

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, 2017

Commission File Number 1-11758

Morgan Stanley

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

1585 Broadway

New York, NY 10036

(Address of principal executive offices, including zip code)

36-3145972

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

(212) 761-4000

(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
Depository 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
Depository 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
Depository 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
Depository 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
Depository 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
Depository 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 (two issuances); Market Vectors ETNs due April 30, 2020 (two 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, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer

Non-Accelerated Filer

(Do not check if a smaller reporting company)

Accelerated Filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

As of June 30, 2017, the aggregate market value of the common stock of Registrant held by non-affiliates of Registrant was approximately \$77,833,014,763. This calculation does not reflect a determination that persons are affiliates for any other purposes.

As of January 31, 2018, there were 1,791,846,388 shares of Registrant's common stock, \$0.01 par value, outstanding.

Documents Incorporated by Reference: Portions of Registrant's definitive proxy statement for its 2018 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, 2017

Table of Contents	Part	Item	Page
Business	I	1	1
Overview			1
Business Segments			1
Competition			1
Supervision and Regulation			2
Executive Officers of Morgan Stanley			10
Risk Factors		1A	11
Unresolved Staff Comments		1B	22
Properties		2	22
Legal Proceedings		3	23
Mine Safety Disclosures		4	28
Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	II	5	29
Selected Financial Data		6	31
Management’s Discussion and Analysis of Financial Condition and Results of Operations		7	32
Introduction			32
Executive Summary			33
Business Segments			38
Supplemental Financial Information and Disclosures			52
Accounting Development Updates			53
Critical Accounting Policies			54
Liquidity and Capital Resources			57
Quantitative and Qualitative Disclosures about Market Risk		7A	71
Financial Statements and Supplementary Data		8	91
Report of Independent Registered Public Accounting Firm			91
Consolidated Income Statements			92
Consolidated Comprehensive Income Statements			93
Consolidated Balance Sheets			94
Consolidated Statements of Changes in Total Equity			95
Consolidated Cash Flow Statements			96
Notes to Consolidated Financial Statements			97
1. Introduction and Basis of Presentation			97
2. Significant Accounting Policies			98
3. Fair Values			109
4. Derivative Instruments and Hedging Activities			124
5. Investment Securities			129
6. Collateralized Transactions			133
7. Loans and Allowance for Credit Losses			136
8. Equity Method Investments			139
9. Goodwill and Intangible Assets			139

Table of Contents	Part	Item	Page
10. Deposits			140
11. Borrowings and Other Secured Financings			140
12. Commitments, Guarantees and Contingencies			142
13. Variable Interest Entities and Securitization Activities			148
14. Regulatory Requirements			153
15. Total Equity			156
16. Earnings per Common Share			159
17. Interest Income and Interest Expense			159
18. Deferred Compensation Plans			159
19. Employee Benefit Plans			161
20. Income Taxes			166
21. Segment and Geographic Information			169
22. Parent Company			171
23. Quarterly Results (Unaudited)			174
24. Subsequent Events			175
Financial Data Supplement (Unaudited)			176
Glossary of Common Acronyms			180
Changes in and Disagreements with Accountants on Accounting and Financial Disclosure		9	182
Controls and Procedures		9A	182
Other Information		9B	184
Directors, Executive Officers and Corporate Governance	III	10	184
Executive Compensation		11	184
Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters		12	184
Certain Relationships and Related Transactions and Director Independence		13	185
Principal Accountant Fees and Services		14	185
Exhibits and Financial Statement Schedules	IV	15	185
Form 10-K Summary		16	185
Exhibit Index			E-1
Signatures			S-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,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Quantitative and Qualitative Disclosures about Market Risk” 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 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 level of individual investor participation in the global markets as well as the level of client assets;
- the flow of investment capital into or from Assets under management or supervision;
- the level and volatility of equity, fixed income and commodity 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;
- technological changes instituted by us, our competitors or counterparties and technological risks, business continuity and related operational risks;
- risk associated with cybersecurity threats, including data protection and cybersecurity risk management;
- our ability to manage effectively our capital and liquidity, including approval of our capital plans by our banking regulators;
- the impact of current, pending and future legislation (including with respect to the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”)) or changes thereto, regulation (including capital, leverage, funding, liquidity and recovery and resolution requirements and our ability to address such 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 U.S. and worldwide;
- changes in tax laws and regulations globally, including the interpretation and application of the U.S. Tax Cuts and Jobs Act (“Tax Act”);
- the effectiveness of our risk management policies;
- our ability to effectively respond to an economic downturn, or other market disruptions;
- the actions and initiatives of current and potential competitors as well as governments, central banks, regulators and self-regulatory organizations;
- our ability to provide innovative products and services and execute our strategic objectives;
- the effect of economic and political conditions and geopolitical events, including the U.K. anticipated withdrawal from the E.U.;
- sovereign risk;
- the performance and results of our acquisitions, divestitures, joint ventures, strategic alliances or other strategic arrangements;
- investor, consumer and business sentiment and confidence in the financial markets;
- our reputation and the general perception of the financial services industry;
- inflation, natural disasters, pandemics and acts of war or terrorism; and
- other risks and uncertainties detailed under “Business—Competition” and “Business—Supervision and Regulation,” “Risk Factors” 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 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, www.sec.gov, that contains annual, quarterly and current reports, proxy and information statements and other information that issuers file electronically with the SEC. Our electronic SEC filings are available to the public at the SEC's internet site.

Our internet site is www.morganstanley.com. You can access our Investor Relations webpage at www.morganstanley.com/about-us-ir. We make available free of charge, on or through our Investor Relations webpage, our Proxy Statements, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended ("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 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.

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 an FHC regulated by the Board of Governors of the Federal Reserve System (“Federal Reserve”) under the Bank Holding Company Act of 1956, as amended (“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, 2017, we had 57,633 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. We define the following as part of our consolidated financial statements (“financial statements”): consolidated income statements (“income statements”), consolidated balance sheets (“balance sheets”), and consolidated cash flow statements (“cash flow statements”). See the “Glossary of Common Acronyms” for definitions of certain acronyms used throughout the 2017 Form 10-K.

Financial information concerning us, our business segments and geographic regions for each of the 12 months ended December 31, 2017, December 31, 2016 and December 31, 2015 is included in the financial statements and the notes thereto in “Financial Statements and Supplementary Data.”

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.”

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, exchanges, electronic trading and clearing platforms, financial data repositories, sponsors of mutual funds, hedge funds and private equity funds, energy companies, financial technology firms 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.”

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. Legislative and regulatory responses to the 2007-2008 financial crisis, both in the U.S. and worldwide, have resulted in major changes to the way we are regulated and conduct our business. These laws and regulations include the Dodd-Frank Act; risk-based capital, leverage and liquidity standards adopted or being developed by the Basel Committee on Banking Supervision (“Basel Committee”), including Basel III, and the national implementation of those standards; capital planning and stress testing requirements; and new resolution regimes in the U.S. and other jurisdictions. Some areas of regulation 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 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 and we expect to remain subject to extensive supervision and regulation.

Financial Holding Company

Consolidated Supervision. We have operated as a BHC and FHC under the BHC Act since September 2008. As a BHC, 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; 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 BHCs and FHCs 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.

The BHC Act grandfathered “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 U.S.” 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 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. In June 2017, the Federal Reserve approved our application for a five-year extension of the transition period to conform investments in certain legacy covered funds that are also illiquid funds. The approval covers essentially all of our non-conforming investments in, and relationships with, legacy covered funds subject to the Volcker Rule. The Volcker Rule also requires that deductions be made from a BHC's Tier 1 capital for permissible investments in covered funds. In addition, the Volcker Rule requires banking entities to have comprehensive compliance programs reasonably designed to ensure and monitor compliance with the Volcker Rule.

Capital Standards. The Federal Reserve establishes capital requirements, including well-capitalized standards, for large BHCs and evaluates our compliance with such requirements. The OCC establishes similar capital requirements and standards for Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA") (collectively, our "U.S. Bank Subsidiaries").

Regulatory Capital Framework. The regulatory capital requirements for us and our U.S. Bank Subsidiaries are largely based on the Basel III capital standards established by the Basel Committee and also implement certain provisions of the Dodd-Frank Act. We are subject to various risk-based capital requirements with various transition provisions, measured against our Common Equity Tier 1 capital, Tier 1 capital and Total capital bases, leverage-based capital requirements, including the SLR, and additional capital buffers above generally applicable minimum standards for BHCs.

In December 2017, the Basel Committee released its agreement on a comprehensive set of revisions to its Basel III Framework. The revised requirements are expected to take effect starting January 2022, subject to U.S. banking agencies issuing implementation proposals. The impact on us of any revisions to the Basel Committee's capital standards is uncertain and depends on future rulemakings by the U.S. banking agencies.

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 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.

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."

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 BHCs, 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 addition to capital planning requirements, the OCC, the Federal Reserve and the FDIC have the authority to prohibit or to limit the payment of dividends by the banking organizations they supervise, including us and our 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. We and our U.S. Bank Subsidiaries are subject to the U.S. banking agencies' LCR requirements, which generally follow Basel Committee standards. Similarly, we and our U.S. Bank Subsidiaries will become subject to NSFR requirements, if adopted by the U.S. banking agencies, and the proposed NSFR requirements generally follow Basel Committee standards.

In addition to the LCR and 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."

Systemic Risk Regime. The Dodd-Frank Act established a systemic risk regime to which BHCs 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 as BHCs 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. 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.

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. 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."

Under the systemic risk regime, if the Federal Reserve or the Financial Stability Oversight Council determines that a BHC 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/or 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 periodically submit to the Federal Reserve and the FDIC a 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 2017 resolution plan, is an 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 and MSPBNA. The guidelines were effective on January 1, 2017, and applied to MSBNA as of January 1, 2018. MSPBNA must be in compliance by October 1, 2018.

In addition, certain financial companies, including BHCs 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.

In September 2017, the Federal Reserve issued a final rule that would impose contractual requirements on certain QFCs ("covered QFCs") to which U.S. G-SIBs, including us, and their subsidiaries are parties. The OCC issued a final rule in

November 2017 that imposes substantively identical requirements on national banks that are subsidiaries of U.S. G-SIBs, including our U.S. Bank Subsidiaries, as well as certain other institutions (together with the entities covered by the Federal Reserve final rule, the “covered entities”). Under the Federal Reserve’s and OCC’s final rules, covered QFCs must generally expressly provide that transfer restrictions and default rights against covered entities are limited to the same extent as they would be under the Federal Deposit Insurance Act and Title II of the Dodd-Frank Act and their implementing regulations. In addition, covered QFCs may not, among other things, permit the exercise of any cross-default right against covered entities based on an affiliate’s entry into insolvency, resolution or similar proceedings, subject to certain creditor protections. There is a phased-in compliance schedule based on counterparty type, with the first compliance date of January 1, 2019.

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.”

Cyber and Information Security Risk Management. As a general matter, the financial services industry faces increased global regulatory focus regarding cyber and information security risk management practices. Many aspects of our businesses are subject to cybersecurity legal and regulatory requirements enacted by U.S. federal and state governments and other non-U.S. jurisdictions in Europe and Asia. These laws are aimed at codifying basic cybersecurity protections and mandating data breach notification requirements.

Certain of our businesses are also subject to privacy and data protection information security legal requirements concerning the use and protection of certain customer information. For example, the General Data Protection Regulation (GDPR) is scheduled to become effective in the E.U. on May 25, 2018 as a replacement for the E.U. Data Protection Directive. The GDPR imposes mandatory breach notification obligations, including significant fines for noncompliance, enhanced governance and accountability requirements and has extraterritorial impact. In addition, other jurisdictions have adopted or are proposing GDPR or similar standards, such as Australia, Singapore, Japan, Columbia, Argentina, India, Turkey, Hong Kong and Switzerland.

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 with respect to a depository institution if that institution does not meet certain capital adequacy standards. These 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, separately 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, BHCs, 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. Sections 23A and 23B also 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 changes to these restrictions made by the Dodd-Frank Act.

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 serve 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 BHC. 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 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, the U.S. DOL’s conflict of interest rule under ERISA went into effect on June 9, 2017. The rule, which 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, is subject to phased-in compliance. As of June 9, 2017, we and our financial advisers are considered ERISA fiduciaries under the rule when providing investment advice for a fee to retirement investors. Full compliance with the rule’s related exemptions is currently scheduled to be required by July 1, 2019. In addition, the U.S. DOL is undertaking an examination of the rule that may result in changes to the rule or its related exemptions or a change in the full compliance date. 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 authorities 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. Research-related regulations have been implemented in many jurisdictions, including in the U.S., where FINRA has adopted rules that cover research relating to both equity and debt securities. In addition, European regulators have introduced new requirements in MiFID II relating to the unbundling of research services and execution services, which may affect the way we conduct our activities. Both U.S. and non-U.S. regulators continue to focus on research conflicts of interest and may impose additional regulations.

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 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.

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. The CFTC has completed the majority of its regulations in this area, most of which are in effect. The SEC has also finalized many of its Swaps regulations, although a significant number are not yet in effect. 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 its respective jurisdiction, 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. The variation margin requirements under these rules were effective as of March 1, 2017. The rules phase-in initial margin requirements from September 1, 2016 through September 1, 2020, depending on the level of 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 important areas within the global derivatives regulatory framework have been finalized in recent years, additional changes are expected. As the framework evolves, we expect to continue to face increased costs and regulatory oversight. Complying with registration and other regulatory requirements has required, and is expected to require in the future, systems and other changes. Compliance with Swaps-related regulatory capital requirements may also require us to devote more capital to our Swaps business.

Our Institutional Securities and Wealth Management business activities are also regulated in jurisdictions outside the U.S. See "Non-U.S. Regulation" herein.

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 also 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, a U.S. broker-dealer subsidiary of ours, Morgan Stanley Distribution, Inc., 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.

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 have increased the expenses associated with our asset management activities and/or reduced the investment returns we are able to generate for us and our asset management clients. See also “Financial Holding Company—Activities Restrictions under the Volcker Rule.”

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,” and “Institutional Securities and Wealth Management—Derivatives Regulation” above and “Non-U.S. Regulation,” below for a discussion of other regulations that impact our Investment Management business

activities, including, among other things, the Department of Labor’s conflict of interest rule and MiFID II.

Our Investment Management business activities are 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 “Non-U.S. Regulation” herein.

Non-U.S. Regulation

All of our businesses 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. Certain regulators have prudential, conduct and other authority over us or our subsidiaries, as well as powers to limit or restrict us from engaging in certain businesses or to conduct administrative proceedings that can result in censure, fines, the issuance of cease-and-desist orders, or the suspension or expulsion of a regulated entity or its affiliates.

Some of our subsidiaries are regulated as broker-dealers and other regulated entity types 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 PRA, the 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 a package of proposals including various risk reduction measures. These include proposed amendments to the Capital Requirements Directive and Regulation providing updates to risk-based capital, liquidity, leverage and other prudential standards on a consolidated basis, consistent with final Basel standards. In addition, the proposals 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. 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. Further amendments were also proposed to the E.U. bank recovery and resolution regime under the E.U. Bank Recovery and Resolution Directive (“BRRD”). 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.

The amendments to the BRRD build on previous proposals by regulators in the U.K., E.U. and other major jurisdictions to finalize 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 established a recovery and resolution framework for E.U. credit institutions and investment firms, including MSIP. 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 jurisdictions by writing down certain unsecured liabilities or converting certain unsecured liabilities into equity.

Regulators in the U.K., E.U. and other major jurisdictions have also finalized other regulatory standards applicable to certain of our subsidiaries that operate in those jurisdictions. For instance, the European Market Infrastructure Regulation introduced new requirements regarding the central clearing and reporting of derivatives, as well as margin requirements

for uncleared derivatives. MiFID II, which took effect on January 3, 2018, introduced 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, we have had to make extensive changes to our operations, including systems and controls in order to comply with MiFID II.

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 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, BHCs 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 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, with 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.

Executive Officers of Morgan Stanley

The executive officers of Morgan Stanley and their age and titles as of February 27, 2018 are set forth below. Business experience for the past five years is provided in accordance with SEC rules.

Jeffrey S. Brodsky (53). 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 (59). Chairman of the Board of Directors and Chief Executive Officer of Morgan Stanley (since January 2012). President and Chief Executive Officer (January 2010 to 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 (51). 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 (55). 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 (60). 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 (49). 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 (52). 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).

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 “Business” and “Return on Equity and Tangible Common Equity Targets” 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.”

Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, volatilities, 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.”

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, the level and term structure of interest rates and currency values, and the level of 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 AUM 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 may 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, which include 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.”

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.”

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 HELOC.

While we believe current valuations and reserves adequately address our perceived levels of risk, adverse economic conditions may negatively impact our clients and our credit exposures. In addition, as a clearing member of several central counterparties, we finance our customer positions and 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. 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.”

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or systems, from 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.”

We are subject to operational risks, including a failure, breach or other disruption of our operational or security systems, which 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. 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 rely on the ability of our employees, consultants, our internal systems and systems at technology centers maintained by unaffiliated third parties to operate our different businesses and 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 face 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.

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 direct or indirect third party's systems or processes or improper or unauthorized action by third parties, including consultants and subcontractors or our employees, we could suffer financial loss, an impairment to our liquidity position, 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. Furthermore, the concentration of financial institution company and personal information held by a handful of third parties increases the risk that a breach at a key third party may cause an industry-wide data breach that could significantly increase the cost and risk of conducting business.

Despite the business contingency and security response plans we have in place, there can be no assurance that such plans will fully mitigate all potential 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 or information security 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 employ backup systems for our data, those backup systems may be unavailable following a disruption, the affected data may not have been backed up or may not be recoverable from the backup, or the backup data may be costly to recover, which could adversely affect our business.

A cyber attack, information or security breach or a technology failure could adversely affect our ability to conduct our business, manage our exposure to risk or result in disclosure or misuse of confidential or proprietary information and otherwise adversely impact our results of operations, liquidity and financial condition, as well as cause reputational harm.

We maintain a significant amount of personal information on our customers, employees and certain counterparties that we

are required to protect under various state, federal and international data protection and privacy laws. These laws may be in conflict with one another, or courts and regulators may interpret them in ways that we had not anticipated or that adversely affect our business.

Cybersecurity and information risks for financial institutions have significantly increased in recent years in part because of the proliferation of new technologies, the use of the internet and mobile telecommunications technologies to conduct financial transactions, and the increased sophistication and activities of organized crime, hackers, terrorists and other external extremist parties, including foreign state actors, in some circumstances as a means to promote political ends. In addition to the growing sophistication of certain parties, the commoditization of cyber tools which are able to be weaponized by less sophisticated actors has led to an increase in the exploitation of technological vulnerabilities. Any of these parties may also attempt to fraudulently induce employees, customers, clients, vendors or other third parties or users of our systems to disclose sensitive information in order to gain access to our data or that of our employees or clients. Cybersecurity and information security risks may also 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. In addition, third parties with whom we do business, their service providers, as well as other third parties with whom our customers do business, may also be sources of cybersecurity risks, particularly where activities of customers are beyond our security and control systems. There is no guarantee that the measures we take will provide absolute security or recoverability 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 unauthorized access attacks, 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, data breaches and other events. There can be no assurance that such unauthorized access, mishandling or misuse of information or cyber incidents will not occur in the future, and they could occur more frequently and on a more significant scale.

A cyber attack, information or security breach or a technology failure of ours or of a third party could jeopardize our or our clients', employees', partners', vendors' or counterparties' personal, confidential, proprietary or other information processed and stored in, and transmitted through, our and our third parties' computer systems. Furthermore, such events

could cause interruptions or malfunctions in our, our clients', employees', partners', vendors', counterparties' or third parties' operations, as well as the unauthorized release, gathering, monitoring, misuse, loss or destruction of confidential, proprietary and other information of ours, our employees, our customers or of other third parties. Any of these events could result in reputational damage with our clients and the market, client dissatisfaction, additional costs to us to maintain and update our operational and security systems and infrastructure, regulatory investigations, litigation or enforcement, or regulatory fines or penalties, 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, vendors and counterparties with which we do business, and the increasing sophistication of cyber attacks, a cyber attack, information or security breach 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 and information security risks, such insurance coverage may be insufficient to cover all losses.

The cost of managing cyber and information security risks and attacks along with complying with new and increasingly expansive regulatory requirements could adversely affect our business.

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. For

more information on how we monitor and manage liquidity risk, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" and "Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Liquidity Risk."

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, 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 long-term and short-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 Service, 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."

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 BHC, we may become subject to a prohibition or to limitations on our ability to pay dividends. 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 us and our 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."

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, requirements for maintaining minimum amounts of external TLAC and external long-term debt, restrictions on activities and investments imposed by the Volcker Rule, comprehensive derivatives regulation, market structure regulation, tax regulations, antitrust laws, trade and transaction reporting obligations, and broadened fiduciary obligations.

In some areas, regulatory standards are subject to final rule-making 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 U.S. 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 periodically submit to the Federal Reserve and the FDIC a 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 resolution plan submission was 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 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" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements."

Further, because both our resolution plan contemplates 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 has entered into a secured amended and restated support agreement with its material entities, as defined in our 2017 resolution plan pursuant to which it would provide such capital and liquidity.

Under the secured 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 contributable material assets, other than shares in subsidiaries of the Parent Company and certain intercompany payables, to provide capital and liquidity, as applicable, to our material entities, as defined in our 2017 resolution plan. The obligations of the Parent Company under the secured amended and restated support agreement are in most cases 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 entities 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 entities pursuant to the secured amended and restated support agreement, will not result in greater losses for holders of our securities compared to a different resolution strategy for us.

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 BHCs of U.S. G-SIBs, including Morgan Stanley, to maintain minimum amounts of equity and eligible long-term debt 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 TLAC 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 CMBS. 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 CMBS. For additional information, see also Note 12 to the financial statements.

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 execute transactions involving the storage, transportation and market-making of several commodities, including metals, natural gas, electric power, environmental attributes 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.

These activities subject us to extensive energy, commodities, environmental, health and safety and other governmental laws and regulations.

Although we have attempted to mitigate our environmental risks by, among other measures, limiting the scope of activities involving storage and transportation, 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 by 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, enhanced regulation of OTC derivatives markets in the U.S. and the E.U., as well as similar legislation proposed or adopted elsewhere, will impose significant costs and 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.

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, and we utilize various measures, such as the use of disclosure, to manage these potential conflicts. 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 BHC 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.

Uncertainties and ambiguities as to the interpretation and application of the Tax Cuts and Jobs Act could adversely affect us.

The Tax Act, enacted on December 22, 2017, significantly revised U.S. corporate income tax law by, among other things, reducing the corporate income tax rate to 21%, and implementing a modified territorial tax system that includes a one-time transition tax on deemed repatriated earnings of non-U.S. subsidiaries; imposes a minimum tax on global intangible low-taxed income (“GILTI”) and an alternative base erosion and anti-abuse tax (“BEAT”) on U.S. corporations that make deductible payments to non-U.S. related persons in excess of specified amounts; and broadens the tax base by partially or wholly eliminating tax deductions for certain historically deductible expenses (e.g., FDIC premiums and executive compensation). The enactment of the Tax Act resulted in an aggregate net discrete tax provision of approximately \$1.2 billion for the year ended December 31, 2017 as described further under “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Supplemental Financial Information and Disclosures—Income Tax Matters.”

There are a number of uncertainties and ambiguities as to the interpretation and application of many of the provisions in the Tax Act, including the provisions relating to the modified territorial tax system, the one-time transition tax, GILTI, and the BEAT. In the absence of guidance on these issues, we use what we believe are reasonable interpretations and assumptions in applying the Tax Act for purposes of determining our tax balances and results of operations, which may change as we receive additional clarification and implementation guidance and as the interpretation of the Tax Act evolves over time. We expect that the U.S. Treasury Department will issue additional guidance on the application of various provisions in the Tax Act. It is possible that such additional guidance or positions taken by the IRS in an audit could differ from the interpretations and assumptions that we previously made,

which could have a material adverse effect on our results of operations and financial condition.

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.”

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, exchanges, electronic trading and clearing platforms, financial data repositories, sponsors of mutual funds, hedge funds, energy companies, financial technology firms 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. Some new competitors in the financial technology sector have sought to target existing segments of our businesses that could be susceptible to disruption by innovative or less regulated business models. For more information regarding the competitive environment in which we operate, see “Business—Competition” and “Business—Supervision and Regulation.”

