximately 103 million shares were available for future grants under these plans.

The Firm generally uses treasury shares, if available, to deliver shares to employees and has an ongoing repurchase authorization that includes repurchases in connection with awards granted under its stock-based compensation plans. Share repurchases by the Firm are subject to regulatory approval. See Note 15 for additional information on the Firm's share repurchase program.

Restricted Stock Units

RSUs are generally subject to vesting over time, generally three years from the date of grant, contingent upon continued employment and subject to restrictions on sale, transfer or assignment until conversion to common stock. All or a portion of an award may be canceled if employment is terminated before the end of the relevant vesting period and after the relevant vesting period in certain situations. Recipients of RSUs may have voting rights, at the Firm's discretion, and generally receive dividend equivalents.

Vested and Unvested RSU Activity

	2016	
shares in millions	Number of Shares	Weighted Average Grant Date Fair Value
RSUs at beginning of period	**105**	**$ 29.26**
Granted	**38**	**25.48**
Conversions to common stock	**(40)**	**25.42**
Canceled	**(3)**	**29.57**
RSUs at end of period[1]	**100**	**29.35**

1. At December 31, 2016, approximately 98 million RSUs with a weighted average grant date fair value of $29.35 were vested or expected to vest.

The weighted average grant date fair value for RSUs granted during 2015 and 2014 was $34.76 and $32.58, respectively. At December 31, 2016, the weighted average remaining term until delivery for the Firm's outstanding RSUs was approximately 1.3 years.

At December 31, 2016, the intrinsic value of RSUs vested or expected to vest was $4,159 million.

The total intrinsic value of RSUs converted to common stock during 2016, 2015 and 2014 was $1,068 million, $1,646 million and $1,461 million, respectively.

Unvested RSU Activity

	2016	
shares in millions	Number of Shares	Weighted Average Grant Date Fair Value
Unvested RSUs at beginning of period	**70**	**$ 29.91**
Granted	**38**	**25.48**
Vested	**(40)**	**27.70**
Canceled	**(3)**	**29.58**
Unvested RSUs at end of period[1]	**65**	**28.70**

1. Unvested RSUs represent awards where recipients have yet to satisfy either the explicit vesting terms or retirement-eligible requirements. At December 31, 2016, approximately 63 million unvested RSUs with a weighted average grant date fair value of $28.68 were expected to vest.

The aggregate fair value of awards that vested during 2016, 2015 and 2014 was $1,088 million, $1,693 million and $1,517 million, respectively.

Stock Options

Stock options generally have an exercise price not less than the fair value of the Firm's common stock on the date of grant, vest and become exercisable over a three-year period and expire five to 10 years from the date of grant, subject to accelerated expiration upon certain terminations of employment. Stock options have vesting, restriction and cancellation provisions that are generally similar to those of RSUs.

No stock options were granted during 2016, 2015 or 2014.

The Firm's expected option life has been determined based upon historical experience. The expected stock price volatility assumption was determined using the implied volatility of exchange-traded options, in accordance with accounting guidance for share-based payments. The risk-free interest rate was determined based on the yields available on U.S. Treasury zero-coupon issues.

Stock Option Activity

options in millions	2016 Number of Options	2016 Weighted Average Exercise Price
Options outstanding at beginning of period	17	$ 52.26
Exercised	(4)	26.90
Expired	(11)	65.45
Options outstanding at end of period[1]	**2**	**28.20**
Options exercisable at end of period	**2**	**28.20**

1. At December 31, 2016, approximately 2 million options with a weighted average exercise price of $28.20 were vested.

The aggregate intrinsic value of stock options exercised was $41 million in 2016 and $2 million per year in 2015 and 2014, with a weighted average exercise price of $26.90, $30.01 and $24.68 for 2016, 2015 and 2014, respectively. Cash received from the exercise of stock options was $66 million for 2016. The income tax benefits realized from the exercise of the stock options was $3 million for 2016. At December 31, 2016, the intrinsic value of exercisable stock options was $26 million.

Stock Options Outstanding and Exercisable

options in millions	At December 31, 2016 Options Outstanding and Exercisable		
Range of Exercise Prices	Number Outstanding	Weighted Average Exercise Price	Average Remaining Life (Years)
$20.00 - $24.99	1	$ 22.98	1.1
$25.00 - $34.99	1	30.01	1.1
Total	**2**		

Performance-Based Stock Units

PSUs will vest and convert to shares of common stock at the end of the performance period only if the Firm satisfies predetermined performance and market-based conditions over the three-year performance period that began on January 1 of the grant year and ends three years later on December 31. Under the terms of the award, the number of PSUs that will actually vest and convert to shares will be based on the extent to which the Firm achieves the specified performance goals during the performance period. PSUs have vesting, restriction and cancellation provisions that are generally similar to those of RSUs.

One-half of the award will be earned based on the Firm's average return on equity, excluding the impact of DVA, certain gains or losses associated with the sale of specified businesses, specified goodwill impairments, certain gains or losses associated with specified legal settlements related to business activities conducted prior to January 1, 2011 and specified cumulative catch-up adjustments resulting from changes in an existing, or application of a new accounting principle that are not applied on a fully retrospective basis ("MS Adjusted Average ROE"). The number of PSUs ultimately earned for this portion of the awards will be determined by applying a multiplier within the following ranges:

Minimum		Maximum	
MS Adjusted Average ROE	Multiplier	MS Adjusted Average ROE	Multiplier
Less than 5%	0.0	11.5% or more	1.5

On the date of award, the fair value per share of this portion was $25.19, $34.58 and $32.81 for 2016, 2015 and 2014, respectively.

One-half of the award will be earned based on the Firm's total shareholder return, relative to the total shareholder return of the S&P 500 Financial Sectors Index ("Relative MS TSR"). The number of PSUs ultimately earned for this portion of the award will be determined by applying a multiplier within the following ranges:

Minimum		Maximum	
Relative MS TSR	Multiplier	Relative MS TSR	Multiplier
Less than -50%	0.0	25% or more	1.5

On the date of award, the fair value per share of this portion was $24.51, $38.07 and $37.72 for 2016, 2015 and 2014, respectively, estimated using a Monte Carlo simulation and the following assumptions:

Grant Year	Risk-Free Interest Rate	Expected Stock Price Volatility	Expected Dividend Yield
2016	**1.1%**	**25.4%**	**0.0%**
2015	0.9%	29.6%	0.0%
2014	0.8%	44.2%	0.0%

The risk-free interest rate was determined based on the yields available on U.S. Treasury zero-coupon issues. The expected stock price volatility was determined using historical volatility. The expected dividend yield is equivalent to reinvesting dividends. A correlation coefficient was developed based on historical price data of the Firm and the S&P 500 Financial Sectors Index.

PSU Activity

in millions	2016 Number of Shares
PSUs at beginning of period	4
Awarded	2
Conversions to common stock	(2)
PSUs at end of period	4

Deferred Cash-Based Compensation Plans

Deferred cash-based compensation plans generally provide a return to the plan participants based upon the performance of various referenced investments.

The components of the Firm's deferred compensation expense (net of cancellations) are presented as follows:

Deferred Compensation Expense

$ in millions	**2016**	2015	2014
Deferred cash-based awards[1]	**$ 950**	$660	$1,757
Return on referenced investments	**228**	112	408
Total	**$1,178**	$772	$2,165

1. Amounts for 2016, 2015 and 2014 include $151 million, $144 million and $92 million, respectively, related to deferred cash-based awards that were granted in 2017, 2016 and 2015, respectively, to employees who satisfied retirement-eligible requirements under award terms that do not contain a service period.

At December 31, 2016, the Firm had approximately $688 million of unrecognized compensation cost related to unvested deferred cash-based awards (excluding unrecognized expense for returns on referenced investments). Absent forfeitures or cancellations and any future return on referenced investments, this amount of unrecognized compensation cost will be recognized as $394 million in 2017, $111 million in 2018 and $183 million thereafter. These amounts do not include 2016 performance year awards granted in January 2017, which will begin to be amortized in 2017 (see below).

2016 Performance Year Deferred Compensation Awards

In January 2017, the Firm granted approximately $763 million of stock-based awards and $895 million of deferred cash-based awards related to the 2016 performance year that contain a future service requirement. Absent forfeitures or cancellations or accelerations, and any future return on referenced investments, the annual compensation cost for these awards will be recognized as follows:

Annual Compensation Cost for 2016 Performance Year Awards

$ in millions	2017	2018	Thereafter	**Total**
Stock-based awards	$440	$174	$ 149	**$ 763**
Deferred cash-based awards	518	263	114	**895**
Total	$958	$437	$ 263	**$1,658**

19. 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.

Pension and Other Postretirement Plans

Substantially all of the U.S. employees of the Firm and its U.S. affiliates who were hired before July 1, 2007 are covered by the U.S. pension plan, a non-contributory, defined benefit pension plan that is qualified under Section 401(a) of the Internal Revenue Code (the "U.S. Qualified Plan"). The U.S. Qualified Plan has ceased future benefit accruals.

Unfunded supplementary plans (the "Supplemental Plans") cover certain executives. Liabilities for benefits payable under the Supplemental Plans are accrued by the Firm and are funded when paid. The Morgan Stanley Supplemental Executive Retirement and Excess Plan (the "SEREP"), a non-contributory defined benefit plan that is not qualified under Section 401(a) of the Internal Revenue Code, ceased future benefit accruals after September 30, 2014. Any benefits earned under the SEREP prior to October 1, 2014 will be payable in the future based on the SEREP's provisions. The amendment did not have a material impact on the consolidated financial statements.

Certain of the Firm's non-U.S. subsidiaries also have defined benefit pension plans covering substantially all of their employees.

The Firm's pension plans generally provide pension benefits that are based on each employee's years of credited service and on compensation levels specified in the plans.

The Firm has an unfunded postretirement benefit plan that provides medical and life insurance for eligible U.S. retirees and medical insurance for their dependents. The Morgan Stanley Medical Plan was amended to change the health care plans offered after December 31, 2014 for retirees who are Medicare-eligible and age 65 or older. The amendment did not have a material impact on the consolidated financial statements.