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 plat-

forms. 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 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.

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. On June 23, 2016, the U.K. electorate voted to leave the E.U. On March 29, 2017, the U.K. invoked Article 50 of the Lisbon Treaty, which triggered a two-year period, subject to extension (which would need the unanimous approval of the E.U. Member States), 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 March 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. Since any transition or implementation periods and the eventual successor arrangements require agreement of both the U.K. and the E.U., there is a risk that these arrangements may not be agreed by March 2019.

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, implementation or successor arrangements. We are taking steps to make changes to our European operations in an effort to ensure that we can continue to provide cross-border banking and investment services in E.U. Member States without the need for separate regulatory authorizations in each member state. These changes must be approved by the relevant regulatory authorities and therefore it is currently unclear what the final post-Brexit structure of our European operations will be. Depending on the extent to which we may be required to make material changes to our European operations beyond those currently planned, our results of operations and business prospects could be negatively affected.

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 MUFG), 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.”

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.

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 at December 31, 2017 ¹
U.S. Locations			
1585 Broadway New York, New York <i>(Global Headquarters and Institutional Securities Headquarters)</i>	Owned	N/A	1,335,500 square feet
2000 Westchester Avenue Purchase, New York <i>(Wealth Management Headquarters)</i>	Owned	N/A	626,100 square feet
522 Fifth Avenue New York, New York <i>(Investment Management Headquarters)</i>	Owned	N/A	564,900 square feet
International Locations			
20 Bank Street London <i>(London Headquarters)</i>	Leased	2038	546,500 square feet
1 Austin Road West Kowloon <i>(Hong Kong Headquarters)</i>	Leased	2019	499,900 square feet
Otemachi Financial City South Tower Otemachi, Chiyoda-ku <i>(Tokyo Headquarters)</i>	Leased	2028	245,600 square feet

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

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 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 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 CDS 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 CDS with CDIB. The complaint seeks compensatory damages related to the approximately \$228 million that CDIB alleges it has already lost under the CDS, rescission of CDIB's obligation to pay an additional \$12 million, punitive damages, equitable relief, pre- and post-judgment interest, fees and costs. On February 28, 2011, the court denied the Firm's motion to dismiss the complaint.

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.* 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 December 1, 2017, the parties reached an agreement in principle to settle the litigation.

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 12, 2017, the Supreme Court of the State of New York granted the Firm's motion to dismiss the amended complaint. On May 12, 2017, plaintiff filed a notice of appeal from that decision.

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 \$634 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 June 20, 2017, the Appellate Division, First Department ("Appellate Division"), affirmed the order granting in part and denying in part the Firm's motion to dismiss. On October 3, 2017, the Appellate Division denied the Firm's motion for leave to appeal that decision.

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 \$133 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 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 alleging failure to notify, regarding which the motion was denied without prejudice. On December 9, 2016, the Firm renewed its motion to dismiss that notification claim. On January 17, 2017, the First Department affirmed the lower court's April 12, 2016 order. On April 13, 2017, the Appellate Division denied plaintiff's motion for leave to appeal to the New York Court of Appeals.

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 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 January 17, 2017, the First Department affirmed the lower court's order granting the motion to dismiss the complaint. On January 9, 2017, plaintiff filed a motion to amend its complaint. On April 13, 2017, the Appellate Division denied plaintiff's motion for leave to appeal to the New York Court of Appeals.

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 warran-

ties. The complaint seeks, among other relief, unspecified damages, attorneys' fees, 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 July 11, 2017, the Appellate Division affirmed in part and reversed in part an order granting in part and denying in part the Firm's motion to dismiss. On September 26, 2017, the Appellate Division denied plaintiff's motion for leave to appeal to the New York Court of Appeals.

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 January 10, 2018, the court reinstated plaintiff's breach of contract claim based on failure to notify, which had been dismissed in its April 3, 2015 order. On January 25, 2018, the court denied the Firm's motion for summary judgment. On February 5, 2018, the Firm filed a motion for judgment on the pleadings and a renewed motion for summary judgment.

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 February 24, 2017, the Firm filed a notice of appeal of the denial of its motion to dismiss the complaint and perfected its appeal on November 22, 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 February 24, 2017, the Firm filed a notice of appeal of the denial of its motion to dismiss the complaint and perfected its appeal on November 22, 2017.

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, and the appeal was fully briefed on August 19, 2016.

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 RMBS 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 U.S. 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.

European Matters

On October 11, 2011, an Italian financial institution, Banco Popolare Società Cooperativa ("Banco Popolare"), filed a civil claim against the Firm in the Milan courts, styled *Banco Popolare Società Cooperativa v Morgan Stanley & Co. International plc & others*, 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 \$91 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 June 22, 2017, the public prosecutor for the Court of Accounts for the Republic of Italy filed a claim against the Firm styled Case No. 2012/00406/MNV, which is pending in the Regional Prosecutor's Office at the Judicial Section of the Court of Auditors for Lazio, Italy. The 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 restructured (and certain of the transactions were terminated) in December 2011 and January 2012. The claim alleges, inter alia, that the Firm effectively acted as an agent of the state in connection with these transactions and asserts claims related to, among other things, whether the Ministry of Finance was authorized to enter into these transactions, whether the transactions were appropriate and whether the Firm's conduct related to the termination of certain transactions was proper. The prosecutor is seeking damages through an administrative process against the Firm for €2.76 billion (approximately \$3.3 billion). A hearing regarding this matter has been scheduled for April 19, 2018.

In matters styled *Case number 15/3637* and *Case number 15/4353*, the Dutch Tax Authority ("Dutch Authority") is

challenging in the District Court in Amsterdam the prior set-off by the Firm of approximately €124 million (approximately \$149 million) plus accrued interest of withholding tax credits against the Firm's corporation tax liabilities for the tax years 2007 to 2013. The Dutch Authority alleges that the Firm was not entitled to receive the withholding tax credits on the basis, inter alia, that a Firm subsidiary did not hold legal title to certain securities subject to withholding tax on the relevant dates. The Dutch Authority has also alleged that the Firm failed to provide certain information to the Dutch Authority and keep adequate books and records. A hearing in this matter took place on September 19, 2017.

On October 5, 2017, various institutional investors filed a claim against the Firm and another bank in a matter styled *Case number BS 99-6998/2017*, in the City Court of Copenhagen, Denmark concerning their roles as underwriters of the initial public offering ("IPO") in March 2014 of the Danish company OW Bunker A/S. The claim seeks damages of DKK 534,270,456 (approximately \$86 million) plus interest in respect of alleged losses arising from investing in shares in OW Bunker, which entered into bankruptcy in November 2014. Separately, on November 29, 2017, another group of institutional investors joined the Firm and another bank as defendants to pending proceedings in the High Court of Eastern Denmark against various other parties involved in the IPO in a matter styled *Case number B-2073-16*. The investors claim damages of DKK 767,235,885 (approximately \$124 million) plus interest, from the Firm and the other bank on a joint and several basis with the Defendants to these proceedings. Both claims are based on alleged prospectus liability; the second claim also alleges professional liability of banks acting as financial intermediaries.

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. On February 2, 2018, the court denied a partial motion to dismiss that complaint. On November 3, 2017, the Firm filed its opposition to plaintiffs' motion for class certification.

Beginning in February of 2016, the Firm was named as a defendant in multiple purported antitrust class actions now consolidated into a single proceeding in the United States District Court for the SDNY styled *In Re: Interest Rate Swaps Antitrust Litigation*. Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants violated U.S. and New York state antitrust laws from 2008 through December of 2016 in connection with their alleged efforts to prevent the development of electronic exchange-based platforms for interest rates swaps trading. Complaints were filed both on behalf of a purported class of investors who purchased interest rates swaps from defendants, as well as on behalf of two swap execution facilities that allegedly were thwarted by the defendants in their efforts to develop such platforms. The consolidated complaints seek, among other relief, certification of the investor class of plaintiffs and treble damages. On July 28, 2017, the court granted in part and denied in part the defendants' motion to dismiss the complaints.

The following matters were terminated during or following the quarter ended December 31, 2017:

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 and June 15, 2017. 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 rescissory damages associated with the purchase of such certificates. On July 7, 2017, the court so-ordered a stipulation of partial discontinuance dismissing claims relating to certificates having an original face value of approximately \$76 million. On January 3, 2018, the parties reached an agreement in principle to settle the litigation.

On June 2, 2015, the Firm submitted to the Environmental Protection Agency ("EPA") a self-disclosure that certain reformulated blendstock the Firm blended and sold during

2013 and 2014 potentially did not meet the applicable volatile organic compound reduction standards of the EPA's Phase II Reformulated Gasoline standard. On December 1, 2017, the parties reached an agreement to settle the litigation. On December 18, 2017, the final settlement of approximately \$1 million was approved by the District Court for the Southern District of Texas.

Mine Safety Disclosures

Not applicable.

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 15, 2018, we had 61,442 holders of record; however, we believe the number of beneficial owners of our common stock exceeds this number.

The table below sets forth, for each of the last eight quarters, the high and low 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.

	2017			2016		
	High	Low	Dividend Declared per Common Share	High	Low	Dividend Declared per Common Share
First quarter	\$ 47.33	\$ 40.06	\$ 0.20	\$ 31.70	\$ 21.16	\$ 0.15
Second quarter	45.98	40.43	0.20	28.29	23.11	0.15
Third quarter	48.90	43.84	0.25	32.44	24.57	0.20
Fourth quarter	54.25	47.42	0.25	44.04	30.96	0.20

The table below sets forth the information with respect to purchases made by or on behalf of the Firm of its common stock during the fourth quarter of the year ended December 31, 2017.

Issuer Purchases of Equity Securities

	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
<i>\$ in millions, except per share data</i>				
Month #1 (October 1, 2017-October 31, 2017)				
Share Repurchase Program ²	4,810,000	\$ 50.55	4,810,000	\$ 3,507
Employee transactions ³	312,377	\$ 48.66	—	\$ —
Month #2 (November 1, 2017-November 30, 2017)				
Share Repurchase Program ²	11,310,000	\$ 49.29	11,310,000	\$ 2,949
Employee transactions ³	189,235	\$ 49.63	—	\$ —
Month #3 (December 1, 2017-December 31, 2017)				
Share Repurchase Program ²	8,531,166	\$ 52.67	8,531,166	\$ 2,500
Employee transactions ³	194,165	\$ 52.78	—	\$ —
Quarter ended December 31, 2017				
Share Repurchase Program ²	24,651,166	\$ 50.71	24,651,166	\$ 2,500
Employee transactions ³	695,777	\$ 50.08	—	\$ —

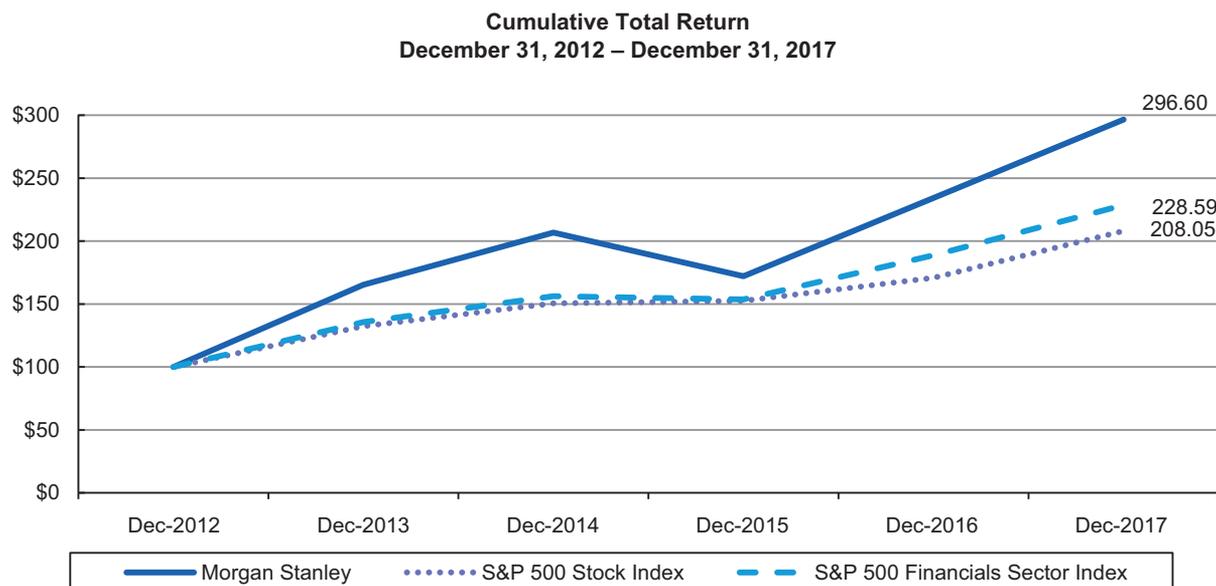
1. Share purchases under publicly announced programs are made pursuant to open-market purchases, Rule 10b5-1 plans or privately negotiated transactions (including with employee benefit plans) as market conditions warrant and at prices we deem appropriate and may be suspended at any time.

2. The Firm’s Board of Directors has authorized the repurchase of the Firm’s outstanding stock under a share repurchase program (“Share Repurchase Program”). The Share Repurchase Program is a program for capital management purposes that considers, among other things, business segment capital needs, as well as equity-based compensation and benefit plan requirements. The Share Repurchase Program has no set expiration or termination date. Share repurchases by the Firm are subject to regulatory approval. On June 28, 2017 the Board of Governors of the Federal Reserve System (“Federal Reserve”) announced that it did not object to our 2017 capital plan, which included a share repurchase of up to \$5.0 billion of the Firm’s outstanding common stock during the period beginning July 1, 2017 through June 30, 2018. During the quarter ended December 31, 2017, the Firm repurchased approximately \$1.25 billion of the Firm’s outstanding common stock as part of its Share Repurchase Program. For further information, see “Liquidity and Capital Resources—Capital Management.”

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 S&P 500 Stock Index and the S&P 500 Financials Sector Index for the last five years. The graph assumes a \$100 investment at the closing price on December 31, 2012 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,					
	2012	2013	2014	2015	2016	2017
Morgan Stanley	\$100.00	\$165.33	\$206.81	\$172.16	\$234.24	\$296.60
S&P 500 Stock Index	100.00	132.37	150.48	152.55	170.78	208.05
S&P 500 Financials Sector Index	100.00	135.59	156.17	153.73	188.69	228.59

Selected Financial Data

Income Statement Data

<i>\$ in millions</i>	2017	2016	2015	2014	2013
Revenues					
Total non-interest revenues	\$ 34,645	\$ 30,933	\$ 32,062	\$ 32,540	\$ 31,715
Interest income	8,997	7,016	5,835	5,413	5,209
Interest expense	5,697	3,318	2,742	3,678	4,431
Net interest	3,300	3,698	3,093	1,735	778
Net revenues	37,945	34,631	35,155	34,275	32,493
Non-interest expenses					
Compensation and benefits	17,166	15,878	16,016	17,824	16,277
Non-compensation expenses	10,376	9,905	10,644	12,860	11,658
Total non-interest expenses	27,542	25,783	26,660	30,684	27,935
Income from continuing operations before income taxes	10,403	8,848	8,495	3,591	4,558
Provision for (benefit from) income taxes	4,168	2,726	2,200	(90)	902
Income from continuing operations	6,235	6,122	6,295	3,681	3,656
Income (loss) from discontinued operations, net of income taxes	(19)	1	(16)	(14)	(43)
Net income	\$ 6,216	\$ 6,123	\$ 6,279	\$ 3,667	\$ 3,613
Net income applicable to redeemable non-controlling interests	—	—	—	—	222
Net income applicable to nonredeemable non-controlling interests	105	144	152	200	459
Net income applicable to Morgan Stanley	\$ 6,111	\$ 5,979	\$ 6,127	\$ 3,467	\$ 2,932
Preferred stock dividends and other	523	471	456	315	277
Earnings (loss) applicable to Morgan Stanley common shareholders	\$ 5,588	\$ 5,508	\$ 5,671	\$ 3,152	\$ 2,655
Amounts applicable to Morgan Stanley					
Income from continuing operations	\$ 6,130	\$ 5,978	\$ 6,143	\$ 3,481	\$ 2,975
Income (loss) from discontinued operations	(19)	1	(16)	(14)	(43)
Net income applicable to Morgan Stanley	\$ 6,111	\$ 5,979	\$ 6,127	\$ 3,467	\$ 2,932
Effective income tax rate from continuing operations	40.1%	30.8%	25.9%	(2.5)%	19.8%

Per Share Data

<i>in millions, except per share amounts</i>	2017	2016	2015	2014	2013
Earnings (loss) per basic common share¹					
Income from continuing operations	\$ 3.15	\$ 2.98	\$ 2.98	\$ 1.65	\$ 1.42
Income (loss) from discontinued operations	(0.01)	—	(0.01)	(0.01)	(0.03)
Earnings (loss) per basic common share	\$ 3.14	\$ 2.98	\$ 2.97	\$ 1.64	\$ 1.39
Earnings (loss) per diluted common share¹					
Income from continuing operations	\$ 3.08	\$ 2.92	\$ 2.91	\$ 1.61	\$ 1.38
Income (loss) from discontinued operations	(0.01)	—	(0.01)	(0.01)	(0.02)
Earnings (loss) per diluted common share	\$ 3.07	\$ 2.92	\$ 2.90	\$ 1.60	\$ 1.36
Book value per common share	\$ 38.52	\$ 36.99	\$ 35.24	\$ 33.25	\$ 32.24
Common shares outstanding at December 31 st	1,788	1,852	1,920	1,951	1,945
Dividends declared per common share	0.90	0.70	0.55	0.35	0.20
Average common shares outstanding					
Basic	1,780	1,849	1,909	1,924	1,906
Diluted	1,821	1,887	1,953	1,971	1,957

Balance Sheet and Other Operating Data

Trading assets	\$ 298,282	\$ 262,154	\$ 239,505	\$ 278,117	\$ 301,252
Loans ²	104,126	94,248	85,759	66,577	42,874
GLR ³	192,660	202,297	203,264	193,169	201,842
Total assets	851,733	814,949	787,465	801,510	832,702
Deposits	159,436	155,863	156,034	133,544	112,379
Borrowings	192,582	165,716	155,941	155,033	155,717
Morgan Stanley shareholders' equity	77,391	76,050	75,182	70,900	65,921
Common shareholders' equity	68,871	68,530	67,662	64,880	62,701
ROE ⁴	8.0%	8.0%	8.5%	4.8%	4.3%

GLR—Global Liquidity Reserve

- For the calculation of basic and diluted earnings (loss) per common share, see Note 16 to the financial statements.
- 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 balance sheets (see Note 7 to the financial statements).
- For a discussion of the GLR, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Liquidity Risk Management Framework—Global Liquidity Reserve."
- The calculation of ROE equals net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity. For further discussion on ROE, see "Executive Summary — Selected Non-GAAP Financial Information."

Management's Discussion and Analysis of Financial Condition and Results of Operations

Introduction

Morgan Stanley, an FHC, 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. We define the following as part of our consolidated financial statements (“financial statements”): consolidated income statements (“income statements”), consolidated balance sheets (“balance sheets”), and consolidated cash flow statements (“cash flow statements”). See the “Glossary of Common Acronyms” for definitions of certain acronyms used throughout the 2017 Form 10-K.

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 prime brokerage services, global macro, credit and commodities products. Lending services include originating and/or purchasing corporate loans, commercial and residential mortgage lending, asset-backed lending, and financing extended to equities and commodities customers and municipalities. Other services include investment and research activities.

Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small to medium-sized businesses/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,” “Business—Competition” and “Business—Supervision and Regulation,” “Risk Factors” and “Liquidity and Capital Resources—Regulatory Requirements” herein.

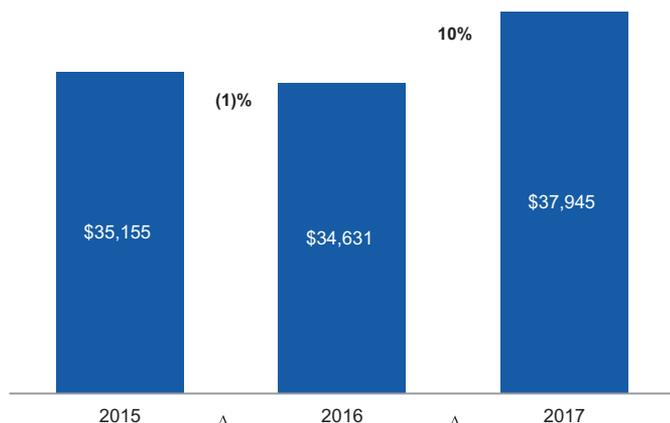
Executive Summary

Overview of Financial Results

Consolidated Results

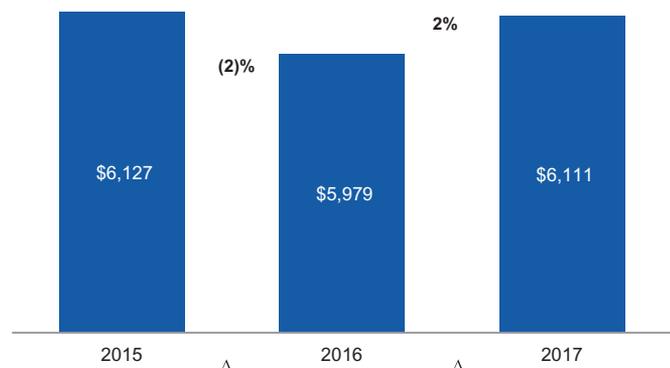
Net Revenues

(\$ in millions)

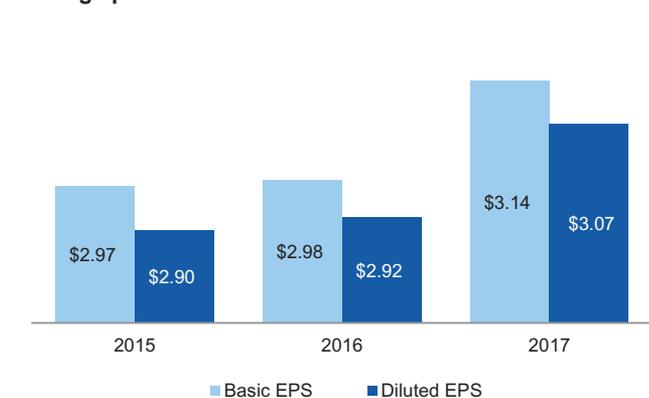


Net Income Applicable to Morgan Stanley¹

(\$ in millions)



Earnings per Common Share^{1, 2}



Financial Results on a U.S. GAAP and Adjusted Basis

\$ in millions, except per share data	2017	2016	2015
Net revenues			
U.S. GAAP	\$ 37,945	\$ 34,631	\$ 35,155
Adjusted ³	37,945	34,631	34,537
Net income applicable to Morgan Stanley			
U.S. GAAP ¹	\$ 6,111	\$ 5,979	\$ 6,127
Adjusted ³	7,079	5,911	5,164
Earnings per diluted common share			
U.S. GAAP ¹	\$ 3.07	\$ 2.92	\$ 2.90
Adjusted ³	3.60	2.88	2.41

- Subsequent to the release of the Firm’s 2017 earnings on January 18, 2018, the net discrete tax provision associated with the enactment of the Tax Act increased by \$43 million due to a change in estimate. For further discussion, see “Supplemental Financial Information and Disclosures—Income Tax Matters” herein.
- For the calculation of basic and diluted EPS, see Note 16 to the financial statements.
- Adjusted amounts exclude intermittent net discrete tax provisions (benefits) for all periods presented. For 2015, results are also adjusted to exclude DVA. For further information on the net discrete tax provisions (benefits), see “Supplemental Financial Information and Disclosures—Income Tax Matters” herein. Beginning in 2017, income tax consequences associated with employee share-based awards are recognized in Provision for income taxes in the income statements but are excluded from the intermittent net discrete tax provisions (benefits) adjustment as we anticipate conversion activity each year. See Note 2 to the financial statements on the adoption of the accounting update *Improvements to Employee Share-Based Payment Accounting*. For further information on non-GAAP measures, see “Selected Non-GAAP Financial Information” herein.