Components of the Net Periodic Benefit Expense (Income)

	Pension Plans		
$ in millions	**2016**	2015	2014
Service cost, benefits earned during the period	**$ 17**	$ 19	$ 20
Interest cost on projected benefit obligation	**150**	152	154
Expected return on plan assets	**(122)**	(120)	(110)
Net amortization of prior service credit	**—**	(1)	—
Net amortization of actuarial loss	**12**	26	22
Curtailment loss	**—**	—	3
Settlement loss	**—**	2	2
Net periodic benefit expense (income)	**$ 57**	$ 78	$ 91

	Other Postretirement Plan		
$ in millions	**2016**	2015	2014
Service cost, benefits earned during the period	**$ 1**	$ 1	$ 2
Interest cost on projected benefit obligation	**4**	3	5
Net amortization of prior service credit	**(17)**	(18)	(14)
Net periodic benefit expense (income)	**$ (12)**	$ (14)	$ (7)

Pre-tax Amounts Recognized in Other Comprehensive Income (Loss)

	Pension Plans		
$ in millions	**2016**	2015	2014
Net gain (loss)	**$ (149)**	$ 212	$ (18)
Prior service credit (cost)	**1**	1	(2)
Amortization of prior service credit	**—**	(1)	—
Amortization of net loss	**12**	28	27
Total	**$ (136)**	$ 240	$ 7

	Other Postretirement Plan		
$ in millions	**2016**	2015	2014
Net gain (loss)	**$ (2)**	$ (3)	$ (9)
Prior service credit (cost)	**—**	(9)	64
Amortization of prior service credit	**(17)**	(18)	(14)
Total	**$ (19)**	$ (30)	$ 41

The Firm generally amortizes into net periodic benefit expense (income) the unrecognized net gains and losses exceeding 10% of the greater of the projected benefit obligation or the market-related value of plan assets. The amortization of the unrecognized net gains and losses is generally over the future service of active participants. The U.S. Qualified Plan and, effective October 1, 2014, the SEREP amortize the unrecognized net gains and losses over the average life expectancy of participants.

Weighted Average Assumptions Used to Determine Net Periodic Benefit Expense (Income)

	Pension Plans		
	2016	2015	2014
Discount rate	**4.27%**	3.86%	4.74%
Expected long-term rate of return on plan assets	**3.61%**	3.59%	3.75%
Rate of future compensation increases	**3.19%**	2.85%	1.06%

	Other Postretirement Plan		
	2016	2015	2014
Discount rate	**4.13%**	3.77%	3.77%

The accounting for pension and postretirement plans involves certain assumptions and estimates. The expected long-term rate of return on plan assets is a long-term assumption that generally is expected to remain the same from one year to the next unless there is a significant change in the target asset allocation, the fees and expenses paid by the plan or market conditions. The expected long-term rate of return for the U.S. Qualified Plan was estimated by computing a weighted average of the underlying long-term expected returns based on the investment managers' target allocations. The U.S. Qualified Plan is primarily invested in fixed income securities and related derivative instruments, including interest rate swap contracts. This asset allocation is expected to help protect the plan's funded status and limit volatility of the Firm's contributions. Total U.S. Qualified Plan investment portfolio performance is assessed by comparing actual investment performance to changes in the estimated present value of the U.S. Qualified Plan's benefit obligation.

Benefit Obligation and Funded Status

Rollforward of the Benefit Obligation and Fair Value of Plan Assets

	Pension Plans		Other Postretirement Plan	
$ in millions	**2016**	2015	**2016**	2015
Rollforward of benefit obligation				
Benefit obligation at beginning of year	**$3,604**	$4,007	**$ 87**	$ 75
Service cost	**17**	19	**1**	1
Interest cost	**150**	152	**4**	3
Actuarial loss (gain)[1]	**159**	(267)	**—**	4
Plan amendments	**(1)**	(1)	**—**	9
Plan curtailments	**—**	(9)	**—**	—
Plan settlements	**(19)**	(29)	**—**	—
Change in mortality assumptions[2]	**64**	(46)	**1**	(1)
Benefits paid	**(219)**	(194)	**(5)**	(4)
Other, including foreign currency exchange rate changes	**(44)**	(28)	**—**	—
Benefit obligation at end of year	**$3,711**	$3,604	**$ 88**	$ 87
Rollforward of fair value of plan assets				
Fair value of plan assets at beginning of year	**$3,497**	$3,705	**$ —**	$ —
Actual return on plan assets	**196**	9	**—**	—
Employer contributions	**38**	31	**5**	4
Benefits paid	**(219)**	(194)	**(5)**	(4)
Plan settlements	**(19)**	(29)	**—**	—
Other, including foreign currency exchange rate changes	**(62)**	(25)	**—**	—
Fair value of plan assets at end of year	**$3,431**	$3,497	**$ —**	$ —
Funded (unfunded) status	**$ (280)**	$ (107)	**$ (88)**	$ (87)

1. Amounts primarily reflect the impact of year-over-year discount rate fluctuations.
2. Amounts represent adoption of new mortality tables published by the Society of Actuaries.

Summary of Funded Status

	Pension Plans		Other Postretirement Plan	
$ in millions	**At December 31, 2016**	At December 31, 2015	**At December 31, 2016**	At December 31, 2015
Amounts recognized in the consolidated balance sheets				
Assets	**$ 230**	$ 382	**$ —**	$ —
Liabilities	**(510)**	(489)	**(88)**	(87)
Net amount recognized	**$ (280)**	$ (107)	**$ (88)**	$ (87)
Amounts recognized in accumulated other comprehensive income (loss)				
Prior service credit (cost)	**$ 2**	$ 1	**$ 17**	$ 34
Net gain (loss)	**(763)**	(626)	**—**	2
Net gain (loss) recognized	**$ (761)**	$ (625)	**$ 17**	$ 36

The estimated prior service credit that will be amortized from accumulated other comprehensive income (loss) into net periodic benefit expense over 2017 is approximately $17 million for the other postretirement plan. The estimated net loss that will be amortized from accumulated other comprehensive income (loss) into net periodic benefit expense (income) over 2017 is approximately $17 million for defined benefit pension plans.

The accumulated benefit obligation for all defined benefit pension plans was $3,696 million and $3,592 million at December 31, 2016 and December 31, 2015, respectively.

Pension Plans with Projected Benefit Obligation in Excess of the Fair Value of Plan Assets

$ in millions	**At December 31, 2016**	At December 31, 2015
Projected benefit obligation	**$ 566**	$ 543
Fair value of plan assets	**56**	54

Pension Plans with Accumulated Benefit Obligation in Excess of the Fair Value of Plan Assets

$ in millions	**At December 31, 2016**	At December 31, 2015
Accumulated benefit obligation	**$ 552**	$ 531
Fair value of plan assets	**56**	54

Weighted Average Assumptions Used to Determine Benefit Obligation

	Pension Plans		Other Postretirement Plan	
	At December 31, 2016	At December 31, 2015	**At December 31, 2016**	At December 31, 2015
Discount rate	**4.01%**	4.27%	**4.01%**	4.13%
Rate of future compensation increase	**3.10%**	3.19%	**N/A**	N/A

N/A—Not Applicable

The discount rates used to determine the benefit obligation for the U.S. pension and postretirement plans were selected by the Firm, in consultation with its independent actuaries, using a pension discount yield curve based on the characteristics of the plans, each determined independently. The pension discount yield curve represents spot discount yields based on duration implicit in a representative broad-based Aa rated corporate bond universe of high-quality fixed income investments. For all non-U.S. pension plans, the Firm set the assumed discount rates based on the nature of liabilities, local economic environments and available bond indices.

Assumed Health Care Cost Trend Rates Used to Determine the U.S. Postretirement Benefit Obligation

	At December 31, 2016	At December 31, 2015
Health care cost trend rate assumed for next year		
Medical	**5.96%**	6.25%
Prescription	**9.32%**	11.00%
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	**4.50%**	4.50%
Year that the rate reaches the ultimate trend rate	**2038**	2038

Assumed health care cost trend rates can have a significant effect on the amounts reported for the Firm's postretirement benefit plan.

Effect of Changes in Assumed Health Care Cost Trend Rates

$ in millions	One-Percentage Point Increase	One-Percentage Point Decrease
Total 2016 postretirement service and interest cost	**N/M**	**N/M**
December 31, 2016 postretirement benefit obligation	**$ 6**	**$ (5)**

N/M—Not Meaningful

Plan Assets

The U.S. Qualified Plan assets represent 88% of the Firm's total pension plan assets. The U.S. Qualified Plan uses a combination of active and risk-controlled fixed income investment strategies. The fixed income asset allocation consists primarily of fixed income securities and related derivative instruments designed to approximate the expected cash flows of the plan's liabilities in order to help reduce plan exposure to interest rate variation and to better align assets with the obligation. The longer-duration fixed income allocation is expected to help protect the plan's funded status and maintain the stability of plan contributions over the long run.

Derivative instruments are permitted in the U.S. Qualified Plan's investment portfolio only to the extent that they comply with all of the plan's investment policy guidelines and are consistent with the plan's risk and return objectives. In addition, any investment in derivatives must meet the following conditions:

- May be used only if derivative instruments are deemed by the investment manager to be more attractive than a similar direct investment in the underlying cash market or if the vehicle is being used to manage risk of the portfolio.
- May not be used in a speculative manner or to leverage the portfolio under any circumstances.
- May not be used as short-term trading vehicles. The investment philosophy of the U.S. Qualified Plan is that investment activity is undertaken for long-term investment rather than short-term trading.
- May be used in the management of the U.S. Qualified Plan's portfolio only when the derivative instruments' possible effects can be quantified, shown to enhance the risk-return profile of the portfolio, and reported in a meaningful and understandable manner.

As a fundamental operating principle, any restrictions on the underlying assets apply to a respective derivative product. This includes percentage allocations and credit quality. Derivatives are used solely for the purpose of enhancing investment in the underlying assets and not to circumvent portfolio restrictions.

Plan assets are measured at fair value using valuation techniques that are consistent with the valuation techniques applied to the Firm's major categories of assets and liabilities as described in Notes 2 and 3. OTC derivative contracts consist of investments in interest rate swaps.

Other investments consist of pledged insurance annuity contracts held by non-U.S.-based plans. The pledged insurance annuity contracts are valued based on the premium reserve of the insurer for a guarantee that the insurer has given to the employee benefit plan that approximates fair value. The pledged insurance annuity contracts are categorized in Level 3 of the fair value hierarchy.

Commingled trust funds are privately offered funds that are regulated, supervised and subject to periodic examination by a U.S. federal or state agency and available to institutional clients. The trust must be maintained for the collective investment or reinvestment of assets contributed to it from U.S. tax-qualified employee benefit plans maintained by more than one employer or controlled group of corporations. The sponsor of the commingled trust funds values the funds based on the fair value of the underlying securities. The underlying securities of the commingled trust funds held by the U.S. Qualified Plan consist mainly of long-duration fixed income instruments. Commingled trust funds are redeemable at NAV at the measurement date or in the near future.

Some non-U.S.-based plans hold foreign funds that consist of investments in fixed income funds, target cash flow funds and liquidity funds. Fixed income funds invest in individual securities quoted on a recognized stock exchange or traded in a regulated market. Certain fixed income funds aim to produce returns consistent with certain Financial Times Stock Exchange indexes. Target cash flow funds are designed to provide a series of fixed annual cash flows achieved by investing in government bonds and derivatives. Liquidity funds place a high priority on capital preservation, stable value and a high liquidity of assets. Foreign funds are readily redeemable at NAV.