2017 Compared with 2016

- We reported net revenues of \$37,945 million in 2017 compared with \$34,631 million in 2016. For 2017, net income applicable to Morgan Stanley was \$6,111 million, or \$3.07 per diluted common share, compared with \$5,979 million, or \$2.92 per diluted common share, in 2016.
- Results for 2017 included an intermittent net discrete tax provision of \$968 million, or \$0.53 per diluted common share, primarily related to the impact of the Tax Cuts and Jobs Act (“Tax Act”), partially offset by net discrete tax benefits related to the remeasurement of reserves and related interest due to new information regarding the status of multi-year IRS tax examinations. Results for 2016 included intermittent 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 multi-year IRS tax examinations, partially offset by adjustments for other tax matters. For a further discussion of the

Tax Act and the net discrete tax benefits, see “Supplemental Financial Information and Disclosures—Income Tax Matters” herein.

- Excluding the intermittent net discrete tax items, net income applicable to Morgan Stanley was \$7,079 million, or \$3.60 per diluted common share, in 2017 compared with \$5,911 million, or \$2.88 per diluted common share, in 2016 (see “Selected Non-GAAP Financial Information” herein).

Non-interest Expenses

(\$ in millions)



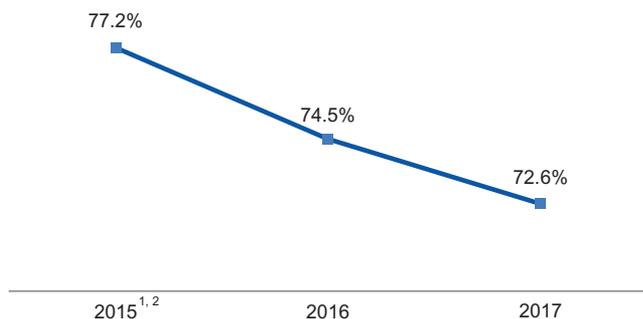
- Compensation and benefits expenses of \$17,166 million in 2017 increased 8% from \$15,878 million in 2016. The 2017 results primarily reflected increases in the formulaic payout to Wealth Management representatives linked to higher revenues, the fair value of investments to which certain deferred compensation plans are referenced, incentive compensation mainly driven by higher revenues and deferred compensation associated with carried interest in the Investment Management business segment.
- Non-compensation expenses were \$10,376 million in 2017 compared with \$9,905 million in 2016, representing a 5% increase. This increase was primarily a result of higher volume-related expenses and litigation costs.

2016 Compared with 2015

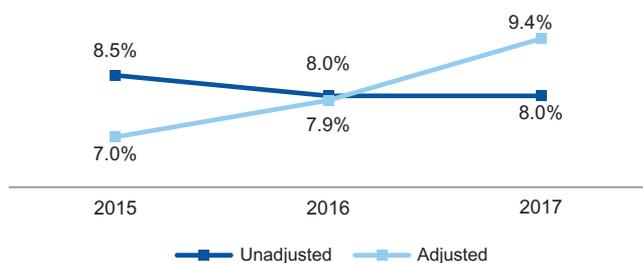
- We reported net revenues of \$34,631 million in 2016, compared with \$35,155 million in 2015. For 2016, net income applicable to Morgan Stanley was \$5,979 million, or \$2.92 per diluted common share, compared with \$6,127 million, or \$2.90 per diluted common share, in 2015.

- Results for 2016 included intermittent 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 multi-year IRS tax examinations, partially offset by adjustments for other tax matters. Results for 2015 included intermittent 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. For a further discussion of the net discrete tax benefits, 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 OCI as opposed to Trading revenues. Results for 2015 are not restated pursuant to that guidance.
- Net revenues were \$34,631 million in 2016 compared with net revenues of \$34,537 million excluding DVA in 2015. Excluding the intermittent 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 \$5,164 million, or \$2.41 per diluted common share, excluding both DVA and the intermittent net discrete tax benefits in 2015 (see “Selected Non-GAAP Financial Information” herein).
- 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 investments to which certain deferred compensation plans are referenced.
- 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.

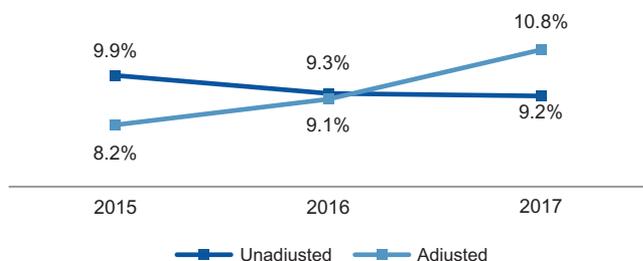
Expense Efficiency Ratio



Return on Average Common Equity^{1,3}



Return on Average Tangible Common Equity^{1,3}

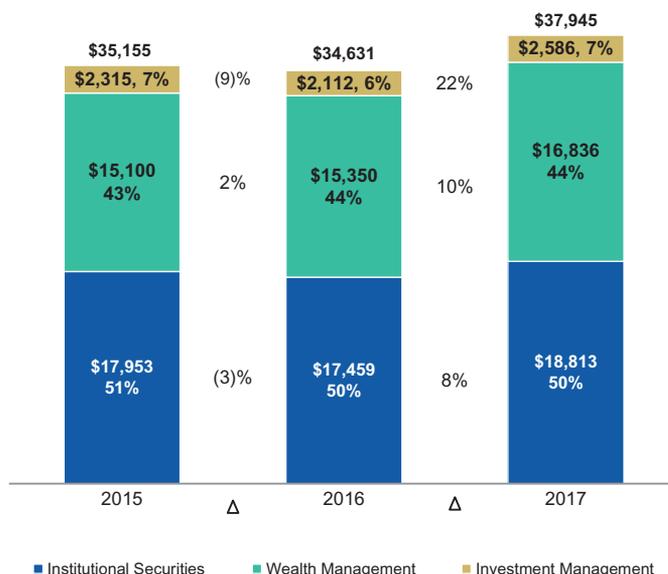


1. Represents a non-GAAP measure. See “Selected Non-GAAP Financial Information” herein.
2. The calculation used in determining the expense efficiency ratio for 2015 excludes DVA.
3. Adjusted amounts exclude intermittent net discrete tax provisions (benefits) for all periods presented. For 2015, results are also adjusted to exclude DVA. For further information on the net discrete tax provisions (benefits), see “Supplemental Financial Information and Disclosures—Income Tax Matters” herein. Beginning in 2017, income tax consequences associated with employee share-based awards are recognized in Provision for income taxes in the income statements but are excluded from the intermittent net discrete tax provisions (benefits) adjustment as we anticipate conversion activity each year. See Note 2 to the financial statements on the adoption of the accounting update *Improvements to Employee Share-Based Payment Accounting*.

Business Segment Results

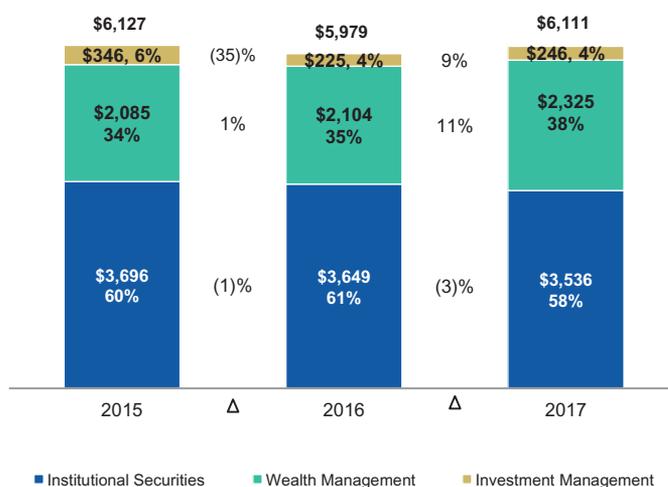
Net Revenues by Segment^{1,2}

(\$ in millions)



Net Income Applicable to Morgan Stanley by Segment^{1,3}

(\$ in millions)



1. The percentages in the charts represent the contribution of each business segment to the total. Amounts do not necessarily total to 100% due to intersegment eliminations, where applicable.
2. The total amount of Net Revenues by Segment also includes intersegment eliminations of \$(290) million in 2017, \$(290) million in 2016 and \$(213) million in 2015.
3. The total amount of Net Income Applicable to Morgan Stanley by Segment also includes intersegment eliminations of \$4 million in 2017 and \$1 million in 2016.

2017 Compared with 2016

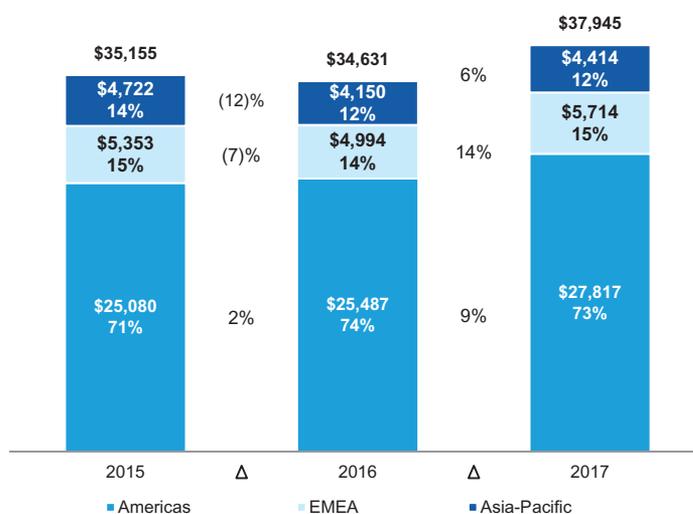
- Institutional Securities net revenues of \$18,813 million in 2017 increased 8% from 2016, primarily reflecting higher revenues from Investment banking.
- Wealth Management net revenues of \$16,836 million in 2017 increased 10% from 2016, primarily reflecting growth in Asset management revenues and Net interest income.
- Investment Management net revenues of \$2,586 million in 2017 increased 22% from 2016, primarily reflecting higher revenues from Investments and Asset management.

2016 Compared with 2015

- Institutional Securities net revenues of \$17,459 million in 2016 decreased 3% compared with \$17,953 million in 2015. The decrease was primarily a result of lower Investment banking and sales and trading revenues, which included DVA gains in 2015, 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.

Net Revenues by Region¹

(\$ in millions)



1. For a discussion of how the geographic breakdown for net revenues is determined, see Note 21 to the financial statements.

Capital Ratios

	At December 31, 2017	At December 31, 2016
Common Equity Tier 1 capital ratio ¹	16.5%	16.9%
Tier 1 capital ratio ¹	18.9%	19.0%
Total capital ratio ¹	21.7%	22.0%
Tier 1 leverage ratio	8.3%	8.4%

1. At December 31, 2017, our capital ratios are based on the Standardized Approach transitional rules. At December 31, 2016, our capital ratios were based on the Advanced Approach transitional rules. For a discussion of our regulatory capital ratios, see “Liquidity and Capital Resources—Regulatory Requirements” herein.

Selected Non-GAAP Financial Information

We prepare our financial statements using 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, Definitive Proxy Statement 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. We consider the non-GAAP financial measures we disclose to be useful to us, investors and analysts by providing further transparency about, or an alternate means of assessing, our financial condition, operating results, prospective regulatory capital requirements or capital adequacy. 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.

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

<i>\$ in millions, except per share data</i>	2017	2016	2015
Net revenues	\$ 37,945	\$ 34,631	\$ 35,155
Impact of adjustments ¹	—	—	(618)
Adjusted net revenue—non-GAAP	37,945	34,631	34,537
Net income applicable to Morgan Stanley	\$ 6,111	\$ 5,979	\$ 6,127
Impact of adjustments ¹	968	(68)	(963)
Adjusted net income applicable to Morgan Stanley—non-GAAP	7,079	5,911	5,164
Earnings per diluted common share	\$ 3.07	\$ 2.92	\$ 2.90
Impact of adjustments ¹	0.53	(0.04)	(0.49)
Adjusted earnings per diluted common share—non-GAAP	3.60	2.88	2.41
Effective income tax rate	40.1%	30.8%	25.9%
Impact of adjustments ¹	(9.3)%	0.8%	6.4%
Adjusted effective income tax rate—non-GAAP	30.8%	31.6%	32.3%

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016	Average Monthly Balance Twelve Months Ended December 31,		
			2017	2016	2015
Tangible Equity					
U.S. GAAP					
Common equity	\$ 68,871	\$ 68,530	\$ 69,787	\$ 68,870	\$ 66,936
Preferred equity	8,520	7,520	8,443	7,520	7,174
Morgan Stanley shareholders' equity	\$ 77,391	\$ 76,050	\$ 78,230	\$ 76,390	\$ 74,110
Junior subordinated debentures issued to capital trusts	—	—	—	1,753	3,640
Less: Goodwill and net intangible assets	(9,042)	(9,296)	(9,158)	(9,410)	(9,661)
Morgan Stanley tangible shareholders' equity—non-GAAP	\$ 68,349	\$ 66,754	\$ 69,072	\$ 68,733	\$ 68,089
U.S. GAAP					
Common equity	\$ 68,871	\$ 68,530	\$ 69,787	\$ 68,870	\$ 66,936
Less: Goodwill and net intangible assets	(9,042)	(9,296)	(9,158)	(9,410)	(9,661)
Tangible common equity—non-GAAP	\$ 59,829	\$ 59,234	\$ 60,629	\$ 59,460	\$ 57,275

Consolidated Non-GAAP Financial Measures

<i>\$ in billions</i>	2017	2016	2015
Average common equity			
Unadjusted	\$ 69.8	\$ 68.9	\$ 66.9
Adjusted ^{1, 2}	69.9	68.9	67.1
ROE			
Unadjusted	8.0%	8.0%	8.5%
Adjusted ^{1, 2}	9.4%	7.9%	7.0%
Average tangible common equity			
Unadjusted	\$ 60.6	\$ 59.5	\$ 57.3
Adjusted ^{1, 2}	60.7	59.5	57.5
ROTCE			
Unadjusted	9.2%	9.3%	9.9%
Adjusted ^{1, 2}	10.8%	9.1%	8.2%
Expense efficiency ratio³	72.6%	74.5%	77.2%
	At December 31, 2017	At December 31, 2016	
Tangible book value per common share⁴	\$ 33.46	\$ 31.98	

Non-GAAP Financial Measures by Business Segment

<i>\$ in billions</i>	2017	2016	2015
Pre-tax profit margin⁵			
Institutional Securities	30%	29%	26%
Wealth Management	26%	22%	22%
Investment Management	18%	14%	21%
Consolidated	27%	26%	24%
Average common equity⁶			
Institutional Securities	\$ 40.2	\$ 43.2	\$ 34.6
Wealth Management	17.2	15.3	11.2
Investment Management	2.4	2.8	2.2
Parent Company	10.0	7.6	18.9
Consolidated average common equity	\$ 69.8	\$ 68.9	\$ 66.9
ROE^{2, 7}			
Institutional Securities	7.8%	7.6%	9.9%
Wealth Management	12.9%	13.3%	16.9%
Investment Management	10.1%	7.7%	15.8%
Consolidated	8.0%	8.0%	8.5%

- Adjustments to the related U.S. GAAP figures are made to exclude intermittent net discrete tax provisions (benefits) for all periods presented. Beginning in 2017, income tax consequences associated with employee share-based awards are recognized in Provision for income taxes in the income statements but are excluded from the intermittent net discrete tax provisions (benefits) adjustment as we anticipate conversion activity each year. See Note 2 to the financial statements for information on the adoption of the accounting update *Improvements to Employee Share-Based Payment Accounting*. For 2015, results are also adjusted to exclude DVA, whereas in 2017 and 2016 unrealized DVA gains (losses) were recorded within OCI in the comprehensive income statements in accordance with the early adoption of a provision of the accounting update *Recognition and Measurement of Financial Assets and Financial Liabilities*. The effect of DVA on Net revenues and Net income applicable to Morgan Stanley in 2015 was \$618 million and \$399 million, respectively. The effect of DVA on average common equity and average tangible common equity for 2015 was \$637 million. See Note 15 to the financial statements for further information on DVA. See "Supplemental Financial Information and Disclosures—Income Tax Matters" herein for further information on the net discrete tax provisions (benefits).
- The calculations used in determining the Firm's "ROE and ROTCE Targets" are the Adjusted ROE and Adjusted ROTCE amounts shown in the previous table. ROE and ROTCE equal net income applicable to Morgan Stanley less preferred dividends as a percentage of average common equity and average tangible common equity, respectively, on a consolidated basis as indicated. When excluding intermittent net discrete tax provisions (benefits) for all periods presented and DVA for 2015, both the numerator and denominator are adjusted.
- The expense efficiency ratio represents total non-interest expenses as a percentage of net revenues. For 2015, the expense efficiency ratio is adjusted to exclude DVA.
- Tangible book value per common share equals tangible common equity divided by common shares outstanding.
- Pre-tax profit margin represents income from continuing operations before income taxes as a percentage of net revenues.
- Average common equity for each business segment is determined using our Required Capital framework (see "Liquidity and Capital Resources—Regulatory Requirements—Attribution of Average Common Equity According to the Required Capital Framework" herein).

7. The calculation of ROE by segment uses net income applicable to Morgan Stanley by segment less preferred dividends allocated to each segment as a percentage of average common equity allocated to each segment. Adjusted ROE excludes intermittent net discrete tax items by business segment for all periods presented. Adjusted ROE for 2015 also excludes DVA. Adjusted ROE for 2017: IS 8.9%, WM 15.3%, IM 13.6%; for 2016: IS 7.4%, WM 13.4%, IM 7.6%; and for 2015: IS 7.1%, WM 16.9%, IM 15.8%.

Return on Equity and Tangible Common Equity Targets

We previously established an ROE Target of 9% to 11% to be achieved by 2017. Excluding the impact of intermittent net discrete tax items, primarily related to the Tax Act, we generated a 9.4% ROE for 2017.

In January 2018, we established an ROE Target of 10% to 13% for the medium term. This is equivalent to an ROTCE Target range of 11.5% to 14.5%.

Our ROE and ROTCE Targets 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; outside legal expenses or penalties and the ability to maintain a reduced level of expenses; capital levels; and intermittent discrete tax items. Given the uncertainties surrounding these and other factors, there are significant risks that our ROE and ROTCE Targets may not be realized. Actual results may differ from our objectives 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" and "Risk Factors" for additional information regarding these forward-looking statements.

For non-GAAP measures (ROE and ROTCE), see "Selected Non-GAAP Financial Information" herein. For information on the impact of intermittent net discrete tax items, including the Tax Act, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein.

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) building, maintaining and rebalancing inventory through trades with other market participants;
- (iii) 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;
- (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.

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 agreements to repurchase and purchased with agreements to resell.

We 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. See "Compensation Expense" herein for more details.

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 financial statements). 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 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 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. Asset management revenues 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.

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 AFS securities and HTM securities), Securities borrowed or purchased under agreements to resell, Securities loaned or sold under agreements to repurchase, Loans, Deposits, and Borrowings. In addition, Net interest is a function of 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 loan commitments and 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 revenues, 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.

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.

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. 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. We make markets for our clients in equity-related securities and derivative products, including providing liquidity and hedging products. 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 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 values 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. We undertake lending activities, which include commercial and residential mortgage lending, asset-backed lending, and financing extended to municipalities. 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 and Other.* 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. Other activities include the results from the centralized management of our fixed income derivative counterparty exposures, which are primarily recorded in Trading revenues.

Other sales and trading revenues include impacts from certain central treasury functions, such as liquidity costs and gains (losses) on economic hedges related to certain borrowings, as well as certain activities associated with corporate lending.

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 and loan commitments, 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 revenues from individual and institutional investors electing a fee-based pricing arrangement and fees from Investment Management. Mutual fund distribution fees 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 AUM.

Net interest income includes interest related to bank deposits, 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, bank deposit activity, time deposits and savings deposits.

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

Investment Management

Net revenues are composed of Investments and Asset management revenues.

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. Investments revenue also contains performance fees from fund management activities in the form of carried interest that are subject to reversal.

Asset management revenues include revenues 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, not in the form of carried interest, 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.

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 the fair value of investments to which certain deferred compensation plans are referenced, 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 (*i.e.*, base salary and benefits).

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	2017	2016	2015	% Change	
				2017	2016
Revenues					
Investment banking	\$ 5,537	\$ 4,476	\$ 5,008	24%	(11)%
Trading	10,295	9,387	9,400	10%	—%
Investments	368	147	274	150%	(46)%
Commissions and fees	2,433	2,456	2,616	(1)%	(6)%
Asset management	359	293	281	23%	4%
Other	630	535	221	18%	142%
Total non-interest revenues	19,622	17,294	17,800	13%	(3)%
Interest income	5,377	4,005	3,190	34%	26%
Interest expense	6,186	3,840	3,037	61%	26%
Net interest	(809)	165	153	N/M	8%
Net revenues	18,813	17,459	17,953	8%	(3)%
Compensation and benefits	6,625	6,275	6,467	6%	(3)%
Non-compensation expenses	6,544	6,061	6,815	8%	(11)%
Total non-interest expenses	13,169	12,336	13,282	7%	(7)%
Income from continuing operations before income taxes	5,644	5,123	4,671	10%	10%
Provision for income taxes	1,993	1,318	825	51%	60%
Income from continuing operations	3,651	3,805	3,846	(4)%	(1)%
Income (loss) from discontinued operations net of income taxes	(19)	(1)	(17)	N/M	94%
Net income	3,632	3,804	3,829	(5)%	(1)%
Net income applicable to noncontrolling interests	96	155	133	(38)%	17%
Net income applicable to Morgan Stanley	\$ 3,536	\$ 3,649	\$ 3,696	(3)%	(1)%

Investment Banking

Investment Banking Revenues

\$ in millions	2017	2016	2015	% Change	
				2017	2016
Advisory	\$ 2,077	\$ 2,220	\$ 1,967	(6)%	13%
Underwriting:					
Equity	1,484	887	1,398	67%	(37)%
Fixed income	1,976	1,369	1,643	44%	(17)%
Total underwriting	3,460	2,256	3,041	53%	(26)%
Total investment banking	\$ 5,537	\$ 4,476	\$ 5,008	24%	(11)%

Investment Banking Volumes

\$ in billions	2017	2016	2015
Completed mergers and acquisitions ¹	\$ 733	\$ 1,021	\$ 664
Equity and equity-related offerings ^{2, 3}	65	45	67
Fixed income offerings ^{2, 4}	260	236	254

Source: Thomson Reuters, data at January 2, 2018. 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.

1. Amounts include transactions of \$100 million or more. Completed mergers and acquisitions volumes are based on full credit to each of the advisors in a transaction.
2. 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.
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 issuances. Amounts exclude leveraged loans and self-led issuances.

2017 Compared with 2016

Investment banking revenues of \$5,537 million in 2017 increased 24% from 2016 due to higher underwriting revenues, partially offset by lower advisory revenues.

- Advisory revenues decreased reflecting the lower volumes of completed M&A (see Investment Banking Volumes table), partially offset by the positive impact of higher fee realizations.
- Equity underwriting revenues increased as a result of higher global market volumes in both follow-on and initial public offerings (see Investment Banking Volumes table) combined with a higher share of fees. Fixed income underwriting revenues increased due to higher bond fees and non-investment grade loan fees.

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 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.

Sales and Trading Net Revenues

By Income Statement Line Item

\$ in millions	2017	2016	2015	% Change	
				2017	2016
Trading	\$ 10,295	\$ 9,387	\$ 9,400	10%	—%
Commissions and fees	2,433	2,456	2,616	(1)%	(6)%
Asset management	359	293	281	23%	4%
Net interest	(809)	165	153	N/M	8%
Total	\$ 12,278	\$ 12,301	\$ 12,450	N/M	(1)%

By Business

\$ in millions	2017	2016	2015	% Change	
				2017	2016
Equity—U.S. GAAP	\$ 7,982	\$ 8,037	\$ 8,288	(1)%	(3)%
Impact of DVA ¹	—	—	(163)	—%	N/M
Equity—non-GAAP	\$ 7,982	\$ 8,037	\$ 8,125	(1)%	(1)%
Fixed Income—U.S. GAAP ²	\$ 4,928	\$ 5,117	\$ 4,758	(4)%	8%
Impact of DVA ¹	—	—	(455)	—%	N/M
Fixed income—non-GAAP	\$ 4,928	\$ 5,117	\$ 4,303	(4)%	19%
Other—U.S. GAAP	(632)	(853)	(596)	26%	(43)%
Total—U.S. GAAP	\$ 12,278	\$ 12,301	\$ 12,450	—%	(1)%
Total—Impact of DVA	—	—	(618)	—%	N/M
Total	\$ 12,278	\$ 12,301	\$ 11,832	—%	4%

1. In 2017 and 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 comprehensive income statements. In 2015, the DVA gains (losses) were recorded within Trading revenues in the income statements. For further information, see "Selected Non-GAAP Financial Information" herein and Note 15 to the financial statements.
2. Effective in 2016, the Institutional Securities "Fixed Income and Commodities" business has been renamed the "Fixed Income" business.

\$ in millions	2017			
	Trading	Fees ¹	Net Interest ²	Total
Financing	\$ 4,140	\$ 363	\$ (762)	\$ 3,741
Execution services	2,294	2,191	(244)	4,241
Total Equity	\$ 6,434	\$ 2,554	\$ (1,006)	\$ 7,982
Total Fixed income	\$ 4,453	\$ 238	\$ 237	\$ 4,928

\$ 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

2015

\$ in millions	2015			Total
	Trading	Fees ¹	Net Interest ²	
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

1. Includes Commissions and fees and Asset management revenues.
2. Funding costs are allocated to the businesses based on funding usage and are included in Net interest.
3. In 2017 and 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 comprehensive income statements. In 2015, the DVA gains (losses) were recorded within Trading revenues in the income statements. For further information, see "Selected Non-GAAP Financial Information" herein and Note 15 to the financial statements.

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 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 financial statements.

2017 Compared with 2016

Equity

Equity sales and trading net revenues of \$7,982 million in 2017 decreased 1% from 2016, reflecting lower results in execution services.

- Financing revenues remained relatively unchanged from 2016. The results reflected higher client activity in equity swaps reflected in Trading revenues, offset by a decline in Net interest revenues from higher net interest costs, reflecting the business' increased portion of GLR requirements and a shift in the mix of financing transactions.

- Execution services decreased from 2016, primarily reflecting lower results in derivatives products mainly driven by lower corporate activity and volatility, partially offset by higher gains on cash equity products recorded in Trading revenues.

Fixed Income

Fixed income net revenues of \$4,928 million in 2017 were 4% lower than in 2016, driven by lower results in global macro products, partially offset by higher results in credit products, and commodities products and other.

- Global macro products decreased primarily due to the lack of a constructive market environment, inventory positioning, and lower client activity reflected in both Trading and Net interest.
- Credit products increased primarily due to the absence of losses driven by a widening spread environment in 2016 and increased securitization activity reflected in Trading revenues, partially offset by reduced Net interest revenues. Net interest revenues decreased as a result of a lower level of interest realized in securitized products and lower net interest spreads, partially offset by increased lending activity.
- Commodities products and Other increased primarily due to higher revenues in other lending and OTC client clearing.

Other

- Other sales and trading net losses of \$632 million in 2017 decreased from 2016, primarily reflecting lower losses associated with corporate loan hedging activity and increases in the fair value of investments to which certain deferred compensation plans are referenced, partially offset by higher funding costs.

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 in 2015.

- 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 GLR 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 in 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 Noncontrolling Interests—2016 Compared with 2015—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.

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

2017 Compared with 2016

Investments

- Net investment gains of \$368 million in 2017 increased from 2016 as a result of higher gains on business-related and real estate investments. In addition, in 2017, we recorded gains on investments to which certain deferred compensation plans are referenced compared with losses in 2016.

Other

- Other revenues of \$630 million in 2017 increased from 2016, primarily reflecting a decrease in the provision on loans held for investment and higher results from other investments, partially offset by lower mark-to-market gains on loans held for sale.

Non-interest Expenses

Non-interest expenses of \$13,169 million in 2017 increased from 2016, primarily reflecting a 6% increase in Compensation and benefits expenses and an 8% increase in Non-compensation expenses in 2017.

- Compensation and benefits expenses increased in 2017, primarily due to increases in the fair value of investments to which certain deferred compensation plans are referenced, and incentive compensation driven mainly by higher revenues.
- Non-compensation expenses increased in 2017, primarily due to higher volume-related expenses and litigation costs related to legacy RMBS matters.

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 to which certain deferred compensation plans are referenced in 2016 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 financial statements 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 investments to which certain deferred compensation plans are referenced.

- 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 CDS antitrust litigation matter and legacy RMBS.

Income Tax Items

In 2017, we recognized in Provision for income taxes an intermittent net discrete tax provision of \$471 million. This net discrete tax provision included an approximate \$705 million impact from the Tax Act, partially offset by net discrete tax benefits primarily associated with the remeasurement of reserves and related interest due to new information regarding the status of multi-year IRS tax examinations. For a further discussion of the Tax Act and other discrete items, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein and Note 21 to the financial statements.

In 2016, we recognized in Provision for income taxes intermittent 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 multi-year IRS tax examinations, partially offset by adjustments for other tax matters.

In 2015, we recognized in Provision for income taxes intermittent 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 U.K.

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.

Noncontrolling Interests

Noncontrolling interests primarily relate to MUFG's interest in Morgan Stanley MUFG Securities Co. Ltd. ("MSMS").

Wealth Management

Income Statement Information

\$ in millions	2017	2016 ¹	2015 ¹	% Change	
				2017	2016
Revenues					
Investment banking	\$ 533	\$ 484	\$ 623	10%	(22)%
Trading	848	861	731	(2)%	18%
Investments	3	—	18	N/M	N/M
Commissions and fees	1,737	1,745	1,981	—%	(12)%
Asset management	9,342	8,454	8,536	11%	(1)%
Other	268	277	255	(3)%	9%
Total non-interest revenues	12,731	11,821	12,144	8%	(3)%
Interest income	4,591	3,888	3,105	18%	25%
Interest expense	486	359	149	35%	141%
Net interest	4,105	3,529	2,956	16%	19%
Net revenues	16,836	15,350	15,100	10%	2%
Compensation and benefits					
	9,360	8,666	8,595	8%	1%
Non-compensation expenses					
	3,177	3,247	3,173	(2)%	2%
Total non-interest expenses					
	12,537	11,913	11,768	5%	1%
Income from continuing operations before income taxes					
	4,299	3,437	3,332	25%	3%
Provision for income taxes					
	1,974	1,333	1,247	48%	7%
Net income applicable to Morgan Stanley					
	\$ 2,325	\$ 2,104	\$ 2,085	11%	1%

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"). Results prior to the Fixed Income Integration have not been recast for this new intersegment agreement due to immateriality.

Financial Information and Statistical Data

\$ in billions	At		
	December 31, 2017	December 31, 2016	
Client assets	\$ 2,373	\$ 2,103	
Fee-based client assets ¹	\$ 1,045	\$ 877	
Fee-based client assets as a percentage of total client assets	44%	42%	
Client liabilities ²	\$ 80	\$ 73	
Investment securities portfolio	\$ 59.2	\$ 63.9	
Loans and lending commitments	\$ 77.3	\$ 68.7	
Wealth Management representatives	15,712	15,763	
	2017	2016	2015
Revenues per representative (dollars in thousands) ³	\$ 1,068	\$ 968	\$ 950
Client assets per representative (dollars in millions) ⁴	\$ 151	\$ 133	\$ 125
Fee-based asset flows ⁵ (dollars in billions)	\$ 75.4	\$ 48.5	\$ 46.3

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	2017	2016	2015	% Change	
				2017	2016
Investment banking	\$ 533	\$ 484	\$ 623	10%	(22)%
Trading	848	861	731	(2)%	18%
Commissions and fees	1,737	1,745	1,981	—%	(12)%
Total	\$ 3,118	\$ 3,090	\$ 3,335	1%	(7)%
Transactional revenues as a % of Net revenues	19%	20%	22%		

2017 Compared with 2016

Net Revenues

Transactional Revenues

Transactional revenues of \$3,118 million in 2017 were relatively unchanged from 2016, as increased Investment banking revenues were offset by decreased Trading revenues.

- Investment banking revenues increased in 2017, primarily due to higher revenues from structured products and equity syndicate activities, partially offset by lower preferred stock syndicate activity.
- Trading revenues decreased in 2017, primarily due to lower revenues related to the Fixed Income Integration and lower client activity in fixed income products, partially offset by gains on investments to which certain deferred compensation plans are referenced.
- Commissions and fees were relatively unchanged in 2017 compared with 2016.

Asset Management

Asset management revenues of \$9,342 million in 2017 increased 11% compared with 2016, primarily due to market appreciation and net positive flows. These increases were partially offset by decreases in average fee rates across all account types.

See “Fee-Based Client Assets” herein for more details.

Net Interest

Net interest of \$4,105 million in 2017 increased 16% compared with 2016, primarily due to higher loan balances and higher interest rates, partially offset by higher interest expense on deposits.

Other

Other revenues of \$268 million in 2017 decreased 3% compared with 2016, primarily due to lower realized gains from the AFS securities portfolio.

Non-interest Expenses

Non-interest expenses of \$12,537 million in 2017 increased 5% compared with 2016 due to higher Compensation and benefits expenses, partially offset by a decrease in Non-compensation expenses.

- Compensation and benefits expenses increased in 2017, primarily due to the formulaic payout to Wealth Management representatives linked to higher revenues, and due to increases in the fair value of investments to which certain deferred compensation plans are referenced.
- Non-compensation expenses decreased in 2017, primarily due to the absence of a \$70 million provision recorded in 2016 related to certain brokerage service reporting activities (see prior year explanation for “Non-interest Expenses” herein) and lower litigation and information processing costs, partially offset by higher consulting fees related to strategic initiatives and higher FDIC insurance expenses.

2016 Compared with 2015

Net Revenues

Transactional Revenues

Transactional revenues of \$3,090 million in 2016 decreased 7% compared with 2015, 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, and equity and structured products.
- Trading revenues increased in 2016, primarily due to gains on investments to which certain employee deferred compensation plans are referenced 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 revenues of \$8,454 million in 2016 decreased 1% compared with 2015, 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” herein for more details.

Net Interest

Net interest of \$3,529 million in 2016 increased 19% compared with 2015, primarily due to higher loan balances and investment portfolio yields.

Other

Other revenues of \$277 million in 2016 increased 9% compared with 2015 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% compared with 2015.

- Compensation and benefits expenses increased in 2016, primarily due to an increase in the fair value of investments to which certain deferred compensation plans are referenced.

Management's Discussion and Analysis

Morgan Stanley

- Non-compensation expenses increased in 2016, primarily as a result of a \$70 million provision related to identified operational issues that resulted in the reporting of incorrect cost basis tax information to the IRS and retail brokerage clients for tax years 2011 through 2016.

Income Tax Items

In 2017, we recognized in Provision for income taxes an intermittent net discrete tax provision of \$411 million, which included approximately \$402 million related to the enactment of the Tax Act. For a discussion of the Tax Act, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein. For the impact of other discrete tax items, see Note 21 to the financial statements.

Fee-Based Client Assets

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 line on our 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.

Fee-Based Client Assets Rollforward

\$ in billions	At December 31, 2016		Market December 31, 2017		At December 31, 2017
	Inflows	Outflows	Inflows	Outflows	
Separately managed ^{1, 2}	\$ 222	\$ 39	(\$ 21)	\$ 12	252
Unified managed ²	204	47	(30)	29	250
Mutual fund advisory	21	2	(4)	2	21
Advisor	125	34	(25)	15	149
Portfolio manager	285	74	(41)	35	353
Subtotal	\$ 857	\$ 196	(\$ 121)	\$ 93	1,025
Cash management	20	13	(13)	—	20
Total fee-based client assets	\$ 877	\$ 209	(\$ 134)	\$ 93	1,045

\$ in billions	At December 31, 2015		Market December 31, 2016		At December 31, 2016
	Inflows	Outflows	Inflows	Outflows	
Separately managed ¹	\$ 283	\$ 33	(\$ 97)	\$ 3	222
Unified managed	105	107	(17)	9	204
Mutual fund advisory	25	2	(6)	—	21
Advisor	115	31	(26)	5	125
Portfolio manager	252	63	(41)	11	285
Subtotal	\$ 780	\$ 236	(\$ 187)	\$ 28	857
Cash management	15	14	(9)	—	20
Total fee-based client assets	\$ 795	\$ 250	(\$ 196)	\$ 28	877

\$ in billions	At December 31, 2014		Market December 31, 2015		At December 31, 2015
	Inflows	Outflows	Inflows	Outflows	
Separately managed ¹	\$ 285	\$ 42	(\$ 32)	(\$ 12)	283
Unified managed	93	29	(14)	(3)	105
Mutual fund advisory	31	3	(6)	(3)	25
Advisor	119	29	(25)	(8)	115
Portfolio manager	241	58	(38)	(9)	252
Subtotal	\$ 769	\$ 161	(\$ 115)	(\$ 35)	780
Cash management	16	9	(10)	—	15
Total fee-based client assets	\$ 785	\$ 170	(\$ 125)	(\$ 35)	795

Average Fee Rates³

Fee rate in bps	2017	2016	2015
Separately managed ²	17	34	40
Unified managed ²	99	107	114
Mutual fund advisory	120	121	122
Advisor	86	88	90
Portfolio manager	97	101	105
Subtotal	77	79	81
Cash management	6	6	6
Total fee-based client assets	76	77	80

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.
2. A shift in client assets of approximately \$66 billion in the fourth quarter of 2016 from separately managed accounts to unified managed accounts resulted in a lower average fee rate for those platforms but did not impact the average fee rate for total fee-based client assets.
3. Certain data enhancements made in the first quarter of 2017 resulted in a modification to the fee rate calculations. Prior periods have been restated to reflect the revised calculations.

- *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 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 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.
- *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.
- *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	2017	2016	2015	% Change	
				2017	2016
Revenues					
Investment banking	\$ —	\$ —	\$ 1	—%	(100)%
Trading	(22)	(2)	(1)	N/M	(100)%
Investments	449	13	249	N/M	(95)%
Commissions and fees	—	3	1	(100)%	200%
Asset management	2,196	2,063	2,049	6%	1%
Other	(37)	31	32	N/M	(3)%
Total non-interest revenues	2,586	2,108	2,331	23%	(10)%
Interest income	4	5	2	(20)%	150%
Interest expense	4	1	18	N/M	(94)%
Net interest	—	4	(16)	(100)%	125%
Net revenues	2,586	2,112	2,315	22%	(9)%
Compensation and benefits	1,181	937	954	26%	(2)%
Non-compensation expenses	949	888	869	7%	2%
Total non-interest expenses	2,130	1,825	1,823	17%	—%
Income from continuing operations before income taxes	456	287	492	59%	(42)%
Provision for income taxes	201	75	128	168%	(41)%
Income from continuing operations	255	212	364	20%	(42)%
Income from discontinued operations, net of income taxes	—	2	1	(100)%	100%
Net income	255	214	365	19%	(41)%
Net income (loss) applicable to noncontrolling interests	9	(11)	19	182%	(158)%
Net income applicable to Morgan Stanley	\$ 246	\$ 225	\$ 346	9%	(35)%

2017 Compared with 2016

Net Revenues

Investments

- Investments gains of \$449 million in 2017 compared with \$13 million in 2016 reflected higher carried interest and performance gains in all asset classes.

Asset Management

- Asset management revenues of \$2,196 million increased 6% compared with 2016, primarily as a result of higher average AUM across all asset classes. This increase was partially offset by lower effective fee rates in Alternative/Other due to a shift in product mix and the absence of fees recognized in 2016 related to the completion of certain fund raisings.

See “Assets under Management or Supervision” herein.

Other

- Other losses of \$37 million were recognized in 2017 compared with other revenues of \$31 million in 2016, primarily as a result of an impairment of an equity method investment in a third-party asset manager.

Non-interest Expenses

Non-interest expenses of \$2,130 million in 2017 increased 17% compared with 2016.

- Compensation and benefits expenses increased in 2017 due to higher incentive compensation, increases in deferred compensation associated with carried interest, and increases in the fair value of investments to which certain deferred compensation plans are referenced.
- Non-compensation expenses increased in 2017, primarily due to higher brokerage, clearing and exchange fees.

2016 Compared with 2015

Net Revenues

Investments

- Investments gains of \$13 million in 2016 decreased 95% from 2015, 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

- Asset management revenues of \$2,063 million in 2016 were relatively unchanged from 2015, as increases in management fees resulting from higher AUM and average fee rates in certain products were offset by lower performance fees.

See “Assets under Management or Supervision” herein.

Non-interest Expenses

Non-interest expenses of \$1,825 million in 2016 were relatively unchanged from 2015, 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.

Income Tax Items

In 2017, we recognized in Provision for income taxes an intermittent net discrete tax provision of \$86 million, which included approximately \$94 million related to the enactment of the Tax Act. For a discussion of the Tax Act, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein. For the impact of other discrete tax items, see Note 21 to the financial statements.

Assets under Management or Supervision

AUM Rollforwards

\$ in billions	At December 31, 2016		Inflows	Outflows	Market Impact	Other	At December 31, 2017	
	\$						\$	\$
Equity	\$ 79	\$ 23	\$ (21)	\$ 23	\$ 1	\$	\$	105
Fixed income	60	27	(21)	4	3			73
Liquidity	163	1,239	(1,227)	1	—			176
Alternative/Other	115	24	(18)	8	(1)			128
Total AUM	\$ 417	\$1,313	\$ (1,287)	\$ 36	\$ 3	\$	\$	482
Shares of minority stake assets	8							7

\$ in billions	At December 31, 2015		Inflows	Outflows	Market Impact	Other	At December 31, 2016	
	\$						\$	\$
Equity	\$ 83	\$ 19	\$ (24)	\$ 1	\$ —	\$	\$	79
Fixed income	60	25	(26)	2	(1)			60
Liquidity	149	1,325	(1,310)	—	(1)			163
Alternative/Other	114	27	(27)	4	(3)			115
Total AUM	\$ 406	\$1,396	\$ (1,387)	\$ 7	\$ (5)	\$	\$	417
Shares of minority stake assets	8							8

\$ in billions	At December 31, 2014		Inflows ¹	Outflows	Market Impact	Other	At December 31, 2015	
	\$						\$	\$
Equity	\$ 99	\$ 15	\$ (30)	\$ —	\$ (1)	\$	\$	83
Fixed income	65	21	(23)	(1)	(2)			60
Liquidity	128	1,259	(1,238)	—	—			149
Alternative/Other	111	28	(18)	—	(7)			114
Total AUM	\$ 403	\$1,323	\$ (1,309)	\$ (1)	\$ (10)	\$	\$	406
Shares of minority stake assets	7							8

Average AUM

\$ in billions	2017	2016	2015
Equity	\$ 93	\$ 81	\$ 93
Fixed income	66	61	63
Liquidity	157	151	136
Alternative/Other	122	115	113
Total AUM	\$ 438	\$ 408	\$ 405
Shares of minority stake assets	7	8	7

Average Fee Rate

Fee rate in bps	2017	2016	2015
Equity	73	72	69
Fixed income	33	32	32
Liquidity	17	18	10
Alternative/Other	70	75	79
Total AUM	46	47	46

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. Inflows exclude 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. Outflows exclude the impact of exchanges occurring, whereby a client changes positions within the same asset class.
- *Market impact*—includes realized and unrealized gains and losses on portfolio investments. This excludes any funds where market impact does not impact management fees.
- *Other*—contains both distributions and foreign currency impact. 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. Foreign currency impact reflects foreign currency changes for non-U.S. dollar denominated funds.
- *Alternative/Other*—asset class includes products in fund of funds, real assets, 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.
- *Average fee rate*—based on Asset management revenues, 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 income statements.

Supplemental Financial Information and Disclosures

Income Tax Matters

Effective Tax Rate from Continuing Operations

	2017	2016	2015
U.S. GAAP	40.1%	30.8%	25.9%
Adjusted effective income tax rate— non-GAAP ¹	30.8%	31.6%	32.3%

1. Beginning in 2017, income tax consequences associated with employee share-based awards are recognized in Provision for income taxes in the income statements but are excluded from the intermittent net discrete tax provisions (benefits) adjustment as we anticipate conversion activity each year. See Note 2 to the financial statements on the adoption of the accounting update *Improvements to Employee Share-Based Payment Accounting*. For 2015, adjusted effective income tax rate also excludes DVA. For further information on non-GAAP measures, see "Selected Non-GAAP Financial Information" herein.

2017

The effective tax rate from continuing operations for 2017 included an intermittent net discrete tax provision of \$968 million, primarily related to the impact of the Tax Act, partially offset by net discrete tax benefits primarily associated with the remeasurement of reserves and related interest due to new information regarding the status of multi-year IRS tax examinations.

The Tax Act, enacted on December 22, 2017, significantly revised U.S. corporate income tax law by, among other things, reducing the corporate income tax rate to 21%, and implementing a modified territorial tax system that includes a one-time transition tax on deemed repatriated earnings of non-U.S. subsidiaries; imposes a minimum tax on global intangible low-taxed income ("GILTI") and an alternative base erosion and anti-abuse tax ("BEAT") on U.S. corporations that make deductible payments to non-U.S. related persons in excess of specified amounts; and broadens the tax base by partially or wholly eliminating tax deductions for certain historically deductible expenses (e.g., FDIC premiums and executive compensation).

We recorded an approximate \$1.2 billion net discrete tax provision as a result of the enactment of the Tax Act, primarily from the remeasurement of certain deferred tax assets using the lower enacted corporate tax rate. This provision incorporates the best available information as of the enactment date as well as assumptions made based upon our current interpretation of the Tax Act. Our estimates may change as we receive additional clarification and implementation guidance from the U.S. Treasury Department and as the interpretation of the Tax Act evolves over time. The ultimate

impact of the income tax effects of the Tax Act will be determined in connection with the preparation of our U.S. consolidated federal income tax return.

Taking into account our current assumptions, estimates and interpretations related to the Tax Act and other factors, we expect our effective tax rate from continuing operations for 2018 to be approximately 22% to 25%, depending on factors such as the geographic mix of earnings and employee share-based awards (see "Forward-Looking Statements").

Subsequent to the release of the Firm's 2017 earnings on January 18, 2018, certain estimates related to the net discrete tax provision associated with the enactment of the Tax Act were revised, resulting in a \$43 million increase in the Provision for income taxes and a reallocation of impacts among segments. This decreased diluted EPS and diluted EPS from continuing operations by \$0.03 and \$0.02 in the fourth quarter and year ended December 31, 2017, respectively. On a business segment basis, the change resulted in an \$89 million increase in Provision for income taxes for Wealth Management, a \$45 million decrease for Institutional Securities, and a \$1 million decrease for Investment Management.

2016

The effective tax rate from continuing operations for 2016 included intermittent 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 multi-year IRS tax examinations, partially offset by adjustments for other tax matters.

2015

The effective tax rate from continuing operations for 2015 included intermittent 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.

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 and 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 client base. For a further discussion of our credit risks, see “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk.” For further discussion about loans and lending commitments, see Notes 7 and 12 to the financial statements.

U.S. Bank Subsidiaries’ Supplemental Financial Information¹

<i>\$ in billions</i>	At December 31, 2017	At December 31, 2016
Assets ²	\$ 185.3	\$ 176.8
Investment securities portfolio:		
Investment securities—AFS	42.0	50.3
Investment securities—HTM	17.5	13.6
Total investment securities	\$ 59.5	\$ 63.9
Deposits ³	\$ 159.1	\$ 154.7
Wealth Management		
Securities-based lending and other loans ⁴	\$ 41.2	\$ 36.0
Residential real estate loans	26.7	24.4
Total	\$ 67.9	\$ 60.4
Institutional Securities		
Corporate loans	\$ 24.2	\$ 20.3
Wholesale real estate loans	12.2	9.9
Total	\$ 36.4	\$ 30.2

1. Amounts exclude transactions with the Parent Company and between the bank subsidiaries.
2. Prior period amounts have been revised to conform to the current presentation.
3. For further information on deposits, see “Liquidity and Capital Resources—Funding Management—Unsecured Financing” herein.
4. Other loans primarily include tailored lending.

Accounting Development Updates

The Financial Accounting Standards Board has issued certain accounting updates that apply to us. 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 financial statements.

The following accounting update was adopted on January 1, 2018.

- *Revenue from Contracts with Customers.* This accounting update aims to clarify the principles of revenue recognition, develop a common revenue recognition standard across all industries for U.S. GAAP and 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. The update is not applicable to financial instruments.