The Firm generally considers the NAV of commingled trust funds and foreign funds provided by the fund manager to be the best estimate of fair value.

Fair Value of Plan Assets and Liabilities

$ in millions	At December 31, 2016			
	Level 1	Level 2	Level 3	Total
Assets				
Investments:				
Cash and cash equivalents[1]	$ 55	$ —	$ —	$ 55
U.S. government and agency securities:				
U.S. Treasury securities	1,493	—	—	1,493
U.S. agency securities	—	423	—	423
Total U.S. government and agency securities	1,493	423	—	1,916
Corporate and other debt:				
Collateralized debt obligation	—	13	—	13
Total corporate and other debt	—	13	—	13
Derivative contracts	—	159	—	159
Derivative-related cash collateral receivable	—	76	—	76
Other investments	—	—	38	38
Total assets[2]	$ 1,548	$ 671	$ 38	$ 2,257
Liabilities				
Derivative contracts	$ —	$ 225	$ —	$ 225
Total liabilities	$ —	$ 225	$ —	$ 225

$ in millions	At December 31, 2015			
	Level 1	Level 2	Level 3	Total
Assets				
Investments:				
Cash and cash equivalents[1]	$ 28	$ —	$ —	$ 28
U.S. government and agency securities:				
U.S. Treasury securities	1,398	—	—	1,398
U.S. agency securities	—	263	—	263
Total U.S. government and agency securities	1,398	263	—	1,661
Corporate and other debt:				
State and municipal securities	—	2	—	2
Collateralized debt obligation	—	22	—	22
Total corporate and other debt	—	24	—	24
Derivative contracts	—	224	—	224
Other investments	—	—	35	35
Receivables:				
Other receivables[1]	—	54	—	54
Total assets[2]	$ 1,426	$ 565	$ 35	$ 2,026
Liabilities				
Derivative contracts	$ —	$ 65	$ —	$ 65
Other liabilities[1]	—	100	—	100
Total liabilities	$ —	$ 165	$ —	$ 165

1. Cash and cash equivalents, other receivables and other liabilities are valued at their carrying value, which approximates fair value.
2. Amounts exclude Commingled trust funds and Foreign funds measured at fair value using the NAV per share, which are not classified in the fair value hierarchy. Commingled trust funds consist of investments in fixed income funds and money market funds of $999 million and $86 million, respectively, at December 31, 2016 and $1,239 million and $59 million, respectively, at December 31, 2015. Foreign funds include investments in fixed income funds, liquidity funds and targeted cash flow funds of $111 million, $9 million and $194 million, respectively, at December 31, 2016 and $149 million, $98 million and $91 million, respectively, at December 31, 2015. Fund amounts as of December 31, 2015 have been excluded from the table to conform to the current presentation.

There were no transfers between levels during 2016 and 2015.

Changes in Level 3 Pension Assets

$ in millions	2016	2015
Balance at beginning of period	$ 35	$ 36
Actual return on plan assets related to assets held at end of period	—	(4)
Purchases, sales, other settlements and issuances, net	3	3
Balance at end of period	$ 38	$ 35

Expected Contributions

The Firm's policy is to fund at least the amount sufficient to meet minimum funding requirements under applicable employee benefit and tax laws. At December 31, 2016, the Firm expected to contribute approximately $50 million to its pension and postretirement benefit plans in 2017 based upon the plans' current funded status and expected asset return assumptions for 2017.

Expected Future Benefit Payments

	At December 31, 2016	
$ in millions	Pension Plans	Other Postretirement Plan
2017	$ 149	$ 5
2018	135	6
2019	139	6
2020	145	6
2021	153	7
2022-2026	867	31

Morgan Stanley 401(k) Plan

U.S. employees meeting certain eligibility requirements may participate in the Morgan Stanley 401(k) Plan. Eligible U.S. employees receive discretionary 401(k) matching cash contributions as determined annually by the Firm. For 2016 and 2015, the Firm made a $1 for $1 Firm match up to 4% of eligible pay, up to the Internal Revenue Service ("IRS") limit. Matching contributions for 2016 and 2015 were invested according to each participant's investment direction. Eligible U.S. employees with eligible pay less than or equal to $100,000 also received a fixed contribution under the 401(k) Plan that equaled 2% of eligible pay. Transition contributions are allocated to certain eligible employees. The Firm match, fixed contribution and transition contribution are included in the Firm's 401(k) expense. The Firm's 401(k) expense for 2016, 2015 and 2014 was $250 million, $255 million and $256 million, respectively.

Defined Contribution Pension Plans

The Firm maintains separate defined contribution pension plans that cover substantially all employees of certain non-U.S. subsidiaries. Under such plans, benefits are determined based on a fixed rate of base salary with certain vesting requirements. In 2016, 2015 and 2014, the Firm's expense related to these plans was $101 million, $111 million and $117 million, respectively.

20. Income Taxes

Provision for (Benefit from) Income Taxes

Components of Provision for (Benefit from) Income Taxes

$ in millions	2016	2015	2014
Current			
U.S. federal	$ 330	$ 239	$ (604)
U.S. state and local	221	144	260
Non-U.S.			
U.K.	196	247	88
Japan	28	19	114
Hong Kong	14	24	34
Other[1]	359	333	258
Total	$ 1,148	$ 1,006	$ 150
Deferred			
U.S. federal	$ 1,336	$ 1,031	$ (207)
U.S. state and local	74	43	(56)
Non-U.S.			
U.K.	56	(56)	(31)
Japan	127	58	56
Hong Kong	31	50	9
Other[1]	(46)	68	(11)
Total	$ 1,578	$ 1,194	$ (240)
Provision for (benefit from) income taxes from continuing operations	$ 2,726	$ 2,200	$ (90)
Provision for (benefit from) income taxes from discontinued operations	$ 1	$ (7)	$ (5)

1. For 2016, significant Non-U.S. other jurisdictions included total tax provisions of $125 million, $46 million and $38 million from Brazil, India and France, respectively. For 2015, significant Non-U.S. other jurisdictions included total tax provisions of $68 million, $62 million, $58 million, $45 million and $42 million from Mexico, Brazil, Netherlands, India and France, respectively. For 2014, significant Non-U.S. other jurisdictions included total tax provisions of $44 million, $38 million and $38 million from Brazil, India and Mexico, respectively.

The Firm recorded a net income tax provision (benefit) to Additional paid-in capital related to employee stock-based compensation transactions of $24 million, $(203) million and $(6) million in 2016, 2015 and 2014, respectively.

Effective Income Tax Rate

Reconciliation of the U.S. Federal Statutory Income Tax Rate to the Effective Income Tax Rate

	2016	2015	2014
U.S. federal statutory income tax rate	**35.0%**	35.0%	35.0%
U.S. state and local income taxes, net of U.S. federal income tax benefits	**2.2**	1.4	6.5
Domestic tax credits	**(2.5)**	(1.5)	(5.0)
Tax exempt income	**(0.1)**	(0.2)	(3.5)
Non-U.S. earnings			
Foreign tax rate differential	**(3.1)**	(8.7)	(22.5)
Change in reinvestment assertion	**—**	0.2	1.4
Change in foreign tax rates	**0.1**	—	—
Wealth Management legal entity restructuring	**—**	—	(38.7)
Non-deductible legal expenses	**—**	—	25.5
Other	**(0.8)**	(0.3)	(1.2)
Effective income tax rate	**30.8%**	25.9%	(2.5)%

The Firm's effective tax rate from continuing operations for 2016 included net discrete tax benefits of $68 million. These net discrete tax benefits were primarily related to the remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination, partially offset by adjustments for other tax matters. Excluding these net discrete tax benefits, the effective tax rate from continuing operations for 2016 would have been 31.6%.

The Firm's effective tax rate from continuing operations for 2015 included net discrete tax benefits of $564 million. These net discrete tax benefits were 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. Excluding these net discrete tax benefits, the effective tax rate from continuing operations for 2015 would have been 32.5%.

The Firm's effective tax rate from continuing operations for 2014 included net discrete tax benefits of $2,226 million. These net discrete tax benefits consisted of: $1,380 million primarily due to the release of a deferred tax liability, previously established as part of the acquisition of Smith Barney in 2009 through a charge to Additional paid-in capital, as a result of the legal entity restructuring that included a change in tax status of Morgan Stanley Smith Barney Holdings LLC from a partnership to a corporation; $609 million principally associated with remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination; and $237 million primarily associated with the repatriation of non-U.S. earnings at a cost lower than originally estimated. Excluding these net discrete tax benefits, the effective tax rate from continuing operations for 2014 would have been 59.5%, which is primarily attributable to approximately $900 million of tax provision from non-deductible expenses for litigation and regulatory matters.

Deferred Tax Assets and Liabilities

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when such differences are expected to reverse.

Deferred Tax Assets and Liabilities

$ in millions	At December 31, 2016	At December 31, 2015
Gross deferred tax assets		
Tax credits and loss carryforwards	**$ 731**	$ 1,987
Employee compensation and benefit plans	**3,504**	3,514
Valuation and liability allowances	**656**	846
Valuation of inventory, investments and receivables	**1,062**	738
Other	**21**	35
Total deferred tax assets	**5,974**	7,120
Deferred tax assets valuation allowance	**164**	139
Deferred tax assets after valuation allowance	**$ 5,810**	$ 6,981
Gross deferred tax liabilities		
Non-U.S. operations	**$ 270**	$ 269
Fixed assets	**773**	716
Total deferred tax liabilities	**$ 1,043**	$ 985
Net deferred tax assets	**$ 4,767**	$ 5,996

The Firm had tax credit carryforwards for which a related deferred tax asset of $465 million and $1,647 million was recorded at December 31, 2016 and December 31, 2015, respectively. These carryforwards are subject to annual limitations on utilization, with the earliest expiration beginning in 2030, if not utilized.

The Firm believes the recognized net deferred tax asset (after valuation allowance) of $4,767 million at December 31, 2016 is more likely than not to be realized based on expectations as to future taxable income in the jurisdictions in which it operates.

The Firm had $12,006 million and $10,209 million of cumulative earnings at December 31, 2016 and December 31, 2015, respectively, attributable to foreign subsidiaries for which no U.S. provision has been recorded for income tax

that could occur upon repatriation. Accordingly, $1,111 million and $893 million of deferred tax liabilities were not recorded with respect to these earnings at December 31, 2016 and December 31, 2015, respectively. The increase in indefinitely reinvested earnings is attributable to regulatory and other capital requirements in foreign jurisdictions.

Unrecognized Tax Benefits

The total amount of unrecognized tax benefits was approximately $1.9 billion, $1.8 billion and $2.2 billion at December 31, 2016, December 31, 2015 and December 31, 2014, respectively. Of this total, approximately $1.1 billion, $1.1 billion and $1.0 billion, respectively (net of federal benefit of state issues, competent authority and foreign tax credit offsets), represent the amount of unrecognized tax benefits that, if recognized, would favorably affect the effective tax rate in future periods.

Interest and penalties related to unrecognized tax benefits are classified as provision for income taxes. The Firm recognized $28 million, $18 million and $(35) million of interest expense (benefit) (net of federal and state income tax benefits) in the consolidated income statements for 2016, 2015 and 2014, respectively. Interest expense accrued at December 31, 2016, December 31, 2015 and December 31, 2014 was approximately $150 million, $122 million and $258 million, respectively, net of federal and state income tax benefits. Penalties related to unrecognized tax benefits for the years mentioned above were immaterial.

Rollforward of Unrecognized Tax Benefits

$ in millions	Unrecognized Tax Benefits
Balance at December 31, 2013	$ 4,096
Increase based on tax positions related to the current period	135
Increase based on tax positions related to prior periods	100
Decrease based on tax positions related to prior periods	(2,080)
Decrease related to settlements with taxing authorities	(19)
Decrease related to a lapse of applicable statute of limitations	(4)
Balance at December 31, 2014	$ 2,228
Increase based on tax positions related to the current period	$ 230
Increase based on tax positions related to prior periods	114
Decrease based on tax positions related to prior periods	(753)
Decrease related to settlements with taxing authorities	(7)
Decrease related to a lapse of applicable statute of limitations	(8)
Balance at December 31, 2015	$ 1,804
Increase based on tax positions related to the current period	$ 172
Increase based on tax positions related to prior periods	14
Decrease based on tax positions related to prior periods	(134)
Decrease related to settlements with taxing authorities	—
Decrease related to a lapse of applicable statute of limitations	(5)
Balance at December 31, 2016	**$ 1,851**

Tax Authority Examinations

The Firm is under continuous examination by the IRS and other tax authorities in certain countries, such as Japan and the 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 2007-2013, respectively. The Firm believes that the resolution of these tax matters will not have a material effect on the consolidated balance sheets, although a resolution could have a material impact on the consolidated income statements for a particular future period and 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 2017, 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 new information is available or when an event occurs necessitating a change.

The Firm periodically evaluates the likelihood of assessments in each taxing jurisdiction resulting from the expiration of the applicable statute of limitations or new information regarding the status of current and subsequent years' examinations. As part of the Firm's periodic review, federal and state unrecognized tax benefits were released or remeasured.

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.

Earliest Tax Year Subject to Examination in Major Tax Jurisdictions

Jurisdiction	Tax Year
U.S.	1999
New York State and New York City	2007
Hong Kong	2010
U.K.	2010
Japan	2013

Income from Continuing Operations before Income Tax Expense (Benefit)

$ in millions	**2016**	2015	2014
U.S.	**$ 5,694**	$ 5,360	$ 1,805
Non-U.S.[1]	**3,154**	3,135	1,786
	$ 8,848	$ 8,495	$ 3,591

1. Non-U.S. income is defined as income generated from operations located outside the U.S.

21. Segment and Geographic Information

Segment Information

The Firm structures its segments primarily based upon the nature of the financial products and services provided to customers and its management organization. The Firm provides a wide range of financial products and services to its customers in each of the business segments: Institutional Securities, Wealth Management and Investment Management. For a further discussion of the business segments, see Note 1.

Revenues and expenses directly associated with each respective business segment are included in determining its operating results. Other revenues and expenses that are not directly attributable to a particular business segment are allocated based upon the Firm's allocation methodologies, generally based on each business segment's respective net revenues, non-interest expenses or other relevant measures.

As a result of revenues and expenses from transactions with other operating segments being treated as transactions with external parties, the Firm includes an Intersegment Eliminations category to reconcile the business segment results to the consolidated results.

Selected Financial Information by Business Segment

$ in millions	2016				
	Institutional Securities[1, 2]	Wealth Management[2]	Investment Management[3]	Intersegment Eliminations	Total
Total non-interest revenues	**$ 17,294**	**$ 11,821**	**$ 2,108**	**$ (290)**	**$ 30,933**
Interest income	**4,005**	**3,888**	**5**	**(882)**	**7,016**
Interest expense	**3,840**	**359**	**1**	**(882)**	**3,318**
Net interest	**165**	**3,529**	**4**	**—**	**3,698**
Net revenues	**$ 17,459**	**$ 15,350**	**$ 2,112**	**$ (290)**	**$ 34,631**
Income from continuing operations before income taxes	**$ 5,123**	**$ 3,437**	**$ 287**	**$ 1**	**$ 8,848**
Provision for income taxes[4]	**1,318**	**1,333**	**75**	**—**	**2,726**
Income from continuing operations	**3,805**	**2,104**	**212**	**1**	**6,122**
Income (loss) from discontinued operations, net of income taxes	**(1)**	**—**	**2**	**—**	**1**
Net income	**3,804**	**2,104**	**214**	**1**	**6,123**
Net income (loss) applicable to noncontrolling interests	**155**	**—**	**(11)**	**—**	**144**
Net income applicable to Morgan Stanley	**$ 3,649**	**$ 2,104**	**$ 225**	**$ 1**	**$ 5,979**

$ in millions	2015				
	Institutional Securities[1]	Wealth Management	Investment Management[3]	Intersegment Eliminations	Total
Total non-interest revenues	$ 17,800	$ 12,144	$ 2,331	$ (213)	$32,062
Interest income	3,190	3,105	2	(462)	5,835
Interest expense	3,037	149	18	(462)	2,742
Net interest	153	2,956	(16)	—	3,093
Net revenues	$ 17,953	$ 15,100	$ 2,315	$ (213)	$35,155
Income from continuing operations before income taxes	$ 4,671	$ 3,332	$ 492	$ —	$ 8,495
Provision for income taxes[4]	825	1,247	128	—	2,200
Income from continuing operations	3,846	2,085	364	—	6,295
Income (loss) from discontinued operations, net of income taxes	(17)	—	1	—	(16)
Net income	3,829	2,085	365	—	6,279
Net income applicable to noncontrolling interests	133	—	19	—	152
Net income applicable to Morgan Stanley	$ 3,696	$ 2,085	$ 346	$ —	$ 6,127

$ in millions	2014				
	Institutional Securities[1, 5]	Wealth Management	Investment Management[3]	Intersegment Eliminations	Total
Total non-interest revenues[6]	$ 17,463	$ 12,549	$ 2,728	$ (200)	$32,540
Interest income	3,389	2,516	2	(494)	5,413
Interest expense	3,981	177	18	(498)	3,678
Net interest	(592)	2,339	(16)	4	1,735
Net revenues	$ 16,871	$ 14,888	$ 2,712	$ (196)	$34,275
Income (loss) from continuing operations before income taxes	$ (58)	$ 2,985	$ 664	$ —	$ 3,591
Provision for (benefit from) income taxes[4]	(90)	(207)	207	—	(90)
Income from continuing operations	32	3,192	457	—	3,681
Income (loss) from discontinued operations, net of income taxes	(19)	—	5	—	(14)
Net income	13	3,192	462	—	3,667
Net income applicable to noncontrolling interests	109	—	91	—	200
Net income (loss) applicable to Morgan Stanley	$ (96)	$ 3,192	$ 371	$ —	$ 3,467

1. In 2016, 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) are recorded within OCI and, when realized, in Trading revenues. In 2015 and in 2014, the realized and unrealized DVA gains (losses) are recorded in Trading revenues. See Notes 2 and 15 for further information.
2. Effective July 1, 2016, the Institutional Securities and Wealth Management business segments entered into an agreement, whereby Institutional Securities assumed management of Wealth Management's fixed income client-driven trading activities and employees. Institutional Securities now pays fees to Wealth Management based on distribution activity (collectively, the "Fixed Income Integration"). Prior periods have not been recast for this new intersegment agreement due to immateriality.

3. The Firm waives a portion of its fees from certain registered money market funds that comply with the requirements of Rule 2a-7 of the Investment Company Act of 1940. These fee waivers resulted in a reduction of fees of approximately $91 million for 2016, $197 million for 2015 and $195 million for 2014.
4. The Firm's effective tax rate from continuing operations included net discrete tax benefits of $68 million in 2016, primarily within Institutional Securities. The Firm's effective tax rate from continuing operations included net discrete tax benefits of $564 million in 2015 within Institutional Securities. The Firm's effective tax rate from continuing operations included net discrete tax benefits of $1,390 million and $839 million in 2014 within Wealth Management and Institutional Securities business segments, respectively (see Note 20).
5. The Institutional Securities business segment Net loss in 2014 was primarily driven by higher legal expenses (see Note 12).
6. In September 2014, the Firm sold a retail property space resulting in a gain on sale of $141 million (within Institutional Securities $84 million, Wealth Management $40 million and Investment Management $17 million), which was included within Other revenues on the consolidated income statements.

Total Assets by Business Segment

$ in millions	**At December 31, 2016**	At December 31, 2015
Institutional Securities	**$ 629,149**	$ 602,714
Wealth Management	**181,135**	179,708
Investment Management[1]	**4,665**	5,043
Total[2]	**$ 814,949**	$ 787,465

1. During 2015, the Firm deconsolidated approximately $244 million in net assets previously attributable to nonredeemable noncontrolling interests that were primarily related to or associated with real estate funds sponsored by the Firm (see Note 13).
2. Corporate assets have been fully allocated to the business segments.

Geographic Information

The Firm operates in both U.S. and non-U.S. markets. The Firm's non-U.S. business activities are principally conducted and managed through EMEA and Asia-Pacific locations. The net revenues disclosed in the following table reflect the regional view of the Firm's consolidated net revenues on a managed basis, based on the following methodology:

Institutional Securities: advisory and equity underwriting—client location, debt underwriting—revenue recording location, sales and trading—trading desk location.

Wealth Management: Wealth Management representatives operate in the Americas.

Investment Management: client location, except certain closed-end funds, which are based on asset location.