We applied the modified retrospective method of adoption which resulted in an immaterial impact to Retained earnings as of January 1, 2018.

This accounting update will change the presentation of certain costs related to underwriting and advisory activities so that such costs will be recorded in the relevant non-compensation expense line item versus the current practice of netting such costs against Investment banking revenues. This change is estimated to gross up Investment banking revenues and non-compensation expenses for the Institutional Securities business segment by approximately 5%. Similarly, certain costs related to the selling and distribution of investment funds will no longer be netted against Asset management revenues, and therefore is expected to result in a gross-up of such revenues by less than 5% and non-compensation expenses by less than 10% for the Investment Management business segment. These changes will not have an impact on net income.

In addition, the timing of the recognition of certain performance fees from fund management activities, not in the form of carried interest, is generally expected to be deferred within a fiscal year until the fees are no longer probable of being reversed. Thus, the recognition of a greater portion of such revenues are expected to be recognized in the second half of each fiscal year based on current fee arrangements. These revenues are recorded in Asset management revenues within the Investment Management business segment, which approximated \$80 million in 2017 and were recognized throughout the year.

The recognition of performance fees from fund management activities in the form of carried interest that are subject to reversal will remain essentially unchanged. We will apply the equity method of accounting to such carried interest, thus excluding them from the scope of this standard.

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

- *Hedge Accounting.* This accounting update aims to better align the hedge accounting requirements with an entity’s risk management strategies and improve the financial reporting of hedging relationships. It will also result in simplification of the application of hedge accounting related to the assessment of hedge effectiveness. This update is effective as of January 1, 2019 with early adoption permitted.

Currently, we plan to early adopt this accounting update in the first quarter of 2018 and estimate that the resulting transition adjustment to 2018 opening retained earnings would not be significant. This adjustment would represent the cumulative effect of applying the new rules from the inception of certain fair value hedges of the interest rate risk of our borrowings, in particular the provision allowing only the benchmark rate component of coupon cash flows to be hedged.

- *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.* This accounting update allows companies the option to reclassify from AOCI to retained earnings the stranded tax effects that resulted from the remeasurement of and other adjustments to deferred tax assets and liabilities upon enactment of the Tax Act. The total impact of the remeasurement and other adjustments was reflected in 2017 income from continuing operations, regardless of where deferred taxes were originally recorded. This update is effective as of January 1, 2019 with early adoption permitted. For a discussion of the Tax Act, see "Supplemental Financial Information and Disclosures—Income Tax Matters" herein.
- *Leases.* This accounting update requires lessees to recognize in 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 with early adoption permitted.
- *Financial Instruments—Credit Losses.* This accounting update impacts the impairment model for certain financial assets measured at amortized cost by requiring a CECL methodology to estimate expected credit losses over the entire life of the financial asset, recorded at inception or purchase. CECL will replace the loss model currently applicable to loans held for investment, HTM securities and other receivables carried at amortized cost.

The update also eliminates the concept of other-than-temporary impairment for AFS securities. Impairments on AFS securities will be required to be recognized in earnings through an allowance, when the fair value is less than amortized cost and a credit loss exists or the securities are expected to be sold before recovery of amortized cost.

Under the update, there may be an ability to determine there are no expected credit losses in certain circumstances, e.g., based on collateral arrangements for lending and financing transactions or based on the credit quality of the borrower or issuer.

Overall, the amendments in this update are expected to accelerate the recognition of credit losses for portfolios where CECL models will be applied. This update is effective as of January 1, 2020 with early adoption permitted as of January 1, 2019.

Critical Accounting Policies

Our financial statements are prepared in accordance with U.S. GAAP, which requires us to make estimates and assumptions (see Note 1 to the financial statements). We believe that of our significant accounting policies (see Note 2 to the financial statements), 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 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 Securities sold under agreements to repurchase;
- Certain Other secured financings; and
- Certain 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 financial statements.

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 financial statements.

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

At December 31, 2017 and December 31, 2016, 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 financial statements 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 financial statements for additional information regarding our valuation policies, processes and procedures.

Goodwill and Intangible Assets

Goodwill

Evaluating goodwill for impairment requires management to make significant judgments. Goodwill impairment tests are performed 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.

We test goodwill for impairment on an annual basis as of July 1 and on an interim basis when certain events or circumstances exist.

For both the annual and interim tests, we have the option to either (a) perform a quantitative impairment test or (b) first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, in which case the quantitative test would be performed.

When performing a quantitative impairment test, we compare the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit is less than its carrying amount, the goodwill impairment loss is equal to the lesser of the excess of the carrying value over the fair value or the carrying amount of goodwill allocated to that reporting unit.

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 lives 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 financial statements 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 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 financial statements 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 financial statements for additional information on our significant assumptions, judgments and interpretations associated with the accounting for income taxes and Note 20 to the financial statements for additional information on our tax examinations.

Liquidity and Capital Resources

Senior management, with oversight by the Asset and Liability Management Committee and the Board of Directors ("Board"), establishes and maintains our 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 ("FRC"), 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 balance sheet, liquidity and capital structure. Liquidity and capital matters are reported regularly to the Board and the Risk Committee of the Board ("BRC").

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 and business segment 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

\$ in millions	At December 31, 2017			
	IS	WM	IM	Total
Assets				
Cash and cash equivalents ¹	\$ 63,597	\$ 16,733	\$ 65	\$ 80,395
Trading assets at fair value	295,678	59	2,545	298,282
Investment securities	19,556	59,246	—	78,802
Securities purchased under agreements to resell	74,732	9,526	—	84,258
Securities borrowed	123,776	234	—	124,010
Customer and other receivables	36,803	18,763	621	56,187
Loans, net of allowance	36,269	67,852	5	104,126
Other assets ²	14,563	9,596	1,514	25,673
Total assets	\$ 664,974	\$ 182,009	\$ 4,750	\$ 851,733

\$ in millions	At December 31, 2016			
	IS	WM	IM	Total
Assets				
Cash and cash equivalents ^{1,3}	\$ 56,190	\$ 21,102	\$ 68	\$ 77,360
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 ^{2,3}	15,042	10,788	1,614	27,444
Total assets	\$629,149	\$181,135	\$4,665	\$814,949

IS—Institutional Securities

WM—Wealth Management

IM—Investment Management

1. Cash and cash equivalents includes Cash and due from banks, Interest bearing deposits with banks and Restricted cash.

2. Other assets primarily includes Goodwill, Intangible assets, premises, equipment, software, other investments, and deferred tax assets.

3. Prior period amounts have been revised to conform to the current presentation.

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 \$851.7 billion at December 31, 2017 from \$814.9 billion at December 31, 2016, primarily due to increases within the Institutional Securities business segment to support client activity, including increased trading assets such as corporate equities and other sovereign government obligations, as well as customer and other receivables resulting from client activity. Lending

activity increased across both the Wealth Management and Institutional Securities loan portfolios. These increases were partially offset by reductions in securities purchased under agreements to resell and other types of investments in the GLR. For further information regarding our GLR, see “Global Liquidity Reserve” herein.

Securities Repurchase Agreements and Securities Lending

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

Collateralized Financing Transactions

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Securities purchased under agreements to resell and Securities borrowed	\$ 208,268	\$ 227,191
Securities sold under agreements to repurchase and Securities loaned	\$ 70,016	\$ 70,472
Securities received as collateral ¹	\$ 13,749	\$ 13,737

<i>\$ in millions</i>	Average Daily Balance Three Months Ended	
	December 31, 2017	December 31, 2016
Securities purchased under agreements to resell and Securities borrowed	\$ 214,343	\$ 224,355
Securities sold under agreements to repurchase and Securities loaned	\$ 66,879	\$ 68,908

1. Included in Trading assets in the balance sheets.

Customer Securities Financing

The customer receivable portion of 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 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 GLR, which support our target liquidity profile.

Required Liquidity Framework

Our Required Liquidity Framework establishes 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 inter-company 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; and
- Client cash withdrawals and reduction in customer short positions that fund long positions.

Liquidity Stress Tests are produced and results are reported at different levels including major operating subsidiaries and major currencies, 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, 2017 and December 31, 2016, 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 GLR 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 GLR includes a discretionary surplus based on risk tolerance and is subject to change depending on market and Firm-specific events. The GLR is held within the Parent Company and its major operating subsidiaries.

GLR by Type of Investment

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Cash deposits with banks ¹	\$ 7,167	\$ 8,679
Cash deposits with central banks ²	33,791	30,568
Unencumbered highly liquid securities:		
U.S. government obligations	73,422	78,615
U.S. agency and agency mortgage-backed securities	55,750	46,360
Non-U.S. sovereign obligations ³	19,424	30,884
Other investment grade securities	3,106	7,191
Total	\$ 192,660	\$ 202,297

1. Included in Interest bearing deposits with banks in the balance sheets.
2. Included in Restricted cash in the balance sheets.
3. Non-U.S. sovereign obligations are primarily composed of unencumbered German, French, Dutch, U.K. and Japanese government obligations.

GLR Managed by Bank and Non-Bank Legal Entities

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016	Average Daily Balance Three Months Ended December 31, 2017
Bank legal entities			
Domestic	\$ 70,364	\$ 74,411	\$ 69,192
Foreign	4,756	4,238	4,242
Total Bank legal entities	75,120	78,649	73,434
Non-Bank legal entities			
Domestic:			
Parent Company	41,642	66,514	45,319
Non-Parent Company	35,264	18,801	32,400
Total Domestic	76,906	85,315	77,719
Foreign	40,634	38,333	39,186
Total Non-Bank legal entities	117,540	123,648	116,905
Total	\$ 192,660	\$ 202,297	\$ 190,339

Regulatory Liquidity Framework

Liquidity Coverage Ratio

We and our U.S. Bank Subsidiaries are subject to the LCR requirements including a requirement to calculate each entity's LCR on each business day. The requirements are designed to ensure that banking organizations have sufficient HQLA to cover net cash outflows arising from significant stress over 30 calendar days, thus promoting the short-term resilience of the liquidity risk profile of banking organizations. We and our U.S. Bank Subsidiaries are compliant with the minimum required LCR of 100%.

HQLA by Type of Asset and LCR

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016	Average Daily Balance Three Months Ended December 31, 2017
HQLA			
Cash deposits with central banks	\$ 32,964	\$ 30,569	\$ 33,450
Securities ¹	125,993	129,524	125,269
Total	\$ 158,957	\$ 160,093	\$ 158,719
LCR	128%		

1. Primarily includes U.S. Treasuries; U.S. agency mortgage-backed securities; sovereign bonds; investment grade corporate bonds; and publicly traded common equities.

The regulatory definition of HQLA is substantially the same as our GLR. GLR includes cash placed at institutions other than central banks that is considered an inflow for LCR purposes. HQLA includes a portion of cash placed at central banks, certain unencumbered investment grade corporate bonds and publicly traded common equities, which do not meet the definition of our GLR.

Net Stable Funding Ratio

The objective of the NSFR is to reduce funding risk over a one-year horizon by requiring banking organizations to fund their activities with sufficiently stable sources of funding in order to mitigate the risk of future funding stress.

The Basel Committee on Banking Supervision (“Basel Committee”) finalized the NSFR framework in 2014. In May 2016, the U.S. banking agencies 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. We continue to evaluate the potential impact of the proposal, which is subject to further rulemaking procedures. Our preliminary estimates, based on the current proposal, indicate that actions will be necessary to meet the requirement, which we would expect to accomplish by the effective date of any 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.”

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, borrowings, Securities sold under agreements to repurchase, 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 segment. 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 our secured financings 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, 2017 and December 31, 2016, 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 GLR 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 HQLA classifications that are consistent with the 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 borrowings and deposits as stable sources of funding. Unencumbered securities and non-security assets are financed with a combination of borrowings 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 financial statements).

Deposits

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Savings and demand deposits:		
Brokerage sweep deposits ¹	\$ 135,946	\$ 153,042
Savings and other	8,541	1,517
Total Savings and demand deposits	144,487	154,559
Time deposits ²	14,949	1,304
Total	\$ 159,436	\$ 155,863

- 1. Represents balances swept from client brokerage accounts.
- 2. Certain time deposit accounts are carried at fair value under the accounting fair value option (see Note 3 to the financial statements).

Deposits are primarily sourced from our Wealth Management clients and are considered to have stable, low-cost funding characteristics. Total deposits at December 31, 2017 were up slightly compared with December 31, 2016, primarily driven by proactive measures to increase Time deposits and Savings and other deposits, partially offset by a reduction in Brokerage sweep deposits due to client deployment of cash into the markets.

Borrowings

We believe that accessing debt investors through multiple distribution channels helps provide consistent access to the unsecured markets. In addition, the issuance of borrowings with original maturities greater than one year allows us to reduce reliance on short-term credit sensitive instruments. Borrowings with original maturities greater than one year 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. The 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 also engage in, and may continue to engage in, repurchases of our borrowings in the ordinary course of business.

Borrowings increased to \$192,582 million as of December 31, 2017 compared with \$165,716 million at December 31, 2016. This increase is a result of issuances, partially offset by maturities and retirements as presented in the following table.

<i>\$ in millions</i>	2017
Issued	\$ 55,416
Matured or retired	(35,825)

For further information on Borrowings, see Note 11 to the financial statements.

Credit Ratings

We rely on external sources to finance a significant portion of our daily 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. When determining credit ratings, 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 U.S. financial reform legislation and regulations. 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 Senior Unsecured Ratings at February 21, 2018

	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
S&P Global Ratings	A-2	BBB+	Stable

	MSBNA		
	Short-Term Debt	Long-Term Debt	Rating Outlook
Fitch Ratings, Inc.	F1	A+	Stable
Moody's Investors Service, Inc.	P-1	A1	Stable
S&P Global Ratings	A-1	A+	Stable

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, 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 S&P Global Ratings. 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 ratings or S&P Global Ratings, based on the relevant contractual downgrade triggers.

Incremental Collateral or Terminating Payments upon Potential Future Rating Downgrade

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
One-notch downgrade	\$ 822	\$ 1,292
Two-notch downgrade	596	875

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

<i>\$ in millions</i>	2017	2016
Repurchases of common stock	\$ 3,750	\$ 3,500

Our Board has authorized the repurchase of the Firm's outstanding stock under a share repurchase program ("Share Repurchase Program"). 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").

Common Stock Dividend Announcement

Announcement date	January 18, 2018
Amount per share	\$0.25
Date paid	February 15, 2018
Shareholders of record as of	January 31, 2018

Preferred Stock

Preferred Stock Dividend Announcement

Announcement date	December 15, 2017
Date paid	January 16, 2018
Shareholders of record as of	December 29, 2017

For additional information on common and preferred stock, see Note 15 to the financial statements.

Regulatory Requirements

Regulatory Capital Framework

We are an FHC under the Bank Holding Company Act of 1956, as amended (“BHC Act”), and are subject to the regulation and oversight of the Board of Governors of the Federal Reserve System (“Federal Reserve”). The Federal Reserve establishes capital requirements for us, 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 Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”).

In December 2017, the Basel Committee released its agreement on a comprehensive set of revisions to its Basel III Framework. The revised requirements are expected to take effect starting January 2022, subject to U.S. banking agencies issuing implementation proposals. The impact on us of any revisions to the Basel Committee’s capital standards 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, 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 (which includes Tier 2 capital). Certain adjustments to and deductions from capital are required for purposes of determining these ratios, such as goodwill, intangible assets, 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, we will be subject to the following buffers:

- A greater than 2.5% Common Equity Tier 1 capital conservation buffer;
- The Common Equity Tier 1 G-SIB capital surcharge, currently at 3%; and

- Up to a 2.5% Common Equity Tier 1 CCyB, currently set by U.S. banking agencies at zero.

The phase-in amount for each of the buffers was 50% of the fully phased-in buffer requirement in 2017, and increases to 75% in 2018. 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.

See “Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements” herein for additional capital requirements effective January 1, 2019.

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:

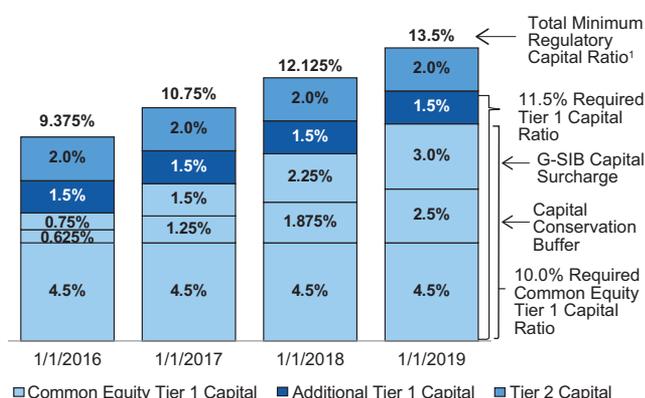
- Credit risk: The failure of a borrower, counterparty or issuer to meet its financial obligations to us;
- Market risk: Adverse changes in the level of one or more market prices, rates, indices, volatilities, correlations or other market factors, such as market liquidity; and
- Operational risk: Inadequate or failed processes or systems, from 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.”

Our risk-based capital ratios for purposes of determining regulatory compliance are the lower of the capital ratios computed under (i) the standardized approaches for calculating credit risk and market risk RWAs (“Standardized Approach”) and (ii) the applicable advanced approaches for calculating credit risk, market risk and operational risk RWAs (“Advanced Approach”). The credit risk RWA calculations between the two approaches differ in that the Standardized Approach requires calculation of RWAs using prescribed risk weights, whereas the Advanced Approach utilizes models to calculate exposure amounts and risk weights. At December 31, 2017, our ratios are based on the Standardized Approach transitional rules. At December 31, 2016, the ratios were based on the Advanced Approach transitional rules.

The minimum risk-based capital ratios applicable to us will change through January 1, 2019 as presented in the following chart.

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

\$ in millions	At December 31, 2017			
	Transitional		Pro Forma Fully Phased-In	
	Standardized	Advanced	Standardized	Advanced
Risk-based capital				
Common Equity Tier 1 capital	\$ 61,134	\$ 61,134	\$ 60,564	\$ 60,564
Tier 1 capital	69,938	69,938	69,120	69,120
Total capital	80,275	80,046	79,470	79,240
Total RWAs	369,578	350,212	377,241	358,324
Common Equity Tier 1 capital ratio	16.5%	17.5%	16.1%	16.9%
Tier 1 capital ratio	18.9%	20.0%	18.3%	19.3%
Total capital ratio	21.7%	22.9%	21.1%	22.1%
Leverage-based capital				
Adjusted average assets ¹	\$ 842,270	N/A	\$ 841,756	N/A
Tier 1 leverage ratio ²	8.3%	N/A	8.2%	N/A

\$ in millions	At December 31, 2016			
	Transitional		Pro Forma Fully Phased-In	
	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

- 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 quarter ended December 31, 2017 and December 31, 2016 adjusted for disallowed goodwill, transitional intangible assets, certain deferred tax assets, certain investments in the capital instruments of unconsolidated financial institutions and other adjustments.
- 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 because they were not yet effective at December 31, 2017. 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."

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

At December 31, 2017	
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 an FHC, 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 FHCs to reflect the higher capital standards required of us under the capital rules. Assuming that the Federal Reserve would apply the same or very similar well-capitalized standards to FHCs, each of our risk-based capital ratios and Tier 1 leverage ratio at December 31, 2017 would have exceeded the revised well-capitalized standard. The Federal Reserve may require an FHC to maintain risk- and leverage-based capital ratios substantially in excess of mandated minimum levels, depending upon general economic conditions and the FHC's particular condition, risk profile and growth plans.

Regulatory Capital Calculated under Transitional Rules

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Common Equity Tier 1 capital		
Common stock and surplus	\$ 14,354	\$ 17,494
Retained earnings	57,577	53,679
AOCI	(3,060)	(2,643)
Regulatory adjustments and deductions:		
Net goodwill	(6,599)	(6,526)
Net intangible assets (other than goodwill and mortgage servicing assets)	(1,956)	(1,631)
Other adjustments and deductions ¹	818	25
Total Common Equity Tier 1 capital	\$ 61,134	\$ 60,398
Additional Tier 1 capital		
Preferred stock	\$ 8,520	\$ 7,520
Noncontrolling interests	494	613
Other adjustments and deductions ²	146	(246)
Additional Tier 1 capital	\$ 9,160	\$ 7,887
Deduction for investments in covered funds	(356)	(188)
Total Tier 1 capital	\$ 69,938	\$ 68,097
Standardized Tier 2 capital		
Subordinated debt	\$ 9,839	\$ 10,303
Noncontrolling interests	83	62
Eligible allowance for credit losses	423	464
Other adjustments and deductions	(8)	(9)
Total Standardized Tier 2 capital	\$ 10,337	\$ 10,820
Total Standardized capital	\$ 80,275	\$ 78,917
Advanced Tier 2 capital		
Subordinated debt	\$ 9,839	\$ 10,303
Noncontrolling interests	83	62
Eligible credit reserves	194	189
Other adjustments and deductions	(8)	(9)
Total Advanced Tier 2 capital	\$ 10,108	\$ 10,545
Total Advanced capital	\$ 80,046	\$ 78,642

Regulatory Capital Rollforward Calculated under Transitional Rules

<i>\$ in millions</i>	2017
Common Equity Tier 1 capital	
Common Equity Tier 1 capital at December 31, 2016	\$ 60,398
Change related to the following items:	
Value of shareholders' common equity	341
Net goodwill	(73)
Net intangible assets (other than goodwill and mortgage servicing assets)	(325)
Other adjustments and deductions ¹	793
Common Equity Tier 1 capital at December 31, 2017	\$ 61,134
Additional Tier 1 capital	
Additional Tier 1 capital at December 31, 2016	\$ 7,887
New issuance of qualifying preferred stock	1,000
Change related to the following items:	
Noncontrolling interests	(119)
Other adjustments and deductions ²	392
Additional Tier 1 capital at December 31, 2017	9,160
Deduction for investments in covered funds at December 31, 2016	(188)
Change in deduction for investments in covered funds	(168)
Deduction for investments in covered funds at December 31, 2017	(356)
Tier 1 capital at December 31, 2017	\$ 69,938
Standardized Tier 2 capital	
Tier 2 capital at December 31, 2016	\$ 10,820
Change related to the following items:	
Eligible allowance for credit losses	(41)
Other changes, adjustments and deductions ³	(442)
Standardized Tier 2 capital at December 31, 2017	\$ 10,337
Total Standardized capital at December 31, 2017	\$ 80,275
Advanced Tier 2 capital	
Tier 2 capital at December 31, 2016	\$ 10,545
Change related to the following items:	
Eligible credit reserves	5
Other changes, adjustments and deductions ³	(442)
Advanced Tier 2 capital at December 31, 2017	\$ 10,108
Total Advanced capital at December 31, 2017	\$ 80,046

1. Other adjustments and deductions used in the calculation of Common Equity Tier 1 capital include credit spread premium over risk-free rate for derivative liabilities, net deferred tax assets, net after-tax DVA and adjustments related to AOCI.
2. Other adjustments and deductions used in the calculation of Additional Tier 1 capital include credit spread premium over risk-free rate for derivative liabilities, net deferred tax assets and net after-tax DVA.
3. Other changes, adjustments and deductions used in the calculations of Standardized and Advanced Tier 2 capital include changes in subordinated debt and noncontrolling interests.

RWAs Rollforward Calculated under Transitional Rules

\$ in millions	2017 ¹	
	Standardized	Advanced
Credit risk RWAs		
Balance at December 31, 2016	\$ 278,874	\$ 169,231
Change related to the following items:		
Derivatives	8,387	181
Securities financing transactions	7,455	2,663
Securitized assets	1,609	1,485
Investment securities	(3,491)	(1,936)
Commitments, guarantees and loans	2,716	(7,702)
Cash	(689)	(997)
Equity investments	(1,007)	(1,085)
Other credit risk ²	429	802
Total change in credit risk RWAs	\$ 15,409	\$ (6,589)
Balance at December 31, 2017	\$ 294,283	\$ 162,642
Market risk RWAs		
Balance at December 31, 2016	\$ 61,317	\$ 60,872
Change related to the following items:		
Regulatory VaR	40	40
Regulatory stressed VaR	4,970	4,970
Incremental risk charge	3,878	3,878
Comprehensive risk measure	(2,610)	(2,590)
Specific risk:		
Non-securitized assets	3,568	3,568
Securitized assets	4,132	4,169
Total change in market risk RWAs	\$ 13,978	\$ 14,035
Balance at December 31, 2017	\$ 75,295	\$ 74,907
Operational risk RWAs		
Balance at December 31, 2016	\$ N/A	\$ 128,038
Change in operational risk RWAs	N/A	(15,375)
Balance at December 31, 2017	\$ N/A	\$ 112,663
Total RWAs	\$ 369,578	\$ 350,212

Regulatory VaR—VaR for regulatory capital requirements

- The RWAs for each category in the table reflect both on- and off-balance sheet exposures, where appropriate.
- Amount reflects assets not in a defined category, non-material portfolios of exposures and unsettled transactions, as applicable.