Net Revenues by Region

$ in millions	**2016**	2015	2014
Americas	**$ 25,487**	$ 25,080	$ 25,140
EMEA	**4,994**	5,353	4,772
Asia-Pacific	**4,150**	4,722	4,363
Net revenues	**$ 34,631**	$ 35,155	$ 34,275

Total Assets by Region

$ in millions	**At December 31, 2016**	At December 31, 2015
Americas	**$ 581,750**	$ 569,369
EMEA	**158,819**	146,177
Asia-Pacific	**74,380**	71,919
Total	**$ 814,949**	$ 787,465

22. Parent Company

Parent Company Only—Condensed Income Statements and Comprehensive Income Statements

$ in millions	**2016**	2015	2014
Revenues			
Dividends from non-bank subsidiaries	**$ 2,448**	$ 4,942	$ 2,641
Trading	**96**	574	601
Investments	**—**	—	(1)
Other	**38**	53	10
Total non-interest revenues	**2,582**	5,569	3,251
Interest income	**3,008**	3,055	2,594
Interest expense	**4,036**	4,073	3,970
Net interest	**(1,028)**	(1,018)	(1,376)
Net revenues	**1,554**	4,551	1,875
Non-interest expenses			
Non-interest expenses	**126**	(195)	214
Income before income taxes	**1,428**	4,746	1,661
Provision for (benefit from) income taxes	**(383)**	(83)	(423)
Net income before undistributed gain of subsidiaries	**1,811**	4,829	2,084
Undistributed gain of subsidiaries	**4,168**	1,298	1,383
Net income	**5,979**	6,127	3,467
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	**(23)**	(300)	(397)
Change in net unrealized gains (losses) on AFS securities	**(269)**	(246)	209
Pensions, postretirement and other	**(100)**	138	33
Change in net DVA	**(283)**	—	—
Comprehensive income	**$ 5,304**	$ 5,719	$ 3,312
Net income	**$ 5,979**	$ 6,127	$ 3,467
Preferred stock dividends and other	**471**	456	315
Earnings applicable to Morgan Stanley common shareholders	**$ 5,508**	$ 5,671	$ 3,152

Parent Company Only—Condensed Balance Sheets

$ in millions, except share data	At December 31, 2016	At December 31, 2015
Assets		
Cash and due from banks	$ **119**	$ 5,169
Deposits with banking subsidiaries	**3,600**	4,311
Interest bearing deposits with banks	**—**	2,421
Trading assets at fair value	**139**	354
Securities purchased under agreement to resell with affiliates	**57,906**	47,060
Advances to subsidiaries:		
Bank and bank holding company	**28,186**	18,380
Non-bank	**95,684**	106,192
Equity investments in subsidiaries:		
Bank and bank holding company	**34,329**	25,787
Non-bank	**31,246**	34,927
Other assets	**4,613**	6,259
Total assets	$ **255,822**	$ 250,860
Liabilities		
Short-term borrowings	$ **1**	$ 40
Trading liabilities at fair value	**49**	138
Payables to subsidiaries	**26,957**	29,220
Other liabilities and accrued expenses	**2,040**	2,189
Long-term borrowings	**150,725**	144,091
Total liabilities	**179,772**	175,678
Commitments and contingent liabilities (see Note 12)		
Equity		
Preferred stock (see Note 15)	**7,520**	7,520
Common stock, $0.01 par value: Shares authorized: **3,500,000,000**; Shares issued: **2,038,893,979**; Shares outstanding: **1,852,481,601** and 1,920,024,027	**20**	20
Additional paid-in capital	**23,271**	24,153
Retained earnings	**53,679**	49,204
Employee stock trusts	**2,851**	2,409
Accumulated other comprehensive income (loss)	**(2,643)**	(1,656)
Common stock held in treasury at cost, $0.01 par value (**186,412,378** and 118,869,952)	**(5,797)**	(4,059)
Common stock issued to employee stock trusts	**(2,851)**	(2,409)
Total shareholders' equity	**76,050**	75,182
Total liabilities and equity	$ **255,822**	$ 250,860

Parent Company Only—Condensed Cash Flow Statements

$ in millions	**2016**	2015	2014
Cash flows from operating activities			
Net income	$ **5,979**	$ 6,127	$ 3,467
Adjustments to reconcile net income to net cash provided by (used for) operating activities:			
Undistributed gain of subsidiaries	**(4,168)**	(1,298)	(1,383)
Other operating activities	**1,367**	1,084	1,176
Changes in assets and liabilities	**(212)**	(3,195)	2,305
Net cash provided by operating activities	**2,966**	2,718	5,565
Cash flows from investing activities			
Advances to and investments in subsidiaries	**(2,502)**	1,364	(7,790)
Securities purchased under agreement to resell with affiliates	**(10,846)**	(5,459)	(7,853)
Net cash used for investing activities	**(13,348)**	(4,095)	(15,643)
Cash flows from financing activities			
Net proceeds from (payments for) short-term borrowings	**(39)**	(655)	189
Proceeds from:			
Excess tax benefits associated with stock-based awards	**61**	211	101
Issuance of preferred stock, net of issuance costs	**—**	1,493	2,782
Issuance of long-term borrowings	**32,795**	28,575	33,031
Payments for:			
Long-term borrowings	**(24,754)**	(22,803)	(28,917)
Repurchases of common stock and employee tax withholdings	**(3,933)**	(2,773)	(1,458)
Cash dividends	**(1,746)**	(1,455)	(904)
Other financing activities	**66**	—	—
Net cash provided by financing activities	**2,450**	2,593	4,824
Effect of exchange rate changes on cash and cash equivalents	**(250)**	(65)	(208)
Net increase (decrease) in cash and cash equivalents	**(8,182)**	1,151	(5,462)
Cash and cash equivalents, at beginning of period	**11,901**	10,750	16,212
Cash and cash equivalents, at end of period	$ **3,719**	$ 11,901	$ 10,750
Cash and cash equivalents include:			
Cash and due from banks	$ **119**	$ 5,169	$ 5,068
Deposits with banking subsidiaries	**3,600**	4,311	4,556
Interest bearing deposits with banks	**—**	2,421	1,126
Cash and cash equivalents, at end of period	$ **3,719**	$ 11,901	$ 10,750

Supplemental Disclosure of Cash Flow Information

Cash payments for interest were **$3,650 million**, $3,959 million and $3,652 million for **2016**, 2015 and 2014, respectively.

Cash payments for income taxes, net of refunds, were **$201 million**, $255 million and $187 million for **2016**, 2015 and 2014, respectively.

Transactions with Subsidiaries

The Parent Company has transactions with its consolidated subsidiaries determined on an agreed-upon basis and has guaranteed certain unsecured lines of credit and contractual obligations on certain of its consolidated subsidiaries.

Parent Company's Long-Term Borrowings

$ in millions	**At December 31, 2016**	At December 31, 2015
Senior debt	**$ 140,422**	$ 130,817
Subordinated debt	**10,303**	13,274
Total	**$ 150,725**	$ 144,091

Guarantees

In the normal course of its business, the Parent Company guarantees certain of its subsidiaries' obligations under derivative and other financial arrangements. The Parent Company records Trading assets and Trading liabilities, which include derivative contracts, at fair value on its condensed balance sheets.

The Parent Company also, in the normal course of its business, provides standard indemnities to counterparties on behalf of its subsidiaries for taxes, including U.S. and foreign withholding taxes, on interest and other payments made on derivatives, securities and stock lending transactions, and certain annuity products. These indemnity payments could be required based on a change in the tax laws or change in interpretation of applicable tax rulings. Certain contracts contain provisions that enable the Parent Company to terminate the agreement upon the occurrence of such events. The maximum potential amount of future payments that the Parent Company could be required to make under these indemnifications cannot be estimated. The Parent Company has not recorded any contingent liability in its condensed financial statements for these indemnifications and believes that the occurrence of any events that would trigger payments under these contracts is remote.

The Parent Company has issued guarantees on behalf of its subsidiaries to various U.S. and non-U.S. exchanges and clearinghouses that trade and clear securities and/or futures contracts. Under these guarantee arrangements, the Parent Company may be required to pay the financial obligations of its subsidiaries related to business transacted on or with the exchanges and clearinghouses in the event of a subsidiary's default on its obligations to the exchange or the clearinghouse. The Parent Company has not recorded any contingent liability in its condensed financial statements for these arrangements and believes that any potential requirements to make payments under these arrangements are remote.

The Parent Company guarantees certain debt instruments and warrants issued by subsidiaries. The debt instruments and warrants totaled $11.5 billion and $9.1 billion at December 31, 2016 and December 31, 2015, respectively. In connection with subsidiary lease obligations, the Parent Company has issued guarantees to various lessors. The Parent Company had $1.1 billion of guarantees outstanding under subsidiary lease obligations, primarily in the U.K. at both December 31, 2016 and December 31, 2015.

Finance Subsidiary

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

Resolution and Recovery Planning

At December 31, 2016, Advances to subsidiaries that met certain criteria were pledged to certain subsidiaries.

23. Quarterly Results (Unaudited)

$ in millions, except per share data	2016 Quarter[1] First	Second	Third	Fourth[2, 3]	2015 Quarter[1] First[4]	Second	Third	Fourth[5]
Total non-interest revenues	**$6,893**	**$ 7,996**	**$7,906**	**$ 8,138**	$9,311	$ 9,045	$7,005	$ 6,701
Net interest	**899**	**913**	**1,003**	**883**	596	698	762	1,037
Net revenues	**7,792**	**8,909**	**8,909**	**9,021**	9,907	9,743	7,767	7,738
Total non-interest expenses	**6,054**	**6,426**	**6,528**	**6,775**	7,052	7,016	6,293	6,299
Income from continuing operations before income taxes	**1,738**	**2,483**	**2,381**	**2,246**	2,855	2,727	1,474	1,439
Provision for income taxes	**578**	**833**	**749**	**566**	387	894	423	496
Income from continuing operations	**1,160**	**1,650**	**1,632**	**1,680**	2,468	1,833	1,051	943
Income (loss) from discontinued operations	**(3)**	**(4)**	**8**	**—**	(5)	(2)	(2)	(7)
Net income	**1,157**	**1,646**	**1,640**	**1,680**	2,463	1,831	1,049	936
Net income applicable to noncontrolling interests	**23**	**64**	**43**	**14**	69	24	31	28
Net income applicable to Morgan Stanley	**$1,134**	**$ 1,582**	**$1,597**	**$ 1,666**	$2,394	$ 1,807	$1,018	$ 908
Preferred stock dividends and other	**79**	**157**	**79**	**156**	80	142	79	155
Earnings applicable to Morgan Stanley common shareholders	**$1,055**	**$ 1,425**	**$1,518**	**$ 1,510**	$2,314	$ 1,665	$ 939	$ 753
Earnings (loss) per basic common share[6]:								
Income from continuing operations	**$ 0.56**	**$ 0.77**	**$ 0.82**	**$ 0.84**	$ 1.21	$ 0.87	$ 0.49	$ 0.40
Income (loss) from discontinued operations	**—**	**(0.01)**	**0.01**	**—**	(0.01)	—	—	—
Earnings per basic common share	**$ 0.56**	**$ 0.76**	**$ 0.83**	**$ 0.84**	$ 1.20	$ 0.87	$ 0.49	$ 0.40
Earnings (loss) per diluted common share[6]:								
Income from continuing operations	**$ 0.55**	**$ 0.75**	**$ 0.80**	**$ 0.81**	$ 1.18	$ 0.85	$ 0.48	$ 0.39
Income (loss) from discontinued operations	**—**	**—**	**0.01**	**—**	—	—	—	—
Earnings per diluted common share	**$ 0.55**	**$ 0.75**	**$ 0.81**	**$ 0.81**	$ 1.18	$ 0.85	$ 0.48	$ 0.39
Dividends declared per common share[7]	**$ 0.15**	**$ 0.15**	**$ 0.20**	**$ 0.20**	$ 0.10	$ 0.15	$ 0.15	$ 0.15
Book value per common share	**$35.34**	**$ 36.29**	**$37.11**	**$ 36.99**	$33.80	$ 34.52	$34.97	$ 35.24

1. In 2016, 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) are recorded within OCI and, when realized, in Trading revenues. In 2015, the realized and unrealized DVA gains (losses) were recorded in Trading revenues.
2. The fourth quarter of 2016 included net discrete tax benefits of $135 million, primarily related to the remeasurement of reserves and related interest due to new information regarding the status of a multi-year tax authority examination (see Note 20).
3. During the fourth quarter of 2016, net revenues included losses of approximately $60 million on sales and markdowns of legacy limited partnership investments in third-party-sponsored funds within the Investment Management business segment. The fourth quarter of 2016 also included a $70 million provision within the Wealth Management business segment related to certain brokerage service reporting activities.
4. The first quarter of 2015 included net discrete tax benefits 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 the Firm's legal entity organization in the U.K. (see Note 20).
5. During the fourth quarter of 2015, the Firm incurred specific severance costs of approximately $155 million, which is included in Compensation and benefits expenses in the consolidated income statements, associated with the Firm's restructuring actions, which were recorded in the business segments, approximately, as follows: Institutional Securities: $125 million, Wealth Management: $20 million and Investment Management: $10 million.
6. Summation of the quarters' earnings per common share may not equal the annual amounts due to the averaging effect of the number of shares and share equivalents throughout the year.
7. Beginning with the dividend declared on July 20, 2016, the Firm increased the quarterly common stock dividend to $0.20 per share from $0.15 per share.

24. 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.

Financial Data Supplement (Unaudited)
Average Balances and Interest Rates and Net Interest Income

$ in millions	2016 Average Daily Balance	2016 Interest	2016 Average Rate	2015 Average Daily Balance	2015 Interest	2015 Average Rate	2014 Average Daily Balance	2014 Interest	2014 Average Rate
Assets									
Interest earning assets									
Investment securities[1]	**$ 78,562**	**$ 1,142**	**1.5%**	$ 67,993	$ 876	1.3%	$ 62,240	$ 613	1.0%
Loans[1]	**89,875**	**2,724**	**3.0**	75,110	2,163	2.9	53,567	1,690	3.2
Interest bearing deposits with banks[1]	**25,960**	**170**	**0.7**	26,650	108	0.4	32,226	109	0.3
Securities purchased under agreements to resell and Securities borrowed[2]:									
U.S.	**144,744**	**(172)**	**(0.1)**	172,481	(618)	(0.4)	177,444	(507)	(0.3)
Non-U.S.	**86,622**	**(202)**	**(0.2)**	80,490	58	0.1	77,139	209	0.3
Trading assets, net of Trading liabilities[3]:									
U.S.	**45,268**	**1,894**	**4.2**	33,589	1,874	5.6	43,040	1,643	3.8
Non-U.S.	**17,321**	**237**	**1.4**	25,612	388	1.5	29,933	466	1.6
Customer receivables and Other[4]:									
U.S.	**48,253**	**944**	**2.0**	53,887	857	1.6	73,244	655	0.9
Non-U.S.	**22,386**	**279**	**1.2**	26,836	129	0.5	18,635	535	2.9
Total	**$558,991**	**$ 7,016**	**1.3%**	$562,648	$ 5,835	1.0%	$567,468	$ 5,413	1.0%
Liabilities and Equity									
Interest bearing liabilities									
Deposits[1]	**$155,143**	**$ 83**	**0.1%**	$141,502	$ 78	0.1%	$119,819	$ 106	0.1%
Short-term and Long- term borrowings[1, 5]	**163,647**	**3,606**	**2.2**	159,781	3,497	2.2	153,813	3,613	2.3
Securities sold under agreements to repurchase and Securities loaned[6]:									
U.S.	**32,359**	**555**	**1.7**	51,115	437	0.9	86,063	548	0.6
Non-U.S.	**31,491**	**422**	**1.3**	34,306	587	1.7	50,843	668	1.3
Customer payables and Other[7]:									
U.S.	**112,159**	**(1,187)**	**(1.1)**	117,358	(1,529)	(1.3)	119,153	(1,366)	(1.1)
Non-U.S.	**72,475**	**(161)**	**(0.2)**	63,759	(328)	(0.5)	49,555	109	0.2
Total	**$567,274**	**$ 3,318**	**0.6**	$567,821	$ 2,742	0.5	$579,246	$ 3,678	0.6
Net interest income and net interest rate spread		**$ 3,698**	**0.7%**		$ 3,093	0.5%		$ 1,735	0.4%

1. Amounts include primarily U.S. balances.
2. Includes fees paid on Securities borrowed.
3. Trading assets, net of Trading liabilities exclude non-interest earning assets and non-interest bearing liabilities, such as equity securities.
4. Includes interest from customer receivables and cash deposited with clearing organizations or segregated under federal and other regulations or requirements.
5. 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 8).
6. Includes fees received on Securities loaned.
7. Includes fees received from prime brokerage customers for stock loan transactions incurred to cover customers' short positions.

Effect of Volume and Rate Changes on Net Interest Income

	2016 versus 2015			2015 versus 2014		
	Increase (decrease) due to change in:			Increase (decrease) due to change in:		
$ in millions	Volume	Rate	Net Change	Volume	Rate	Net Change
Interest earning assets						
Investment securities	**$ 136**	**$ 130**	**$ 266**	$ 57	$ 206	$ 263
Loans	**426**	**135**	**561**	651	(178)	473
Interest bearing deposits with banks	**(3)**	**65**	**62**	(31)	30	(1)
Securities purchased under agreements to resell and Securities borrowed:						
U.S.	**99**	**347**	**446**	14	(125)	(111)
Non-U.S.	**4**	**(264)**	**(260)**	9	(160)	(151)
Trading assets, net of Trading liabilities:						
U.S.	**652**	**(632)**	**20**	(361)	592	231
Non-U.S.	**(126)**	**(25)**	**(151)**	(67)	(11)	(78)
Customer receivables and Other:						
U.S.	**(90)**	**177**	**87**	(173)	375	202
Non-U.S.	**(21)**	**171**	**150**	235	(641)	(406)
Change in interest income	**$ 1,077**	**$ 104**	**$ 1,181**	$ 334	$ 88	$ 422
Interest bearing liabilities						
Deposits	**8**	**(3)**	**5**	26	(54)	(28)
Short-term and Long-term borrowings	**85**	**24**	**109**	170	(286)	(116)
Securities sold under agreements to repurchase and Securities loaned:						
U.S.	**(160)**	**278**	**118**	(223)	112	(111)
Non-U.S.	**(48)**	**(117)**	**(165)**	(217)	136	(81)
Customer payables and Other:						
U.S.	**64**	**278**	**342**	21	(184)	(163)
Non-U.S.	**(45)**	**212**	**167**	31	(468)	(437)
Change in interest expense	**$ (96)**	**$ 672**	**$ 576**	$ (192)	$ (744)	$ (936)
Change in net interest income	**$ 1,173**	**$ (568)**	**$ 605**	$ 526	$ 832	$ 1,358

Deposits

$ in millions	2016 Average Amount[1]	2016 Average Rate	2015 Average Amount[1]	2015 Average Rate	2014 Average Amount[1]	2014 Average Rate
Deposits[2]:						
Savings deposits	**$153,387**	**—%**	$139,169	0.1%	$118,086	0.1%
Time deposits	**1,756**	**2.4%**	2,333	0.6%	1,733	0.7%
Total	**$155,143**	**0.1%**	$141,502	0.6%	$119,819	0.1%

Average Deposits[1]

1. In 2016 and 2015, the Firm calculated its average balances based upon daily amounts. In 2014, the Firm calculated its average balances based upon weekly amounts, except where weekly balances were unavailable, month-end balances were used.
2. The Firm's deposits were primarily held in U.S. offices.

Ratios

	2016	2015	2014
Net income to average assets	**0.7%**	0.7%	0.4%
Return on average common equity[1]	**8.0%**	8.5%	4.8%
Return on total equity[2]	**7.8%**	8.3%	4.9%
Dividend payout ratio[3]	**24.0%**	19.0%	21.9%
Total average common equity to average assets	**8.5%**	8.0%	7.9%
Total average equity to average assets	**9.4%**	8.9%	8.5%

1. Percentage is based on net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity.
2. Percentage is based on net income as a percentage of average total equity.
3. Percentage is based on dividends declared per common share as a percentage of net income per diluted share.

Short-Term Borrowings

$ in millions	2016	2015	2014
Securities sold under agreements to repurchase			
Period-end balance	**$54,628**	$36,692	$ 69,949
Average balance[1, 2]	**47,376**	61,338	103,640
Maximum balance at any month-end	**57,655**	81,346	129,265
Weighted average interest rate during the period[3]	**0.8%**	0.9%	0.8%
Weighted average interest rate on period-end balance[4]	**(0.3)%**	0.8%	0.7%
Securities loaned			
Period-end balance	**$15,844**	$19,358	$ 25,219
Average balance[1, 2]	**16,474**	24,083	33,266
Maximum balance at any month-end	**18,851**	29,674	35,700
Weighted average interest rate during the period[3]	**3.7%**	2.1%	1.3%
Weighted average interest rate on period-end balance[3]	**3.6%**	2.4%	1.6%

1. In 2016 and 2015, the Firm calculated its average balances based upon daily amounts. In 2014, the Firm calculated its average balances based upon weekly amounts, except where weekly balances were unavailable, month-end balances were used.
2. At December 31, 2016, the differences between period end balances and average balances were not significant.
3. The weighted average interest rate was calculated using (a) interest expense incurred on all securities sold under agreements to repurchase and securities loaned transactions, whether or not such transactions were reported in the consolidated balance sheets and (b) net average or period-end balances when applicable. In addition, off-balance sheet securities-for-securities transactions were not included in the average or period-end balances.

Cross-Border Outstandings

Cross-border outstandings are based upon the Federal Financial Institutions Examination Council's ("FFIEC") regulatory guidelines for reporting cross-border risk. Claims include cash, customer and other receivables, securities purchased under agreements to resell, securities borrowed and cash trading instruments, but exclude commitments. Securities purchased under agreements to resell and securities borrowed are presented based on the domicile of the counterparty, without reduction for related securities collateral held. For information regarding the Firm's country risk exposure, see "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk—Country Risk Exposure" in Part II, Item 7A.