Credit risk RWA increased \$15,409 million in 2017 under the Standardized Approach, primarily driven by increased exposures in derivatives and margin lending. Credit risk RWA under the Advanced Approach decreased \$6,589 million in 2017, primarily due to reduced exposures in corporate loans.

Market risk RWA increased \$13,978 million and \$14,035 million in 2017 under the Standardized and Advanced Approaches, respectively, primarily driven by increases in stressed VaR, specific risk charges from securitizations and non-securitizations, and incremental risk charges from broad-based increases in trading exposures in response to client demand.

The decrease of \$15,375 million in operational risk RWAs in 2017 under the Advanced Approach reflects a reduction in the internal loss frequency related to litigation utilized in the operational risk capital model.

Supplementary Leverage Ratio

Pro Forma Supplementary Leverage Exposure and Ratio

\$ in millions	At December 31, 2017		At December 31, 2016	
	Transitional Basis	Fully Phased-in ¹	Transitional Basis	Fully Phased-in ¹
Average total assets ²	\$ 851,510	\$ 851,510	\$ 820,536	\$ 820,536
Adjustments ^{3, 4}	231,173	230,660	242,113	240,999
Pro forma supplementary leverage exposure	\$ 1,082,683	\$ 1,082,170	\$ 1,062,649	\$ 1,061,535
Pro forma SLR	6.5%	6.4%	6.4%	6.2%

- Estimated amounts utilize fully phased-in Tier 1 capital and take into consideration the Tier 1 capital deductions that would be applicable in 2018 after the phase-in period has ended.
- Computed as the average daily balance of consolidated total assets under U.S. GAAP during the quarter ended December 31, 2017 and December 31, 2016.
- Computed as the average of the month-end balances over the quarter ended December 31, 2017 and December 31, 2016.
- 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.

The SLR becomes effective as a capital standard on January 1, 2018. Beginning on that date, we will be required to maintain a Tier 1 supplementary leverage ratio of 3% as well as an SLR capital buffer of at least 2% (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, our U.S. Bank Subsidiaries must maintain an SLR of 6% to be considered well-capitalized.

U.S. Subsidiary Banks' Pro Forma Supplementary Leverage Ratios on a Transitional Basis

	At December 31, 2017	At December 31, 2016
MSBNA	9.1%	7.7%
MSPBNA	9.3%	10.2%

The pro forma transitional and fully phased-in supplementary leverage exposures and ratios for both us and our U.S. Bank Subsidiaries are non-GAAP financial measures because they were not yet effective at December 31, 2017. 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 SLR, 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."

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. The phase-in amount was 50% of the applicable surcharge in 2017, and increases to 75% in 2018 (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 BHCs of U.S. G-SIBs ("covered BHC"), 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. We expect to be in compliance with all requirements of the rule by January 1, 2019, the date that compliance is required.

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 an SPOE resolution strategy is used (see "Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning" and "Risk Factors—Legal, Regulatory and Compliance Risk").

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 SLR). 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 CCyB, 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 BHCs, including us, which form part of the Federal Reserve's annual 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 or redemption 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.

The capital plan rule requires that large BHCs receive no objection from the Federal Reserve before making a capital distribution. In addition, even with an approved capital plan,

the BHC must seek the approval of the Federal Reserve before making a capital distribution if, among other reasons, the BHC would not meet its regulatory capital requirements after making the proposed capital distribution. A BHC'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 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.

We submitted our 2017 Capital Plan ("Capital Plan") and company-run stress test results to the Federal Reserve on April 5, 2017. On June 22, 2017, the Federal Reserve published summary results of the Dodd-Frank Act supervisory stress tests of each large BHC, including us. On June 28, 2017, the Federal Reserve published summary results of CCAR and announced that it did not object to the Capital Plan.

The Capital Plan includes the repurchase of up to \$5.0 billion of outstanding common stock for the period beginning July 1, 2017 through June 30, 2018, an increase from \$3.5 billion in the 2016 Capital Plan. Additionally, the Capital Plan includes an increase in our quarterly common stock dividend to \$0.25 per share from \$0.20 per share, beginning with the common stock dividend declared on July 19, 2017. We disclosed a summary of the results of our company-run stress tests on June 23, 2017 on our Investor Relations website. In addition, we submitted the results of our mid-cycle company-run stress test to the Federal Reserve on October 5, 2017 and disclosed a summary of the results on October 20, 2017 on our Investor Relations website.

For the 2018 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, 2018. We expect that the Federal Reserve will provide its response to our 2018 capital plan by June 30, 2018. The Federal Reserve is expected to publish summary results of the CCAR and Dodd-Frank Act supervisory stress tests of each large BHC, including us, by June 30, 2018. 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, 2018 and disclose a summary of the results between October 5, 2018 and November 4, 2018.

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.

The Dodd-Frank Act requires each of our U.S. Bank Subsidiaries to conduct an annual stress test. MSBNA and MSPBNA submitted their 2017 annual company-run stress tests to the OCC on April 5, 2017 and published a summary of their stress test results on June 23, 2017 on our Investor Relations website. For the 2018 stress test cycle, MSBNA and MSPBNA must submit their annual company-run stress tests to the OCC by April 5, 2018 and publish the summary results between June 15, 2018 and July 15, 2018.

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 under the Required Capital framework, as well as each business segment's relative contribution to our total Required Capital.

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 estimates. Prior periods were attributed based on transitional regulatory capital provisions and have not been recast. The amount of capital allocated to the business segments is generally set at the beginning of each year and remains fixed throughout the year until the next annual reset unless a significant business change occurs (*e.g.*, acquisition or disposition). Differences between available and Required Capital are attributed to Parent Company equity during the year.

The Required Capital framework is expected to evolve over time in response to changes in the business and regulatory

environment, for example, to incorporate changes in stress testing or enhancements to modeling techniques. We will continue to evaluate the framework with respect to the impact of future regulatory requirements, as appropriate.

Average Common Equity Attribution¹

<i>\$ in billions</i>	2017	2016	2015
Institutional Securities	\$ 40.2	\$ 43.2	\$ 34.6
Wealth Management	17.2	15.3	11.2
Investment Management	2.4	2.8	2.2
Parent Company	10.0	7.6	18.9
Total	\$ 69.8	\$ 68.9	\$ 66.9

1. Average common equity is a non-GAAP financial measure. See “Selected Non-GAAP Financial Information” herein.

Regulatory Developments

Resolution and Recovery Planning

Pursuant to the Dodd-Frank Act, we are required to periodically submit to the Federal Reserve and the FDIC a 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 2017 resolution plan, is an SPOE strategy. We submitted our full 2017 resolution plan on June 30, 2017. As indicated in our 2017 resolution plan, the Parent Company has amended and restated its support agreement with its material entities, as defined in our 2017 resolution plan. Under the secured amended and restated support agreement, upon the occurrence of a resolution scenario, the Parent Company would be obligated to contribute or loan on a subordinated basis all of its contributable 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 entities.

The obligations of the Parent Company under the secured amended and restated support agreement are in most cases 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 entities against the assets of the Parent Company (other than shares in subsidiaries of the Parent Company) are effectively senior to unsecured obligations of the Parent Company.

In December 2017, we received joint feedback on our 2017 resolution plan from the Federal Reserve and the FDIC. The feedback identified no deficiencies in our 2017 resolution plan but noted one shortcoming to be remediated in our next resolution plan submission.

Further, the Federal Reserve and the FDIC have extended the next resolution plan filing deadline for eight large domestic banks, including us, by one year to July 1, 2019.

For more information about resolution and recovery planning requirements and our activities in these areas, including the implications of such activities in a resolution scenario, see “Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning” and “Risk Factors—Legal, Regulatory and Compliance Risk.”

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. In June 2017, we received approval from the Federal Reserve of our application for a five-year extension of the transition period to conform investments in certain legacy Volcker covered funds that are also illiquid funds. The approval covered essentially all of our non-conforming investments in, and relationships with, legacy covered funds subject to the Volcker Rule. For more information about the Volcker Rule, see “Business—Supervision and Regulation—Activities Restrictions under the Volcker Rule.”

U.S. Department of Labor Conflict of Interest Rule

The U.S. DOL’s final Conflict of Interest Rule under ERISA went into effect on June 9, 2017, with certain aspects subject to phased-in compliance. Full compliance with the rule’s related exemptions is currently scheduled to be required by July 1, 2019. In addition, the U.S. DOL is undertaking an examination of the rule that may result in changes to the rule or its related exemptions or a change in the full compliance date. For a discussion of the U.S. DOL Conflict of Interest Rule, see “Business—Supervision and Regulation—Institutional Securities and Wealth Management.”

U.K. Referendum

Following the U.K. electorate vote to leave the E.U., the U.K. invoked Article 50 of the Lisbon Treaty on March 29, 2017, which triggered a two-year period, subject to extension (which would need the unanimous approval of the E.U. Member States), during which the U.K. government is expected to negotiate its withdrawal agreement with the E.U. For further discussion of U.K. referendum’s potential impact on our operations, see “Risk Factors—International Risk.” For further information regarding our exposure to the U.K., see also “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk—Country Risk Exposure.”

Expected Replacement of London Interbank Offered Rate

Central banks around the world, including the Federal Reserve, have commissioned working groups of market participants and others with the goal of finding suitable replacements for LIBOR based on observable market transactions. It is expected that a transition away from the widespread use of LIBOR to alternative rates will occur over the course of the next few years.

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 financial statements.

Off-Balance Sheet Arrangements and Contractual Obligations

Off-Balance Sheet Arrangements

We enter into various off-balance sheet arrangements, including through unconsolidated 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 financial statements.

For information on our commitments, obligations under certain guarantee arrangements and indemnities, see Note 12 to the financial statements. For further information on our lending commitments, see “Quantitative and Qualitative Disclosures about Market Risk—Risk Management—Credit Risk—Lending Activities.”

Contractual Obligations

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

Contractual Obligations

\$ in millions	At December 31, 2017				
	Payments Due in:				
	2018	2019-2020	2021-2022	Thereafter	Total
Borrowings ¹	\$ 23,870	\$ 45,963	\$ 36,649	\$ 84,581	\$ 191,063
Other secured financings ¹	4,992	3,142	153	398	8,685
Contractual interest payments ²	4,903	7,930	5,680	17,031	35,544
Time deposits ³	12,300	2,481	108	129	15,018
Operating leases—premises ⁴	664	1,183	938	2,639	5,424
Purchase obligations	598	607	217	197	1,619
Total⁵	\$ 47,327	\$ 61,306	\$ 43,745	\$ 104,975	\$ 257,353

1. For further information on Borrowings and Other secured financings, see Note 11 to the financial statements. Amounts presented for Borrowings and Other secured financings are financings with original maturities greater than one year.
2. Amounts represent estimated future contractual interest payments related to unsecured borrowings with original maturities greater than one year based on applicable interest rates at December 31, 2017.
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 financial statements.
5. 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 financial statements for further information).

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, 2017 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 in the balance sheets.

Quantitative and Qualitative Disclosures about Market Risk

Risk Management

Overview

We believe effective risk management is vital to the success of our business activities. Accordingly, we have an 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.

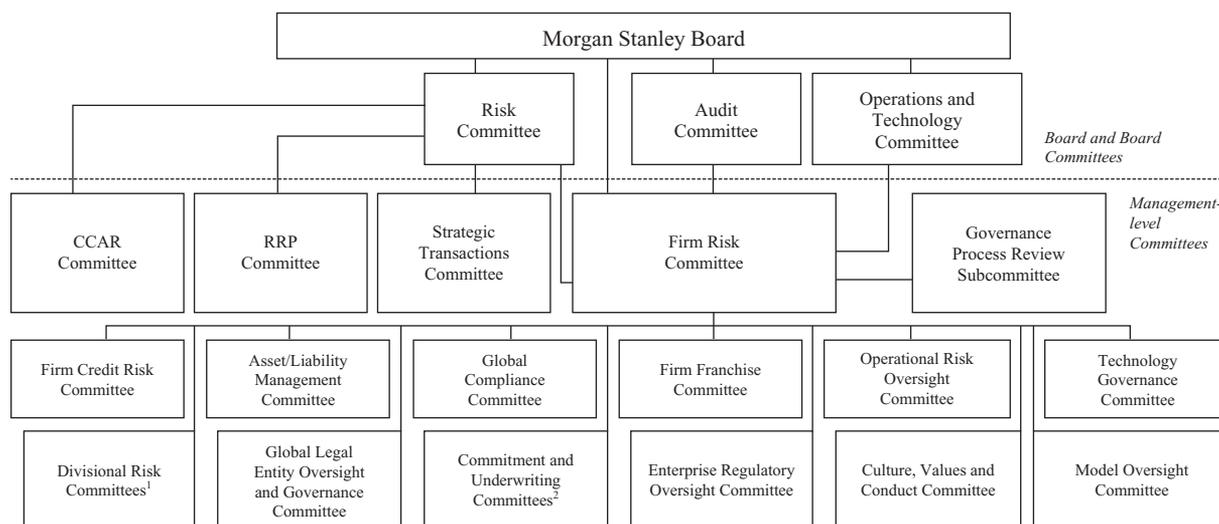
We have policies and procedures in place to identify, measure, monitor, advise, challenge and control the principal risks involved in the activities of the Institutional Securities, Wealth Management and Investment Management business segments, as well as at the Parent Company level. The principal risks 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 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 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 Board Risk Committee (“BRC”); the Audit Committee of the Board (“BAC”); 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, and Municipal Capital Commitment Committee.

Morgan Stanley Board of Directors. The Board has oversight of 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, CCAR Committee, and Resolution and Recovery Planning Committee (“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, and coordinates with other Board committees with respect to oversight of risk management and risk assessment guidelines.

Audit Committee of the Board. The BAC is composed of independent directors. The BAC oversees the integrity of our 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 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 Financial Officer and Chief Legal 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 oversees our CCAR 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 risk management functions (Market Risk, Credit Risk, Operational Risk, Model Risk and Liquidity Risk Management departments) are independent of our business units and they report to the Chief Risk Officer. 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 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, 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 the design and effectiveness 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 compli-

ance 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 control issues.

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 reinforcing and confirming adherence to the core values through our governance framework, tone from the top, management oversight, risk management and controls, and three lines of defense structure (business, control functions such as Risk Management and Compliance, and Internal Audit).

The Board is responsible for overseeing the Firm's practices and procedures relating to culture, values and conduct, as set forth in the Firm's Corporate Governance Policies. Our Culture, Values and Conduct Committee, which is part of the ERM framework, is the senior management committee that oversees the Firm-wide culture, values and conduct program. A fundamental building block of this program is the Firm's Code of Conduct, which 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 of Conduct.

The employee annual performance review process includes evaluation of employee conduct related to risk management practices and the Firm's expectations. 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. For example, 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. Management committees from control functions periodically meet to discuss employees whose conduct is not in line with our expectations. These results are incorporated into identified employees' performance reviews and compensation and promotion decisions.

The Firm's clawback and cancellation provisions apply to deferred incentive compensation and cover a broad scope of employee conduct, including any act or omission (including with respect to direct supervisory responsibilities) that constitutes a breach of obligation to the Firm or causes a restatement of the Firm's financial results, constitutes a violation of the Firm's global risk management principles, policies and standards, or causes a loss of revenue 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. The discussion primarily focuses on our Institutional Securities 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 in the following paragraphs.

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 BHC 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, volatilities, 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 VaR for market risk exposures is generated. In addition, we incur market risk within the Wealth Management and Investment

Management business segments. The Wealth Management business segment primarily incurs non-trading market risk from lending and deposit-taking activities. The Investment Management business segment primarily incurs non-trading market risk from capital investments in alternative and other funds. 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 2017, 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. The statistical technique known as VaR is one of the tools we use 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 in the following paragraphs 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

Risk Disclosures

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 and for regulatory capital calculations. Our regulators have approved our VaR model for use in regulatory calculations.

The portfolio of positions used for Management VaR differs from that used for Regulatory VaR. Management VaR contains certain positions that are excluded from Regulatory VaR. Examples include counterparty 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

\$ in millions	95%/One-Day VaR for 2017			
	Period End	Average	High	Low
Interest rate and credit spread	\$ 32	\$ 31	\$ 44	\$ 23
Equity price	11	15	26	10
Foreign exchange rate	9	10	18	6
Commodity price	7	8	11	6
Less: Diversification benefit ^{1, 2}	(20)	(24)	N/A	N/A
Primary Risk Categories	\$ 39	\$ 40	\$ 60	\$ 28
Credit Portfolio	9	12	17	8
Less: Diversification benefit ^{1, 2}	(5)	(8)	N/A	N/A
Total Management VaR	\$ 43	\$ 44	\$ 64	\$ 33

\$ in millions	95%/One-Day VaR for 2016			
	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

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

Average total Management VaR and average Management VaR for the Primary Risk Categories of \$44 million and \$40 million, respectively, increased from 2016, primarily as a result of increases in trading inventory across the global macro, and credit businesses within Institutional Securities, in response to client demand.

Distribution of VaR Statistics and Net Revenues for 2017. 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 corresponding 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.

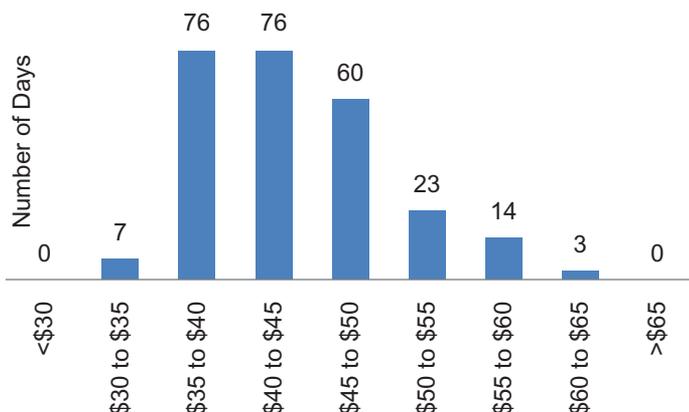
We evaluate the reasonableness of our VaR model by comparing the potential declines in portfolio values generated by the model with corresponding actual trading results for the Firm, as well as individual business units. For days where losses exceed the VaR statistic, we examine the drivers of trading losses to evaluate the VaR model's accuracy relative to realized trading results. During 2017, we experienced net trading losses on 15 days, which were not in excess of the 95%/one-day Total Management VaR.

The distribution of VaR statistics and net revenues is presented in the following histograms for the Total Trading populations.

Total Trading. As shown in the 95%/One-Day Management VaR table, the average 95%/one-day total Management VaR for 2017 was \$44 million. The following histogram presents

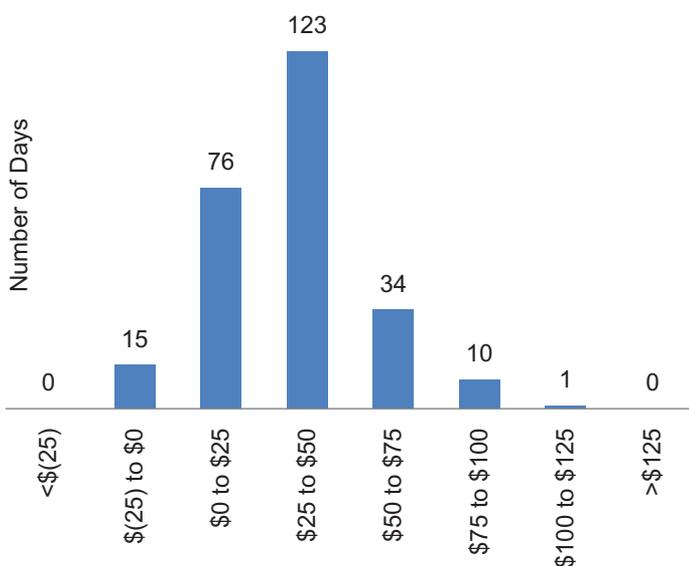
the distribution of the daily 95%/one-day total Management VaR for 2017, which was in a range between \$35 million and \$60 million for approximately 96% of trading days during the year.

Daily 95%/One-Day Total Management VaR for 2017
(\$ in millions)



The following histogram shows the distribution for 2017 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.

Daily Net Trading Revenues for 2017
(\$ in millions)



Non-Trading Risks

We believe that sensitivity analysis is an appropriate representation of our non-trading risks. The following sensitivity analyses cover substantially all of the non-trading risk in our portfolio.

Credit Spread Sensitivity to Our Own Credit Spread.

Credit Spread Risk Sensitivity¹

\$ in millions	At December 31, 2017	At December 31, 2016
Derivatives	\$ 6	\$ 6
Funding liabilities ²	29	17

1. Amounts represent the increase in value for each 1 bps widening of our credit spread.
2. Relates to structured note liabilities carried at fair value.

Credit spread risk sensitivity for funding liabilities per basis point as of December 31, 2017 has increased compared with December 31, 2016, primarily as a result of new structured note issuances.

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.

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

\$ in millions	At December 31, 2017	At December 31, 2016
Basis point change		
+200	\$ 489	\$ 550
+100	367	262
-100	(500)	(655)

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, including non-parallel rate change scenarios. 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. The change in sensitivity to interest rates between December 31, 2017 and December 31, 2016 is related to overall changes in our asset-liability profile and higher market rates.

Risk Disclosures

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

	Loss from 10% Decline	
	At December 31, 2017	At December 31, 2016
<i>\$ in millions</i>		
Investments related to Investment Management activities	\$ 316	\$ 332
Other investments:		
Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	168	158
Other Firm investments	178	130

Investments sensitivity for other investments as of December 31, 2017 increased compared with December 31, 2016, primarily as a result of an increase in the value of underlying investments.

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 increase or 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 increase or 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 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 lending commitments;
- entering into swap or other derivative contracts under which counterparties may 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 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 HELOC form, primarily to existing Wealth Management clients.

Monitoring and Control

In order to help protect us from losses, the Credit Risk Management Department ("CRM") establishes Firm-wide practices to evaluate, monitor and control credit risk at the transaction, obligor and portfolio levels. CRM approves extensions of credit, evaluates the creditworthiness of the counterparties and borrowers on a regular basis, and helps ensure 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 CRM and through various risk committees, whose membership includes individuals from CRM. 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.

CRM helps ensure timely and transparent communication of material credit risks, compliance with established limits and escalation of risk concentrations to appropriate senior management. CRM 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 from 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 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. CRM also evaluates strategy, market position, industry dynamics, management and other factors that could affect the obligor's risk profile. Additionally, CRM 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 CRM 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 financial statements.

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 financial statements for additional information about our collateralized transactions.

Lending Activities Included in Loans and Trading Assets

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 balance sheets, these loans and lending commitments are carried as held for investment, which are recorded at amortized cost; as held for sale, which are recorded at the lower of cost or fair value; or at fair value with changes in fair value recorded in earnings. 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 balance sheets. See Notes 3, 7 and 12 to the financial statements for further information.

Loans and Lending Commitments

\$ in millions	At December 31, 2017			
	IS	WM	IM ¹	Total
Corporate loans	\$ 15,332	\$ 14,417	\$ 5	\$ 29,754
Consumer loans	—	26,808	—	26,808
Residential real estate loans	—	26,635	—	26,635
Wholesale real estate loans	9,980	—	—	9,980
Loans held for investment, gross of allowance	25,312	67,860	5	93,177
Allowance for loan losses	(182)	(42)	—	(224)
Loans held for investment, net of allowance	25,130	67,818	5	92,953
Corporate loans	9,456	—	—	9,456
Residential real estate loans	1	34	—	35
Wholesale real estate loans	1,682	—	—	1,682
Loans held for sale	11,139	34	—	11,173
Corporate loans	8,336	—	22	8,358
Residential real estate loans	799	—	—	799
Wholesale real estate loans	1,579	—	—	1,579
Loans held at fair value	10,714	—	22	10,736
Total loans	46,983	67,852	27	114,862
Lending commitments^{2, 3}	92,588	9,481	—	102,069
Total loans and lending commitments^{2, 3}	\$ 139,571	\$ 77,333	\$ 27	\$ 216,931

\$ in millions	At December 31, 2016			
	IS	WM	IM 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	42,500	60,427	23	102,950
Lending commitments^{2, 3}	90,143	8,299	—	98,442
Total loans and lending commitments^{2, 3}	\$ 132,643	\$ 68,726	\$ 23	\$ 201,392

- Investment Management business segment loans are entered into in conjunction with certain investment advisory activities.
- Lending commitments represent the notional amount of legally binding obligations to provide funding to clients for lending transactions. Since commitments associated with these business activities may expire unused or may not be utilized to full capacity, they do not necessarily reflect the actual future cash funding requirements.

3. For syndications led by us, any lending commitments accepted by the borrower but not yet closed are net of amounts syndicated. For syndications that we participate in and do not lead, any 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.

Allowance for Loans and Lending Commitments Held for Investment

\$ in millions	At December 31, 2017	At December 31, 2016
Loans	\$ 224	\$ 274
Commitments	198	190

The allowance for loan losses decreased in 2017, primarily due to the charge-off of an energy industry related loan. See Note 7 to the financial statements for further information.

Status of Loans Held for Investment

	At December 31, 2017		At December 31, 2016	
	IS	WM	IS	WM
Current	99.5%	99.9%	98.6%	99.9%
Non-accrual ¹	0.5%	0.1%	1.4%	0.1%

1. These loans are 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.

Institutional Securities

In connection with certain Institutional Securities business segment activities, we provide loans and lending commitments to a diverse group of corporate and other institutional clients. These activities include originating and purchasing corporate loans, commercial and residential mortgage lending, asset-backed lending, 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.

Risk Disclosures

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, including commercial real estate loans, loans secured by loan pools, corporate loans and secured lines of revolving credit. Credit risk with respect to these loans and lending commitments arises from the failure of a borrower to perform according to the terms of the loan agreement or a decline in the underlying collateral value. See Note 13 to the financial statements for information about our securitization activities. In addition, a collateral management group monitors collateral levels against requirements and oversees the administration of the collateral function. See Note 6 to the financial statements for additional information about our collateralized transactions.

Institutional Securities Loans and Lending Commitments by Credit Rating¹

\$ in millions	At December 31, 2017				
	Years to Maturity				
	Less than 1	1-3	3-5	Over 5	Total
Loans					
AAA	\$ —	\$ —	\$ —	\$ —	\$ —
AA	14	503	30	5	552
A	1,608	1,710	1,235	693	5,246
BBB	2,791	6,558	3,752	646	13,747
NIG	4,760	12,311	4,480	3,245	24,796
Unrated ²	243	291	621	1,487	2,642
Total loans	9,416	21,373	10,118	6,076	46,983
Lending commitments					
AAA	—	165	—	—	165
AA	3,745	1,108	3,002	—	7,855
A	3,769	5,533	11,774	197	21,273
BBB	3,987	12,345	16,818	1,095	34,245
NIG	4,159	9,776	12,279	2,698	28,912
Unrated ²	9	40	42	47	138
Total lending commitments	15,669	28,967	43,915	4,037	92,588
Total exposure	\$ 25,085	\$ 50,340	\$ 54,033	\$ 10,113	\$ 139,571

\$ in millions	At December 31, 2016				
	Years to Maturity				
	Less than 1	1-3	3-5	Over 5	Total
Loans					
AAA	\$ —	\$ —	\$ —	\$ —	\$ —
AA	—	—	38	—	38
A	235	775	1,391	552	2,953
BBB	1,709	6,473	2,768	1,362	12,312
NIG	4,667	12,114	5,629	2,304	24,714
Unrated ²	699	126	175	1,483	2,483
Total loans	7,310	19,488	10,001	5,701	42,500
Lending commitments					
AAA	50	105	50	—	205
AA	3,724	451	3,989	—	8,164
A	1,994	4,610	11,135	392	18,131
BBB	6,261	9,006	18,148	653	34,068
NIG	2,839	8,934	14,267	3,418	29,458
Unrated ²	107	6	—	4	117
Total lending commitments	14,975	23,112	47,589	4,467	90,143
Total exposure	\$ 22,285	\$ 42,600	\$ 57,590	\$ 10,168	\$ 132,643

NIG—Non-investment grade

1. Obligor credit ratings are determined by CRM.

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.

Institutional Securities Loans and Lending Commitments by Industry

\$ in millions	At	At
	December 31, 2017	December 31, 2016
Industry		
Real estate	\$ 28,426	\$ 19,807
Financials ¹	22,112	20,624
Information technology	11,862	8,602
Consumer discretionary	11,555	12,059
Industrials	11,090	11,465
Energy	10,233	11,757
Healthcare	9,956	11,534
Utilities	9,592	9,216
Consumer staples	8,315	7,329
Materials	5,069	7,630
Insurance	4,739	4,190
Telecommunications services	4,172	6,156
Other	2,450	2,274
Total	\$ 139,571	\$ 132,643

1. Prior period amounts have been revised to conform to the current presentation.

Institutional Securities business segment 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 and index hedges) with a notional amount of \$16.6 billion and \$20.2 billion at December 31, 2017 and December 31, 2016, respectively.

Event-Driven Loans and Lending Commitments

\$ in millions	At December 31, 2017				
	Years to Maturity				Total
	Less than 1	1-3	3-5	Over 5	
Loans	\$ 1,458	\$ 1,058	\$ 639	\$ 2,012	\$ 5,167
Lending commitments	1,272	3,206	2,091	1,874	8,443
Total loans and lending commitments	\$ 2,730	\$ 4,264	\$ 2,730	\$ 3,886	\$ 13,610

\$ in millions	At December 31, 2016				
	Years to Maturity				Total
	Less than 1	1-3	3-5	Over 5	
Loans	\$ 666	\$ 1,593	\$ 1,216	\$ 1,622	\$ 5,097
Lending commitments	6,594	1,460	4,807	3,391	16,252
Total loans and lending commitments	\$ 7,260	\$ 3,053	\$ 6,023	\$ 5,013	\$ 21,349

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 Lending Exposures Related to the Energy Industry. At December 31, 2017, Institutional Securities' loans and lending commitments related to the energy industry were \$10.2 billion, of which approximately 66% are accounted for as held for investment and 34% are accounted for as either held for sale or at fair value. Additionally, approximately 60% of the total energy industry loans and lending commitments were to investment grade counterparties.

At December 31, 2017, the energy industry portfolio included \$0.8 billion in loans and \$2.0 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 52% of the E&P lending commitments were to investment grade counterparties. To the extent oil and natural gas prices deteriorate, we may incur lending losses.

Wealth Management

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. These loans allow the client to borrow money against the value of qualifying securities, generally 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., 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, 2017, loans and lending commitments associated with the Wealth Management business segment lending activities increased by approximately 13%, primarily due to growth in securities-based lending and other loans.

Wealth Management Loans and Lending Commitments by Remaining Contractual Maturity

\$ in millions	At December 31, 2017				
	Years to Maturity				Total
	Less than 1	1-3	3-5	Over 5	
Securities-based lending and other loans ¹	\$ 34,389	\$ 3,687	\$ 1,899	\$ 1,231	\$ 41,206
Residential real estate loans	—	24	15	26,607	26,646
Total loans	\$ 34,389	\$ 3,711	\$ 1,914	\$ 27,838	\$ 67,852
Lending commitments	7,253	1,827	120	281	9,481
Total loans and lending commitments	\$ 41,642	\$ 5,538	\$ 2,034	\$ 28,119	\$ 77,333

Risk Disclosures

Morgan Stanley

\$ in millions	At December 31, 2016				
	Years to Maturity				Total
	Less than 1	1-3	3-5	Over 5	
Securities-based lending and other loans ¹	\$ 30,547	\$ 2,983	\$ 1,304	\$ 1,179	\$ 36,013
Residential real estate loans	—	—	45	24,369	24,414
Total loans	\$ 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

1. PLA and LAL platforms had an outstanding loan balance of \$32.2 billion and \$29.7 billion at December 31, 2017 and December 31, 2016, respectively.

Lending Activities Included in Customer and Other Receivables

Margin Loans

\$ in millions	At December 31, 2017		
	IS	WM	Total
Net customer receivables representing margin loans	\$ 19,977	\$ 12,135	\$ 32,112

\$ in millions	At December 31, 2016		
	IS	WM	Total
Net customer receivables representing margin loans	\$ 11,876	\$ 12,483	\$ 24,359

Institutional Securities and Wealth Management business segments provide margin lending arrangements which allow the client to borrow against the value of qualifying securities. Margin lending activities generally have minimal credit risk due to the value of collateral held and their short-term nature.

Employee Loans

\$ in millions	At December 31, 2017	At December 31, 2016
Employee loans:		
Balance	\$ 4,185	\$ 4,804
Allowance for loan losses	(77)	(89)
Balance, net	\$ 4,108	\$ 4,715
Repayment term range, in years	1 to 20	1 to 12

Employee loans are generally granted to retain and recruit certain employees, are full recourse and generally require periodic repayments. We establish an allowance for loan amounts to terminated employees that we do not consider recoverable, which is recorded in Compensation and benefits expense. See Note 7 to the financial statements for a further description of our employee loans.

Credit Exposure—Derivatives

We incur credit risk as a dealer in OTC derivatives. Credit risk with respect to derivative instruments arises from the possibility that a counterparty may fail 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).

Fair values as shown below represent the Firm's net exposure to counterparties related to its OTC derivative products. Obligor credit ratings are determined internally by CRM.

Counterparty Credit Rating and Remaining Contractual Maturity of OTC Derivative Assets

\$ in millions	Fair Value at December 31, 2017					Total Derivative Assets
	Contractual Years to Maturity					
	Less than 1	1-3	3-5	Over 5		
Credit Rating						
AAA	\$ 157	\$ 404	\$ 406	\$ 3,759	\$ 4,726	
AA	1,586	2,070	1,030	5,802	10,488	
A	6,473	4,738	4,434	20,613	36,258	
BBB	3,941	2,379	1,764	13,135	21,219	
Non-investment grade	2,691	2,816	3,663	2,294	11,464	
Total	\$ 14,848	\$ 12,407	\$ 11,297	\$ 45,603	\$ 84,155	

\$ in millions	Fair Value at December 31, 2017			
	Total Derivative Assets	Cross-Maturity and Cash Collateral Netting ¹	Net Amounts Post-cash Collateral	Net Amounts Post-Collateral ²
	Credit Rating			
AAA	\$ 4,726	\$ (3,780)	\$ 946	\$ 880
AA	10,488	(5,444)	5,044	2,224
A	36,258	(27,277)	8,981	4,859
BBB	21,219	(14,207)	7,012	4,974
Non-investment grade	11,464	(5,409)	6,055	2,738
Total	\$ 84,155	\$ (56,117)	\$ 28,038	\$ 15,675

\$ in millions	Fair Value at December 31, 2016					Total Derivative Assets
	Contractual Years to Maturity					
	Less than 1	1-3	3-5	Over 5		
Credit Rating						
AAA	\$ 150	\$ 428	\$ 918	\$ 2,931	\$ 4,427	
AA	3,177	2,383	2,942	10,194	18,696	
A	9,244	6,676	5,495	21,322	42,737	
BBB	4,423	3,085	2,434	13,023	22,965	
Non-investment grade	2,283	1,702	1,722	1,794	7,501	
Total	\$ 19,277	\$ 14,274	\$ 13,511	\$ 49,264	\$ 96,326	

\$ in millions	Fair Value at December 31, 2016			
	Total Derivative Assets	Cross-Maturity and Cash Collateral Netting ¹	Net Amounts Post-cash Collateral	Net Amounts Post-Collateral ²
Credit Rating				
AAA	\$ 4,427	\$ (3,900)	\$ 527	\$ 485
AA	18,696	(11,813)	6,883	4,114
A	42,737	(31,425)	11,312	6,769
BBB	22,965	(16,629)	6,336	4,852
Non-investment grade	7,501	(4,131)	3,370	1,915
Total	\$ 96,326	\$ (67,898)	\$ 28,428	\$ 18,135

1. 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.
2. Fair value is shown net of collateral received (primarily cash and U.S. government and agency securities).

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

\$ in millions	At December 31, 2017	At December 31, 2016 ¹
Industry		
Utilities	\$ 4,382	\$ 4,184
Financials	3,330	4,008
Industrials	1,124	1,644
Sovereign governments	1,084	709
Regional governments	1,005	1,352
Healthcare	882	1,103
Information technology	715	267
Not-for-profit organizations	703	830
Energy	646	533
Consumer discretionary	464	590
Real estate	374	503
Materials	329	235
Insurance	206	570
Consumer staples	161	567
Other	270	1,040
Total²	\$ 15,675	\$ 18,135

1. The amounts included in the December 31, 2016 industry categories have been revised due to previous misclassifications. The total remained unchanged.
2. For further information on derivative instruments and hedging activities, see Note 4 to the financial statements.

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 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 CVAs as appropriate within Trading revenues in the income statements.

For additional credit exposure information on our credit derivative portfolio, see Note 4 to the financial statements.

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).” It is based on the FFIEC’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, 2017.

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, 2017

<i>\$ in millions</i>	Net Inventory ¹	Net Counterparty Exposure ²	Loans	Lending Commitments	Exposure before Hedges	Hedges ³	Net Exposure
Country							
U.K.:							
Sovereigns	\$ (416)	\$ 35	\$ —	\$ —	\$ (381)	\$ (357)	\$ (738)
Non-sovereigns	1,301	9,753	2,429	6,748	20,231	(1,929)	18,302
Total	\$ 885	\$ 9,788	\$ 2,429	\$ 6,748	\$ 19,850	\$ (2,286)	\$ 17,564
Germany:							
Sovereigns	\$ 4,741	\$ 783	\$ —	\$ —	\$ 5,524	\$ (828)	\$ 4,696
Non-sovereigns	480	2,156	706	3,286	6,628	(1,465)	5,163
Total	\$ 5,221	\$ 2,939	\$ 706	\$ 3,286	\$ 12,152	\$ (2,293)	\$ 9,859
Japan:							
Sovereigns	\$ 5,379	\$ 46	\$ —	\$ —	\$ 5,425	\$ (118)	\$ 5,307
Non-sovereigns	421	3,292	—	—	3,713	(114)	3,599
Total	\$ 5,800	\$ 3,338	\$ —	\$ —	\$ 9,138	\$ (232)	\$ 8,906
France:							
Sovereigns	\$ (227)	\$ —	\$ —	\$ —	\$ (227)	\$ (50)	\$ (277)
Non-sovereigns	318	1,580	171	3,119	5,188	(792)	4,396
Total	\$ 91	\$ 1,580	\$ 171	\$ 3,119	\$ 4,961	\$ (842)	\$ 4,119
Brazil:							
Sovereigns	\$ 3,449	\$ —	\$ —	\$ —	\$ 3,449	\$ (12)	\$ 3,437
Non-sovereigns	(77)	205	28	83	239	(17)	222
Total	\$ 3,372	\$ 205	\$ 28	\$ 83	\$ 3,688	\$ (29)	\$ 3,659
Spain:							
Sovereigns	\$ (540)	\$ —	\$ —	\$ —	\$ (540)	\$ —	\$ (540)
Non-sovereigns	99	235	191	3,658	4,183	(182)	4,001
Total	\$ (441)	\$ 235	\$ 191	\$ 3,658	\$ 3,643	\$ (182)	\$ 3,461
Australia:							
Sovereigns	\$ 2,193	\$ 11	\$ —	\$ —	\$ 2,204	\$ —	\$ 2,204
Non-sovereigns	163	332	168	753	1,416	(176)	1,240
Total	\$ 2,356	\$ 343	\$ 168	\$ 753	\$ 3,620	\$ (176)	\$ 3,444
Canada:							
Sovereigns	\$ (332)	\$ 24	\$ —	\$ —	\$ (308)	\$ —	\$ (308)
Non-sovereigns	334	1,555	76	1,441	3,406	(342)	3,064
Total	\$ 2	\$ 1,579	\$ 76	\$ 1,441	\$ 3,098	\$ (342)	\$ 2,756
China:							
Sovereigns	\$ 186	\$ 211	\$ —	\$ —	\$ 397	\$ (54)	\$ 343
Non-sovereigns	994	280	689	449	2,412	(10)	2,402
Total	\$ 1,180	\$ 491	\$ 689	\$ 449	\$ 2,809	\$ (64)	\$ 2,745
India:							
Sovereigns	\$ 1,479	\$ —	\$ —	\$ —	\$ 1,479	\$ —	\$ 1,479
Non-sovereigns	589	545	—	—	1,134	—	1,134
Total	\$ 2,068	\$ 545	\$ —	\$ —	\$ 2,613	\$ —	\$ 2,613

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).
2. Net counterparty exposure (*i.e.*, repurchase transactions, securities lending and OTC derivatives) takes into consideration legally enforceable master netting agreements and collateral.
3. 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. For a further description of the contractual terms for purchased credit protection and whether they may limit the effectiveness of our hedges, see "Credit Exposure—Derivatives" herein.

Risk Disclosures

As a market maker, we may transact in CDS positions to facilitate client trading. Exposures related to single-name and index credit derivatives for those countries shown in the previous table were as follows:

Credit Derivatives Included in Net Inventory

<i>\$ in millions</i>	At December 31, 2017
Gross purchased protection	\$ (79,052)
Gross written protection	77,205
Net exposure	\$ (1,847)

Net counterparty exposure shown in the Top Ten Country Exposures table above are net of the benefit of collateral received, which is typically composed of cash and government obligations.

Benefit of Collateral Received against Counterparty Credit Exposure

<i>\$ in millions</i>		At December 31, 2017
Counterparty credit exposure	Collateral ¹	
Germany	Belgium, Germany	\$ 10,264
U.K.	U.K., U.S., France	9,110
Other	Spain, U.S.	13,892

1. Collateral primarily consists of cash and government obligations.

Country Risk Exposures Related to the U.K. At December 31, 2017, our country risk exposures in the U.K. included net exposures of \$17,564 million as shown in the Top Ten Country Exposures table above, and overnight deposits of \$6,920 million. The \$18,302 million of exposures to non-sovereigns were diversified across both names and sectors. Of these exposures, \$5,686 million were to U.K.-focused counterparties that generate more than one-third of their revenues in the U.K., \$5,920 million were to geographically diversified counterparties, and \$5,447 million were to exchanges and clearinghouses.

Country Risk Exposures Related to Brazil. At December 31, 2017, our country risk exposures in Brazil included net exposures of \$3,659 million as shown in the Top Ten Country Exposures table above. Our sovereign net exposures in Brazil were principally in the form of local currency government bonds held onshore to support client activity. The \$222 million of exposures to non-sovereigns were diversified across both names and sectors.

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or

systems, from 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).

In December 2017, the Basel Committee released its agreement on a comprehensive set of revisions to its Basel III Framework, including an update to the calculation of operational risk regulatory capital requirements. Under the requirements, 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 requirements are expected to take effect starting January 2022, subject to U.S. banking agencies issuing implementation proposals.

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 reviewed and confirmed 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 enhancement of defenses against cyber attacks; use of legal agreements and contracts to transfer and/or limit operational risk exposures; due diligence; implement-

tation 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 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 a program that oversees our cyber and information security risks. Our cybersecurity and information security policies, procedures, and technologies are designed to protect our, client and employee data against unauthorized disclosure, modification or misuse and are also designed to address regulatory requirements. These policies and procedures cover a broad range of areas, including: identification of internal and external threats, access control, data security, protective controls, detection of malicious or unauthorized activity, incident response and recovery planning.

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 aligns with our risk tolerance and is designed to meet regulatory requirements. The program includes the adoption of appropriate risk management controls, 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. The Model Risk Management Department ("MRM") is a distinct department in Risk Management responsible for the oversight of model risk.

MRM 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. MRM 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 head of MRM 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 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.”

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 AML 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” and “Risk Factors”).

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 industries globally presents a continuing business challenge for us.

Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Morgan Stanley:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Morgan Stanley and subsidiaries (the “Firm”) as of December 31, 2017 and 2016, the related consolidated income statements, comprehensive income statements, cash flow statements and statements of changes in total equity for the years ended December 31, 2017, 2016, and 2015, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Firm as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the years ended December 31, 2017, 2016, and 2015, 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) (PCAOB), the Firm’s internal control over financial reporting as of December 31, 2017, based on 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, 2018, expressed an unqualified opinion on the Firm’s internal control over financial reporting.

/s/ Deloitte & Touche LLP
New York, New York
February 27, 2018

We have served as the Firm’s auditor since 1997.

Basis for Opinion

These financial statements are the responsibility of the Firm’s management. Our responsibility is to express an opinion on the Firm’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Consolidated Income Statements

Morgan Stanley

in millions, except per share data

	2017	2016	2015
Revenues			
Investment banking	\$ 6,003	\$ 4,933	\$ 5,594
Trading	11,116	10,209	10,114
Investments	820	160	541
Commissions and fees	4,061	4,109	4,554
Asset management	11,797	10,697	10,766
Other	848	825	493
Total non-interest revenues	34,645	30,933	32,062
Interest income	8,997	7,016	5,835
Interest expense	5,697	3,318	2,742
Net interest	3,300	3,698	3,093
Net revenues	37,945	34,631	35,155
Non-interest expenses			
Compensation and benefits	17,166	15,878	16,016
Occupancy and equipment	1,329	1,308	1,382
Brokerage, clearing and exchange fees	2,093	1,920	1,892
Information processing and communications	1,791	1,787	1,767
Marketing and business development	609	587	681
Professional services	2,169	2,128	2,298
Other	2,385	2,175	2,624
Total non-interest expenses	27,542	25,783	26,660
Income from continuing operations before income taxes	10,403	8,848	8,495
Provision for income taxes	4,168	2,726	2,200
Income from continuing operations	6,235	6,122	6,295
Income (loss) from discontinued operations, net of income taxes	(19)	1	(16)
Net income	\$ 6,216	\$ 6,123	\$ 6,279
Net income applicable to noncontrolling interests	105	144	152
Net income applicable to Morgan Stanley	\$ 6,111	\$ 5,979	\$ 6,127
Preferred stock dividends and other	523	471	456
Earnings applicable to Morgan Stanley common shareholders	\$ 5,588	\$ 5,508	\$ 5,671
Earnings per basic common share			
Income from continuing operations	\$ 3.15	\$ 2.98	\$ 2.98
Income (loss) from discontinued operations	(0.01)	—	(0.01)
Earnings per basic common share	\$ 3.14	\$ 2.98	\$ 2.97
Earnings per diluted common share			
Income from continuing operations	\$ 3.08	\$ 2.92	\$ 2.91
Income (loss) from discontinued operations	(0.01)	—	(0.01)
Earnings per diluted common share	\$ 3.07	\$ 2.92	\$ 2.90
Dividends declared per common share	\$ 0.90	\$ 0.70	\$ 0.55
Average common shares outstanding			
Basic	1,780	1,849	1,909
Diluted	1,821	1,887	1,953

Consolidated Comprehensive Income Statements

Morgan Stanley

<i>\$ in millions</i>	2017	2016	2015
Net income	\$ 6,216	\$ 6,123	\$ 6,279
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	\$ 251	\$ (11)	\$ (304)
Change in net unrealized gains (losses) on available-for-sale securities	41	(269)	(246)
Pension, postretirement and other	(117)	(100)	138
Change in net debt valuation adjustment	(588)	(296)	—
Total other comprehensive income (loss)	\$ (413)	\$ (676)	\$ (412)
Comprehensive income	\$ 5,803	\$ 5,447	\$ 5,867
Net income applicable to noncontrolling interests	105	144	152
Other comprehensive income (loss) applicable to noncontrolling interests	4	(1)	(4)
Comprehensive income applicable to Morgan Stanley	\$ 5,694	\$ 5,304	\$ 5,719

Consolidated Balance Sheets

Morgan Stanley

	At December 31, 2017	At December 31, 2016
<i>\$ in millions, except share data</i>		
Assets		
Cash and cash equivalents:		
Cash and due from banks	\$ 24,816	\$ 22,017
Interest bearing deposits with banks	21,348	21,364
Restricted cash	34,231	33,979
Trading assets at fair value (\$169,735 and \$152,548 were pledged to various parties)	298,282	262,154
Investment securities (includes \$55,203 and \$63,170 at fair value)	78,802	80,092
Securities purchased under agreements to resell (includes \$— and \$302 at fair value)	84,258	101,955
Securities borrowed	124,010	125,236
Customer and other receivables	56,187	46,460
Loans:		
Held for investment (net of allowance of \$224 and \$274)	92,953	81,704
Held for sale	11,173	12,544
Goodwill	6,597	6,577
Intangible assets (net of accumulated amortization of \$2,730 and \$2,421)	2,448	2,721
Other assets	16,628	18,146
Total assets	\$ 851,733	\$ 814,949
Liabilities		
Deposits (includes \$204 and \$63 at fair value)	\$ 159,436	\$ 155,863
Trading liabilities at fair value	131,295	128,194
Securities sold under agreements to repurchase (includes \$800 and \$729 at fair value)	56,424	54,628
Securities loaned	13,592	15,844
Other secured financings (includes \$3,863 and \$5,041 at fair value)	11,271	11,118
Customer and other payables	191,510	190,513
Other liabilities and accrued expenses	17,157	15,896
Borrowings (includes \$46,912 and \$39,142 at fair value)	192,582	165,716
Total liabilities	773,267	737,772
Commitments and contingent liabilities (see Note 12)		
Equity		
Morgan Stanley shareholders' equity:		
Preferred stock	8,520	7,520
Common stock, \$0.01 par value:		
Shares authorized: 3,500,000,000; Shares issued: 2,038,893,979; Shares outstanding: 1,788,086,805 and 1,852,481,601	20	20
Additional paid-in capital	23,545	23,271
Retained earnings	57,577	53,679
Employee stock trusts	2,907	2,851
Accumulated other comprehensive income (loss)	(3,060)	(2,643)
Common stock held in treasury at cost, \$0.01 par value (250,807,174 and 186,412,378 shares)	(9,211)	(5,797)
Common stock issued to employee stock trusts	(2,907)	(2,851)
Total Morgan Stanley shareholders' equity	77,391	76,050
Noncontrolling interests	1,075	1,127
Total equity	78,466	77,177
Total liabilities and equity	\$ 851,733	\$ 814,949

Consolidated Statements of Changes in Total Equity

Morgan Stanley

<i>\$ in millions</i>	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, 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
Cumulative adjustment for accounting changes ³	—	—	45	(35)	—	—	—	—	—	10
Net income applicable to Morgan Stanley	—	—	—	6,111	—	—	—	—	—	6,111
Net income applicable to noncontrolling interests	—	—	—	—	—	—	—	—	105	105
Dividends	—	—	—	(2,178)	—	—	—	—	—	(2,178)
Shares issued under employee plans	—	—	306	—	56	—	878	(56)	—	1,184
Repurchases of common stock and employee tax withholdings	—	—	—	—	—	—	(4,292)	—	—	(4,292)
Net change in Accumulated other comprehensive income (loss)	—	—	—	—	—	(417)	—	—	4	(413)
Issuance of preferred stock	1,000	—	(6)	—	—	—	—	—	—	994
Other net decreases	—	—	(71)	—	—	—	—	—	(161)	(232)
Balance at December 31, 2017	\$ 8,520	\$ 20	\$ 23,545	\$ 57,577	\$ 2,907	\$ (3,060)	\$ (9,211)	\$ (2,907)	\$ 1,075	\$ 78,466

1. DVA—represents the change in 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 related to certain Borrowings (structured notes). 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 interests and tax, related to outstanding liabilities under the fair value option election from Retained earnings into AOCI. See Note 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.