The following tables set forth cross-border outstandings for each country, excluding derivative exposure, in which cross-border outstandings exceed 1% of the Firm's consolidated assets or 20% of the Firm's total capital, whichever is less, at December 31, 2016, December 31, 2015 and December 31, 2014, respectively, in accordance with the FFIEC guidelines:

At December 31, 2016

$ in millions	Banks	Governments	Non-banking Financial Institutions	Other	Total
Country:					
Japan	**$12,478**	**$ 10,821**	**$ 32,618**	**$ 8,602**	**$64,519**
United Kingdom	**6,127**	**3,064**	**32,143**	**10,219**	**51,553**
France	**6,295**	**5,201**	**15,618**	**5,649**	**32,763**
Cayman Islands	**5**	**—**	**16,783**	**3,085**	**19,873**
Germany	**3,853**	**3,546**	**4,797**	**2,452**	**14,648**
Ireland	**457**	**11**	**7,045**	**4,444**	**11,957**
Canada	**3,566**	**850**	**2,562**	**2,832**	**9,810**

$ in millions	At December 31, 2015				
	Banks	Governments	Non-banking Financial Institutions	Other	Total
Country:					
United Kingdom	$ 9,556	$ 36	$ 53,039	$11,273	$73,904
Japan	6,784	9,903	18,432	9,076	44,195
France	15,321	18	7,217	6,087	28,643
Cayman Islands	349	—	19,582	4,848	24,779
Germany	5,089	6,516	4,240	6,158	22,003
Ireland	411	3	7,058	5,387	12,859
Switzerland	1,430	501	719	7,794	10,444
Canada	2,667	2,328	3,068	2,354	10,417
India	2,514	355	770	5,620	9,259
Singapore	2,185	5,980	36	770	8,971
Netherlands	669	—	4,244	3,542	8,455
China	1,999	1,134	914	4,431	8,478

$ in millions	At December 31, 2014				
	Banks	Governments	Non-banking Financial Institutions	Other	Total
Country:					
United Kingdom	$ 8,514	$ 948	$ 50,855	$9,170	$69,487
Cayman Islands	144	—	38,223	5,249	43,616
Japan	14,860	5,645	15,814	7,162	43,481
France	18,838	218	2,349	5,591	26,996
Germany	6,650	6,679	3,991	3,304	20,624
Singapore	2,117	7,761	18	788	10,684
China	1,738	3,259	64	5,546	10,607
Canada	2,741	286	4,261	2,694	9,982
South Korea	149	6,081	721	3,012	9,963
Ireland	304	20	5,793	3,203	9,320
Netherlands	910	—	3,509	3,890	8,309

For cross-border exposure including derivative contracts that exceeds 0.75% but does not exceed 1% of the Firm's consolidated assets, South Korea, Singapore and Brazil had a total cross-border exposure of $22,927 million at December 31, 2016; South Korea, Spain and Australia had a total cross-border exposure of $20,527 million at December 31, 2015; and Saudi Arabia, Switzerland, Luxembourg and Australia had a total cross-border exposure of $28,637 million at December 31, 2014.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Exchange Act Rule 13a-15(e). Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. The Firm's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP").

Our internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Firm;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of the Firm's management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Firm's internal control over financial reporting as of December 31, 2016. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013).* Based on management's assessment and those criteria, management believes that the Firm maintained effective internal control over financial reporting as of December 31, 2016.

The Firm's independent registered public accounting firm has audited and issued a report on the Firm's internal control over financial reporting, which appears below.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Morgan Stanley:

We have audited the internal control over financial reporting of Morgan Stanley and subsidiaries (the "Firm") as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Firm's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Firm's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of the Firm as of and for the year ended December 31, 2016 and our report dated February 27, 2017 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP
New York, New York
February 27, 2017

Changes in Internal Control Over Financial Reporting

No change in the Firm's internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f)) occurred during the quarter ended December 31, 2016 that materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

Information relating to the Firm's directors and nominees in the Firm's definitive proxy statement for its 2017 annual meeting of shareholders ("Morgan Stanley's Proxy Statement") is incorporated by reference herein.

Information relating to the Firm's executive officers is contained in Part I, Item 1 of this report under "Executive Officers of Morgan Stanley."

Morgan Stanley's Code of Ethics and Business Conduct applies to all directors, officers and employees, including its Chief Executive Officer, Chief Financial Officer and Deputy Chief Financial Officer. You can find our Code of Ethics and Business Conduct on our internet site, *www.morganstanley.com/about-us-governance/ethics.html*. 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 U.S. Securities and Exchange Commission or the New York Stock Exchange LLC, on our internet site.

Item 11. Executive Compensation

Information relating to director and executive officer compensation in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to equity compensation plans and security ownership of certain beneficial owners and management in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information regarding certain relationships and related transactions in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Information regarding director independence in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Item 14. Principal Accountant Fees and Services

Information regarding principal accountant fees and services in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Part IV

Item 15. Exhibits and Financial Statement Schedules

Documents filed as part of this report

- The consolidated financial statements required to be filed in this Annual Report on Form 10-K are included in Part II, Item 8 hereof.
- An exhibit index has been filed as part of this report beginning on page E-1 and is incorporated by reference herein.

Item 16. Form 10-K Summary

None.

Signatures

Pursuant to the requirements of Section 13 or 15(d) 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, on February 27, 2017.

MORGAN STANLEY
(REGISTRANT)

By: /s/ JAMES P. GORMAN

(James P. Gorman)
Chairman of the Board and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned, hereby severally constitute Jonathan Pruzan, Eric F. Grossman and Martin M. Cohen, and each of them singly, our true and lawful attorneys with full power to them and each of them to sign for us, and in our names in the capacities indicated below, any and all amendments to the Annual Report on Form 10-K filed with the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys to any and all amendments to said Annual Report on Form 10-K.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on the 27th day of February, 2017.

Signature	Title
/s/ JAMES P. GORMAN **(James P. Gorman)**	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)
/s/ JONATHAN PRUZAN **(Jonathan Pruzan)**	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ PAUL C. WIRTH **(Paul C. Wirth)**	Deputy Chief Financial Officer (Principal Accounting Officer)
/s/ ERSKINE B. BOWLES **(Erskine B. Bowles)**	Director
/s/ ALISTAIR DARLING **(Alistair Darling)**	Director
/s/ THOMAS H. GLOCER **(Thomas H. Glocer)**	Director
/s/ ROBERT H. HERZ **(Robert H. Herz)**	Director
/s/ NOBUYUKI HIRANO **(Nobuyuki Hirano)**	Director
/s/ KLAUS KLEINFELD **(Klaus Kleinfeld)**	Director
/s/ JAMI MISCIK **(Jami Miscik)**	Director
/s/ DENNIS M. NALLY **(Dennis M. Nally)**	Director

Signature	Title
/s/ Donald T. Nicolaisen **(Donald T. Nicolaisen)**	Director
/s/ Hutham S. Olayan **(Hutham S. Olayan)**	Director
/s/ James W. Owens **(James W. Owens)**	Director
/s/ Ryosuke Tamakoshi **(Ryosuke Tamakoshi)**	Director
/s/ Perry M. Traquina **(Perry M. Traquina)**	Director
/s/ Rayford Wilkins, Jr. **(Rayford Wilkins, Jr.)**	Director

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

EXHIBITS TO FORM 10-K

For the year ended December 31, 2016
Commission File No. 1-11758

Morgan Stanley

Exhibit Index

Certain of the following exhibits, as indicated parenthetically, were previously filed as exhibits to registration statements filed by Morgan Stanley or its predecessor companies under the Securities Act or to reports or registration statements filed by Morgan Stanley or its predecessor companies under the Exchange Act and are hereby incorporated by reference to such statements or reports. Morgan Stanley's Exchange Act file number is 1-11758. The Exchange Act file number of Morgan Stanley Group Inc., a predecessor company ("MSG"), was 1-9085.[1]

Exhibit No.	Description
3.1*	Amended and Restated Certificate of Incorporation of Morgan Stanley, as amended to date.
3.2	Amended and Restated Bylaws of Morgan Stanley, as amended to date (Exhibit 3.1 to Morgan Stanley's Current Report on Form 8-K dated October 29, 2015).
4.1	Indenture dated as of February 24, 1993 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4 to Morgan Stanley's Registration Statement on Form S-3 (No. 33-57202)).
4.2	Amended and Restated Senior Indenture dated as of May 1, 1999 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-e to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-75289) as amended by Fourth Supplemental Senior Indenture dated as of October 8, 2007 (Exhibit 4.3 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2007).
4.3	Senior Indenture dated as of November 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-f to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-117752), as amended by First Supplemental Senior Indenture dated as of September 4, 2007 (Exhibit 4.5 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2007), Second Supplemental Senior Indenture dated as of January 4, 2008 (Exhibit 4.1 to Morgan Stanley's Current Report on Form 8-K dated January 4, 2008), Third Supplemental Senior Indenture dated as of September 10, 2008 (Exhibit 4 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended August 31, 2008), Fourth Supplemental Senior Indenture dated as of December 1, 2008 (Exhibit 4.1 to Morgan Stanley's Current Report on Form 8-K dated December 1, 2008), Fifth Supplemental Senior Indenture dated as of April 1, 2009 (Exhibit 4 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009), Sixth Supplemental Senior Indenture dated as of September 16, 2011 (Exhibit 4.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011), Seventh Supplemental Senior Indenture dated as of November 21, 2011 (Exhibit 4.4 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2011), Eighth Supplemental Senior Indenture dated as of May 4, 2012 (Exhibit 4.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012), Ninth Supplemental Senior Indenture dated as of March 10, 2014 (Exhibit 4.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014) and Tenth Supplemental Senior Indenture dated as of January 11, 2017 (Exhibit 4.1 to Morgan Stanley's Current Report on Form 8-K dated January 11, 2017).
4.4	The Unit Agreement Without Holders' Obligations, dated as of August 29, 2008, between Morgan Stanley and The Bank of New York Mellon, as Unit Agent, as Trustee and Paying Agent under the Senior Indenture referred to therein and as Warrant Agent under the Warrant Agreement referred to therein (Exhibit 4.1 to Morgan Stanley's Current Report on Form 8-K dated August 29, 2008).
4.5	Amended and Restated Subordinated Indenture dated as of May 1, 1999 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-f to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-75289)).
4.6	Subordinated Indenture dated as of October 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-g to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-117752)).
4.7	Junior Subordinated Indenture dated as of March 1, 1998 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended February 28, 1998).

(1) For purposes of this Exhibit Index, references to "The Bank of New York" mean in some instances the entity successor to JPMorgan Chase Bank, N.A. or J.P. Morgan Trust Company, National Association; references to "JPMorgan Chase Bank, N.A." mean the entity formerly known as The Chase Manhattan Bank, in some instances as the successor to Chemical Bank; references to "J.P. Morgan Trust Company, N.A." mean the entity formerly known as Bank One Trust Company, N.A., as successor to The First National Bank of Chicago.

Exhibit No.	Description
4.8	Junior Subordinated Indenture dated as of October 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-ww to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-117752)).
4.9	Junior Subordinated Indenture dated as of October 12, 2006 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4.1 to Morgan Stanley's Current Report on Form 8-K dated October 12, 2006).
4.10	Deposit Agreement dated as of July 6, 2006 among Morgan Stanley, JPMorgan Chase Bank, N.A. and the holders from time to time of the depositary receipts described therein (Exhibit 4.3 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended May 31, 2006).
4.11	Form of Deposit Agreement among Morgan Stanley, JPMorgan Chase Bank, N.A. and the holders from time to time of the depositary receipts representing interests in the Series A Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated July 5, 2006).
4.12	Depositary Receipt for Depositary Shares, representing Floating Rate Non-Cumulative Preferred Stock, Series A (included in Exhibit 4.11 hereto).
4.13	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series E Preferred Stock described therein (Exhibit 2.6 to Morgan Stanley's Registration Statement on Form 8-A dated September 27, 2013).
4.14	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E (included in Exhibit 4.13 hereto).
4.15	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series F Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated December 9, 2013).
4.16	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F (included in Exhibit 4.15 hereto).
4.17	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series G Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated April 28, 2014).
4.18	Depositary Receipt for Depositary Shares, representing 6.625% Non-Cumulative Preferred Stock, Series G (included in Exhibit 4.17 hereto).
4.19	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series H Preferred stock described therein (Exhibit 4.6 to Morgan Stanley's Current Report on Form 8-K dated April 29, 2014).
4.20	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series H (included in Exhibit 4.19 hereto).
4.21	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series I Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated September 17, 2014).
4.22	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I (included in Exhibit 4.21 hereto).
4.23	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series J Preferred Stock described therein (Exhibit 4.3 to Morgan Stanley's Current Report on Form 8-K dated March 18, 2015).
4.24	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series J (included in Exhibit 4.23 hereto).
4.25	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series K Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Current Report on Form 8-A dated January 30, 2017).
4.26	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K (included in Exhibit 4.25 hereto).

Exhibit No.	Description
4.27	Instruments defining the Rights of Security Holders, Including Indentures—Except as set forth in Exhibits 4.1 through 4.18 above, the instruments defining the rights of holders of long-term debt securities of Morgan Stanley and its subsidiaries are omitted pursuant to Section (b)(4)(iii) of Item 601 of Regulation S-K. Morgan Stanley hereby agrees to furnish copies of these instruments to the U.S. Securities and Exchange Commission upon request.
10.1	Amended and Restated Trust Agreement dated as of October 18, 2011 by and between Morgan Stanley and State Street Bank and Trust Company (Exhibit 10.1 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2011).
10.2	Amended and Restated Investor Agreement dated as of June 30, 2011 by and between Morgan Stanley and Mitsubishi UFJ Financial Group, Inc. (Exhibit 10.1 to Morgan Stanley's Current Report on Form 8-K dated June 30, 2011), as amended by Third Amendment, dated October 3, 2013 (Exhibit 10.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013) and Fourth Amendment, dated April 6, 2016 (Exhibit 10.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016).
10.3†	Morgan Stanley 401(k) Plan, amended and restated as of January 1, 2013 (Exhibit 10.6 to Morgan Stanley Annual Report on Form 10-K for the year ended December 31, 2012), as amended by Amendment (Exhibit 10.5 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2013), Amendment (Exhibit 10.6 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2013). Amendment (Exhibit 10.5 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2014) and Amendment (Exhibit 10.5 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2015).
10.4†*	Amendment to Morgan Stanley 401(k) Plan, dated as of December 13, 2016.
10.5†	Tax Deferred Equity Participation Plan as amended and restated as of November 26, 2007 (Exhibit 10.9 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2007).
10.6†	Directors' Equity Capital Accumulation Plan as amended and restated as of August 1, 2016 (Exhibit 10.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).
10.7†	Employees' Equity Accumulation Plan as amended and restated as of November 26, 2007 (Exhibit 10.12 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2007).
10.8†	Employee Stock Purchase Plan as amended and restated as of February 1, 2009 (Exhibit 10.20 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2008).
10.9†	Morgan Stanley Supplemental Executive Retirement and Excess Plan, amended and restated effective December 31, 2008 (Exhibit 10.2 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009) as amended by Amendment (Exhibit 10.5 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009), Amendment (Exhibit 10.19 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2010), Amendment (Exhibit 10.3 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011) and Amendment (Exhibit 10.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014).
10.10†	1995 Equity Incentive Compensation Plan (Annex A to MSG's Proxy Statement for its 1996 Annual Meeting of Stockholders) as amended by Amendment (Exhibit 10.39 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2000), Amendment (Exhibit 10.5 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended August 31, 2005), Amendment (Exhibit 10.3 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended February 28, 2006), Amendment (Exhibit 10.24 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2006) and Amendment (Exhibit 10.22 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2007).
10.11†	Form of Management Committee Equity Award Certificate for Discretionary Retention Award of Stock Units and Stock Options (Exhibit 10.30 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2006).
10.12†	Form of Deferred Compensation Agreement under the Pre-Tax Incentive Program 2 (Exhibit 10.12 to MSG's Annual Report for the fiscal year ended November 30, 1996).
10.13†	Key Employee Private Equity Recognition Plan (Exhibit 10.43 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2000).

Exhibit No.	Description
10.14†	Morgan Stanley Financial Advisor and Investment Representative Compensation Plan as amended and restated as of November 26, 2007 (Exhibit 10.34 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2007).
10.15†	Morgan Stanley UK Share Ownership Plan (Exhibit 4.1 to Morgan Stanley's Registration Statement on Form S-8 (No. 333-146954)).
10.16†	Supplementary Deed of Participation for the Morgan Stanley UK Share Ownership Plan, dated as of November 5, 2009 (Exhibit 10.36 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2009).
10.17†	Aircraft Time Sharing Agreement, dated as of January 1, 2010, by and between Corporate Services Support Corp. and James P. Gorman (Exhibit 10.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010).
10.18†	Agreement between Morgan Stanley and James P. Gorman, dated August 16, 2005, and amendment dated December 17, 2008 (Exhibit 10.2 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010), as amended by Amendment (Exhibit 10.25 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2013).
10.19†	Form of Restrictive Covenant Agreement (Exhibit 10 to Morgan Stanley's Current Report on Form 8-K dated November 22, 2005).
10.20†	Morgan Stanley Performance Formula and Provisions (Exhibit 10.2 to Morgan Stanley's Current Report on Form 8-K dated May 14, 2013).
10.21†	2007 Equity Incentive Compensation Plan, as amended and restated as of March 24, 2016 (Exhibit 10.1 to Morgan Stanley's Current Report on Form 8-K dated May 17, 2016).
10.22†	Morgan Stanley 2006 Notional Leveraged Co-Investment Plan, as amended and restated as of November 28, 2008 (Exhibit 10.47 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2008).
10.23†	Form of Award Certificate under the 2006 Notional Leveraged Co-Investment Plan (Exhibit 10.7 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended February 29, 2008).
10.24†	Morgan Stanley 2007 Notional Leveraged Co-Investment Plan, amended as of June 4, 2009 (Exhibit 10.6 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009).
10.25†	Form of Award Certificate under the 2007 Notional Leveraged Co-Investment Plan for Certain Management Committee Members (Exhibit 10.8 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended February 29, 2008).
10.26†	Morgan Stanley Compensation Incentive Plan (Exhibit 10.54 to Morgan Stanley's Annual Report on Form 10-K for the fiscal year ended November 30, 2008).
10.27†	Morgan Stanley 2009 Replacement Equity Incentive Compensation Plan for Morgan Stanley Smith Barney Employees (Exhibit 4.2 to Morgan Stanley's Registration Statement on Form S-8 (No. 333-159504)).
10.28†	Form of Award Certificate for Special Discretionary Retention Awards of Stock Options (Exhibit 10.4 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011).
10.29†	Morgan Stanley Schedule of Non-Employee Directors Annual Compensation, effective as of August 1, 2016 (Exhibit 10.2 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).
10.30†	Memorandum to Colm Kelleher Regarding Repatriation to London (Exhibit 10.4 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012).
10.31†	Morgan Stanley U.S. Tax Equalization Program (Exhibit 10.5 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012).
10.32†	Morgan Stanley UK Limited Alternative Retirement Plan, dated as of October 8, 2009 (Exhibit 10.2 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).
10.33†	Form of Award Certificate for Discretionary Retention Awards of Stock Options (Exhibit 10.5 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013).

Exhibit No.	Description
10.34†	Agreement between Morgan Stanley and Colm Kelleher, dated January 5, 2015 (Exhibit 10.1 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015).
10.35†	Description of Operating Committee Medical Coverage (Exhibit 10.2 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015).
10.36†	Form of Award Certificate for Discretionary Retention Awards of Stock Units (Exhibit 10.38 to Morgan Stanley's Annual Report for the year ended December 31, 2015).
10.37†	Form of Award Certificate for Discretionary Retention Awards under the Morgan Stanley Compensation Incentive Plan (Exhibit 10.39 to Morgan Stanley's Annual Report for the year ended December 31, 2015).
10.38†	Form of Award Certificate for Long-Term Incentive Program Awards (Exhibit 10.40 to Morgan Stanley's Annual Report for the year ended December 31, 2015).
10.39†	Agreement between Morgan Stanley and Gregory J. Fleming, dated January 22, 2016 (Exhibit 10.41 to Morgan Stanley's Annual Report for the year ended December 31, 2015).
10.40†	Memorandum to Colm Kelleher Regarding Relocation to New York, dated February 25, 2016 (Exhibit 10.2 to Morgan Stanley's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016).
10.41†*	Agreement between Morgan Stanley and James A. Rosenthal, dated January 17, 2017.
12*	Statement Re: Computation of Ratio of Earnings to Fixed Charges and Computation of Ratio of Earnings to Fixed Charges and Preferred Stock Dividends.
21*	Subsidiaries of Morgan Stanley.
23.1*	Consent of Deloitte & Touche LLP.
24	Powers of Attorney (included on signature page).
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 Income Statements—Twelve Months Ended December 31, 2016, December 31, 2015 and December 31, 2014, (ii) the Consolidated Comprehensive Income Statements—Twelve Months Ended December 31, 2016, December 31, 2015 and December 31, 2014, (iii) the Consolidated Balance Sheets—December 31, 2016 and December 31, 2015, (iv) the Consolidated Statements of Changes in Total Equity—Twelve Months Ended December 31, 2016, December 31, 2015 and December 31, 2014, (iv) the Consolidated Cash Flow Statements—Twelve Months Ended December 31, 2016, December 31, 2015 and December 31, 2014, and (vi) Notes to Consolidated Financial Statements.

* Filed herewith.

** Furnished herewith.

† Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Form 10-K pursuant to Item 15(b).