3. The cumulative adjustment relates to the adoption of the following accounting updates on January 1, 2017: *Improvements to Employee Share-Based Payment Accounting*, for which the Firm recorded a cumulative catch-up adjustment to reflect its election to account for forfeitures as they occur (see Note 2 for further information); and *Intra-Entity Transfers of Assets Other Than Inventory*, for which the Firm recorded a cumulative catch-up adjustment to reflect the tax impact from an intercompany sale of assets.

Consolidated Cash Flow Statements

Morgan Stanley

<i>\$ in millions</i>	2017	2016	2015
Cash flows from operating activities			
Net income	\$ 6,216	\$ 6,123	\$ 6,279
Adjustments to reconcile net income to net cash provided by (used for) operating activities:			
Deferred income taxes	2,747	1,579	1,189
(Income) loss from equity method investments	34	79	(114)
Stock-based compensation expense	1,026	1,136	1,104
Depreciation and amortization	1,753	1,736	1,433
Net gain on sale of available-for-sale securities	(35)	(112)	(84)
Impairment charges	91	130	69
Provision for credit losses on lending activities	29	144	123
Other operating adjustments	63	(199)	322
Changes in assets and liabilities:			
Trading assets, net of Trading liabilities	(27,588)	(24,079)	30,212
Securities borrowed	1,226	17,180	(5,708)
Securities loaned	(2,252)	(3,514)	(5,861)
Customer and other receivables and other assets	(9,315)	(371)	(434)
Customer and other payables and other liabilities	2,007	1,913	4,633
Securities purchased under agreements to resell	17,697	(14,298)	(4,369)
Securities sold under agreements to repurchase	1,796	17,936	(33,257)
Net cash provided by (used for) operating activities	(4,505)	5,383	(4,463)
Cash flows from investing activities			
Proceeds from (payments for):			
Other assets—Premises, equipment and software, net	(1,629)	(1,276)	(1,373)
Business dispositions, net of cash disposed	—	—	998
Changes in loans, net	(12,125)	(9,604)	(15,816)
Investment securities:			
Purchases	(23,962)	(50,911)	(47,291)
Proceeds from sales	18,131	33,716	37,926
Proceeds from paydowns and maturities	7,445	8,367	5,663
Other investing activities	(251)	200	(102)
Net cash provided by (used for) investing activities	(12,391)	(19,508)	(19,995)
Cash flows from financing activities			
Net proceeds from (payments for):			
Noncontrolling interests	(83)	(96)	(96)
Other secured financings	(1,573)	1,333	(2,370)
Deposits	3,573	(171)	22,490
Proceeds from:			
Derivatives financing activities	73	—	512
Issuance of preferred stock, net of issuance costs	994	—	1,493
Issuance of Borrowings	55,416	43,626	34,182
Payments for:			
Borrowings	(35,825)	(31,596)	(27,377)
Derivatives financing activities	(73)	(120)	(452)
Repurchases of common stock and employee tax withholdings	(4,292)	(3,933)	(2,773)
Cash dividends	(2,085)	(1,746)	(1,455)
Other financing activities	136	66	—
Net cash provided by (used for) financing activities	16,261	7,363	24,154
Effect of exchange rate changes on cash and cash equivalents	3,670	(1,430)	(1,735)
Net increase (decrease) in cash and cash equivalents	3,035	(8,192)	(2,039)
Cash and cash equivalents, at beginning of period	77,360	85,552	87,591
Cash and cash equivalents, at end of period	\$ 80,395	\$ 77,360	\$ 85,552
Cash and cash equivalents:			
Cash and due from banks	\$ 24,816	\$ 22,017	\$ 19,827
Interest bearing deposits with banks	21,348	21,364	34,256
Restricted cash	34,231	33,979	31,469
Cash and cash equivalents, at end of period	\$ 80,395	\$ 77,360	\$ 85,552
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	\$ 5,377	\$ 2,834	\$ 2,672
Income taxes, net of refunds	1,390	831	677

1. Introduction and Basis of Presentation

The Firm

Morgan Stanley, an FHC, 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. See the “Glossary of Common Acronyms” for definitions of certain acronyms used throughout the 2017 Form 10-K.

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, founda-

tions, 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 (“financial statements”) are prepared in accordance with 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 financial statements and related disclosures. The Firm believes that the estimates utilized in the preparation of its 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 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 VIEs (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 (“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 (“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.

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 applies the equity method of accounting with net gains and losses recorded within Other revenues (see Note 8) unless the Firm has elected to measure the investment at fair value, in which case 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 flow statements"), cash and cash equivalents consist of Cash and due from banks, Interest bearing deposits with banks and Restricted cash. Cash and cash equivalents includes 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.

Restricted cash represents cash subject to withdrawal or usage restrictions and includes cash in banks subject to withdrawal restrictions, restricted deposits held as compensating balances, and cash segregated in compliance with federal or other regulations.

Dispositions

The Firm completed the sale of its global oil merchanting unit of the commodities division to Castleon 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.

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 OTC equity securities; services related to sales and trading activities; and sales of mutual funds, futures, insurance products and options.

Asset Management

Asset management revenues 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 benchmark stated in the investment management agreement. Performance-based fees are recorded within Investments or Asset management revenues depending on the nature of the arrangement.

See Note 21 for information regarding the unrealized cumulative amount of performance-based fee revenues. 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 and equity securities classified as 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 income statements, except for AFS securities (see "Investment Securities—AFS and HTM securities" 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 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 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 Firm has elected to measure certain eligible instruments at fair value, including certain Securities purchased under agreements to resell, loans and lending commitments, equity method investments, Deposits (structured certificates of deposit), Securities sold under agreements to repurchase, Other secured financings and 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.

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.

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, with Level 1 being the highest and Level 3 being the lowest level:

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 meets 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 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 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 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 an FVA in 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. 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.

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 Nonrecurring 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, 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 reviews 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 Chief Financial Officer 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 agree-

ment. In cases where the Firm has not determined an agreement to be enforceable, the related amounts are not offset (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 the 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 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 certain fixed rate senior 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 an 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.

Investment Securities—Available-for-Sale and Held-to-Maturity

AFS securities are reported at fair value in the 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 income statements. Realized gains and losses on AFS securities are reported in the income statements (see Note 5). The Firm utilizes the "first-in, first-out" method as the basis for determining the cost of AFS securities.

HTM securities are reported at amortized cost in the balance sheets. Interest income, including amortization of premiums and accretion of discounts on HTM securities, is included in Interest income in the 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 OTTI at the individual security level. A temporary impairment is recognized in AOCI. OTTI is recognized in the 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 OTTI.

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 OTTI, 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, its industry or geographic area;
- changes in the financial condition of the issuer of the security, the presence of explicit or implicit guarantees of repayment by the U.S. Government for U.S. Government and Agency securities 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;
- the current rating and 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 in the balance sheet and the cost basis) will be recognized in the income statements.

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 agencies' 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 quality 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 to ensure that it is reasonably likely to adequately absorb the estimated probable losses inherent in the portfolio. When the Firm recognizes an allowance, there is also 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 a TDR. 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 collectibility 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 realized 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 nonaccrual 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 discussed 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 balance sheets, and the expense is recorded in Other non-interest expenses in the 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 mortgage loans held for sale are derivatives and are reported in Trading assets or Trading liabilities in the balance sheets with an offset to Trading revenues in the income statements.

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 below cost of such commitments in Other liabilities and accrued expenses in the balance sheets with an offset to Other revenues in the income statements.

Loans and lending commitments held for sale are subject to the nonaccrual policies described above in the Loans Held for Investment—Nonaccrual loans section. 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 balance sheets, and the expense is recorded in Trading revenues in the income statements.

Loans and lending commitments at fair value are subject to the nonaccrual policies described above in the Loans Held for Investment—Nonaccrual loans section. Because such loans and lending commitments are reported at fair value, the allowance for loan losses and charge-off policies do not apply to these loans.

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 in the 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. In instances where the Firm is the lender in securities-for-securities transactions and is permitted to sell or repledge these securities, the fair value of the collateral received is reported in Trading assets and the related obligation to return the collateral is reported in Trading liabilities in the balance sheets. Securities-for-securities transactions where the Firm is the borrower are not included in the balance sheets.

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 balance sheets. Depreciation and amortization are provided by the straight-line method over the estimated useful life of the asset.

Estimated Useful Lives of Assets

<i>in years</i>	Estimated Useful Life
Buildings	39
Leasehold improvements—Building	term of lease to 25
Leasehold improvements—Other	term of lease to 15
Furniture and fixtures	7
Computer and communications equipment	3 to 9
Power generation assets	15 to 29
Terminals, pipelines and equipment	3 to 30
Software costs	3 to 10

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.

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 either (a) perform a *quantitative* impairment test or (b) first perform a *qualitative* assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, in which case the quantitative test would be performed.

When performing a *quantitative* impairment test, we compare the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit is less than its carrying amount, the goodwill impairment loss is equal to the lesser of the excess of the carrying value over the fair value or the carrying amount of goodwill allocated to that reporting unit.

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 income statements.

Earnings per Common Share

Basic 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 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 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 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 PSUs that vest and convert to shares of common stock only if they satisfy 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. The Firm accounts for forfeitures as they occur. 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. Certain stock-based compensation with market-based conditions is valued using a Monte Carlo valuation model.

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, which 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 Employee stock trusts at its discretion. 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 in the balance sheets.

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, which reflects the period over which the compensation is earned.

The Firm 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.

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. Such effects are recorded in income tax expense (benefit) from continuing operations regardless of where deferred taxes were originally recorded.

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. When performing the assessment, the Firm considers all types of deferred tax assets in combination with each other, regardless of the origin of the underlying temporary difference. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. If the Firm subsequently determines that it would be able to realize deferred tax assets 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.

The Firm recognizes tax expense associated with global intangible low-taxed income provisions ("GILTI") included in the Tax Cuts and Jobs Act ("Tax Act") as it is incurred as part of the current income taxes to be paid or refunded for the current period.

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.

Notwithstanding the above, it may be appropriate to record future adjustments made to amounts related to the Tax Act as an adjustment to income tax expense (benefit) from continuing operations in the reporting period the adjustments are determined, depending on the nature of the estimate and reason for the adjustment.

Foreign Currencies

Assets and liabilities of operations with 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 in the 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.

Accounting Standards Adopted

The Firm adopted the following accounting updates in 2017.

- **Improvements to Employee Share-Based Payment Accounting.** This accounting update, adopted January 1, 2017, simplifies the accounting for employee share-based awards, including the recognition of forfeitures, the classification of related income tax consequences, and the classification of tax-related cash flows within the cash flow statements.

Beginning in 2017, the income tax consequences related to share-based awards are required to be recognized in Provision for income taxes in the income statements upon the conversion of employee share-based awards instead of Additional paid-in capital. The impact of the income tax consequences upon conversion of the awards may be either a benefit or a provision. Conversion of employee share-based awards to Firm shares will primarily occur in the first quarter of each year. The impact of recognizing excess tax benefits upon conversion of awards in the quarter in which the accounting update was adopted (three months ended March 31, 2017) was a \$112 million benefit to Provision for income taxes. For full year impact of this discrete tax item, see Note 21. The classification of cash flows from excess tax benefits was moved from the financing section to the operating section of the cash flow statements, and was applied on a retrospective basis.

In addition, this accounting update permits an entity to elect whether to continue to estimate the total forfeitures, or to account for forfeitures on an actual basis as they occur. The Firm has elected to account for forfeitures on an actual basis as they occur. This change is required to be applied using a modified retrospective approach, and upon adoption, the Firm recorded a cumulative catch-up adjustment, decreasing Retained earnings by approximately \$30 million net of tax, increasing Additional paid-in capital by approximately \$45 million and increasing deferred tax assets by approximately \$15 million.

- **Statement of Cash Flows—Restricted Cash.** This accounting update requires that an entity include in its cash and cash equivalents amounts that are deemed to be restricted cash and cash equivalents and to present a reconciliation of such amounts in the cash flow statements. The Firm early adopted this accounting update in the fourth quarter of 2017. Prior periods were retrospectively adjusted to conform to the current period presentation. Upon adoption, the Firm recorded an increase of \$2.9 billion and a decrease of \$(8.3) billion in Net cash provided by (used for) operating activities, for the years ended December 31, 2016 and 2015, respectively. These impacts were primarily related to reclassifying the changes in the Firm's Restricted cash balance from the operating section to the cash and cash equivalent balances within the cash flow statements.
- **Income Tax Accounting Implications of the Tax Cuts and Jobs Act.** This SEC Staff Accounting Bulletin addresses the recognition of the tax effects of the Tax Act in the period of enactment (2017). It allows companies to book provisional estimates of the effects, or to report that their accounting is incomplete when issuing financial statements. To the extent that provisional estimates are booked, it allows a one year measurement period during which any adjustments made to previous provisional amounts would be recorded as an adjustment to income tax expense (benefit) from continuing operations in the reporting period the adjustments are determined. The adoption of this accounting guidance in the fourth quarter of 2017 did not have a material impact on the Firm's financial statements.

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	
<p><i>U.S. Treasury and Agency Securities</i></p> <p><i>U.S. Treasury Securities</i></p> <ul style="list-style-type: none"> Fair value is determined using quoted market prices. <p><i>U.S. Agency Securities</i></p> <ul style="list-style-type: none"> 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 comparable to-be-announced securities. CMOs are generally valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments. 	<ul style="list-style-type: none"> Generally Level 1 Level 1 - non-callable agency-issued debt securities Generally Level 2 - callable agency-issued debt securities, agency mortgage pass-through pool securities and CMOs Level 3 - in instances where the inputs are unobservable
<p><i>Other Sovereign Government Obligations</i></p> <ul style="list-style-type: none"> Fair value is determined using quoted prices in active markets when available. 	<ul style="list-style-type: none"> Generally Level 1 Level 2 - if the market is less active or prices are dispersed Level 3 - in instances where the prices are unobservable
<p><i>State and Municipal Securities</i></p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Generally Level 2 – if value based on observable market data for comparable instruments
<p><i>RMBS, CMBS, ABS (collectively known as Mortgage- and Asset-backed securities)</i></p> <ul style="list-style-type: none"> Mortgage- and asset-backed securities 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, 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. 	<ul style="list-style-type: none"> 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
<p><i>Corporate Bonds</i></p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Generally Level 2 - if value based on observable market data for comparable instruments Level 3 - in instances where prices or significant spread inputs are unobservable
<p><i>CDO</i></p> <ul style="list-style-type: none"> The Firm holds cash CDOs that typically reference a tranche of an underlying synthetic portfolio of single name CDS spreads collateralized by corporate bonds (CLN) or cash portfolio of ABS/loans ("asset-backed CDOs"). Credit correlation, a primary input used to determine the fair value of CLNs, 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. 	<ul style="list-style-type: none"> Level 2 - when either comparable market transactions are observable or credit correlation input is insignificant Level 3 - when either comparable market transactions are unobserv-

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<ul style="list-style-type: none"> Asset-backed CDOs 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 position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity. 	<ul style="list-style-type: none"> able or the credit correlation input is significant
<p><i>Loans and Lending Commitments</i></p> <ul style="list-style-type: none"> 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. <p>For further information on loans and lending commitments, see Note 7.</p>	<ul style="list-style-type: none"> Level 2 - if value based on observable market data for comparable instruments Level 3 - in instances where prices or significant spread inputs are unobservable
<p><i>Corporate Equities</i></p> <ul style="list-style-type: none"> 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 NAV. 	<ul style="list-style-type: none"> 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
<p><i>Derivative and Other Contracts</i></p> <p><i>Listed Derivative Contracts</i></p> <ul style="list-style-type: none"> 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. <p><i>OTC Derivative Contracts</i></p> <ul style="list-style-type: none"> 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 that 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 observ- 	<ul style="list-style-type: none"> Level 1 - listed derivatives that are actively traded Level 2 - listed derivatives that are not actively traded 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

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<p>able data points, based on historic and/or implied observations, may be employed as a technique to estimate the model input values.</p> <p>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.</p>	
<p><i>Investments</i></p> <ul style="list-style-type: none"> 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. For direct investments, 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. 	<ul style="list-style-type: none"> 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
<p><i>Physical Commodities</i></p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Generally Level 2 if value based on observable inputs
Investment Securities—AFS Securities	
<ul style="list-style-type: none"> 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 CMOs), CMBS, FFELP student loan ABS, auto loan ABS, corporate bonds, CLO and actively traded equity securities. <p>For further information on the determination of fair value, refer to the corresponding asset/liability valuation technique described herein.</p> <p>For further information on AFS securities, see Note 5.</p>	<p>For further information on Valuation Hierarchy Classification, see corresponding Valuation Technique described herein.</p>
Deposits	
<p><i>Certificates of Deposit</i></p> <ul style="list-style-type: none"> The Firm issues 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. 	<ul style="list-style-type: none"> Generally Level 2
Securities Purchased under Agreements to Resell and Securities Sold under Agreements to Repurchase	
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Generally Level 2 Level 3 - in instances where the unobservable inputs are deemed significant
Borrowings	
<p><i>Structured Notes</i></p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	At December 31, 2017				
	Level 1	Level 2	Level 3	Netting ¹	Total
Assets at fair value					
Trading assets:					
U.S. Treasury and agency securities	\$ 22,077	\$ 26,888	\$ —	\$ —	\$ 48,965
Other sovereign government obligations ²	20,234	7,825	1	—	28,060
State and municipal securities	—	3,592	8	—	3,600
MABS	—	2,364	423	—	2,787
Corporate bonds	—	15,105	456	—	15,561
CDO	—	445	84	—	529
Loans and lending commitments ³	—	4,791	5,945	—	10,736
Other debt	—	1,287	161	—	1,448
Corporate equities ⁴	149,697	492	166	—	150,355
Derivative and other contracts:					
Interest rate	472	178,704	1,763	—	180,939
Credit	—	7,602	420	—	8,022
Foreign exchange	58	53,724	15	—	53,797
Equity	1,101	40,359	3,530	—	44,990
Commodity and other	1,126	5,390	4,147	—	10,663
Netting ¹	(2,088)	(216,764)	(1,575)	(47,171)	(267,598)
Total derivative and other contracts	669	69,015	8,300	(47,171)	30,813
Investments ⁵	297	523	1,020	—	1,840
Physical commodities	—	1,024	—	—	1,024
Total trading assets ⁵	192,974	133,351	16,564	(47,171)	295,718
Investment securities—AFS	27,522	27,681	—	—	55,203
Intangible assets	—	3	—	—	3
Total assets at fair value	\$ 220,496	\$ 161,035	\$ 16,564	\$ (47,171)	\$ 350,924

\$ in millions	At December 31, 2017				
	Level 1	Level 2	Level 3	Netting ¹	Total
Liabilities at fair value					
Deposits	\$ —	\$ 157	\$ 47	\$ —	\$ 204
Trading liabilities:					
U.S. Treasury and agency securities	17,802	24	—	—	17,826
Other sovereign government obligations ²	24,857	2,016	—	—	26,873
Corporate and other debt	—	7,141	3	—	7,144
Corporate equities ⁴	52,653	82	22	—	52,757
Derivative and other contracts:					
Interest rate	364	162,239	545	—	163,148
Credit	—	8,166	379	—	8,545
Foreign exchange	23	55,118	127	—	55,268
Equity	1,001	44,666	2,322	—	47,989
Commodity and other	1,032	5,156	2,701	—	8,889
Netting ¹	(2,088)	(216,764)	(1,575)	(36,717)	(257,144)
Total derivative and other contracts	332	58,581	4,499	(36,717)	26,695
Total trading liabilities	95,644	67,844	4,524	(36,717)	131,295
Securities sold under agreements to repurchase	—	650	150	—	800
Other secured financings	—	3,624	239	—	3,863
Borrowings	—	43,928	2,984	—	46,912
Total liabilities at fair value	\$ 95,644	\$ 116,203	\$ 7,944	\$ (36,717)	\$ 183,074

Notes to Consolidated Financial Statements

Morgan Stanley

\$ in millions	At December 31, 2016				
	Level 1	Level 2	Level 3	Netting ¹	Total
Assets at fair value					
Trading assets:					
U.S. Treasury and agency securities	\$ 27,579	\$ 20,392	\$ 74	\$ —	\$ 48,045
Other sovereign government obligations	14,005	5,497	6	—	19,508
State and municipal securities	—	2,355	250	—	2,605
MABS	—	1,691	217	—	1,908
Corporate bonds	—	11,051	232	—	11,283
CDO	—	602	63	—	665
Loans and lending commitments ³	—	3,580	5,122	—	8,702
Other debt	—	1,360	180	—	1,540
Corporate equities ⁴	131,574	352	446	—	132,372
Derivative and other contracts:					
Interest rate	1,131	300,406	1,373	—	302,910
Credit	—	11,727	502	—	12,229
Foreign exchange	231	74,921	13	—	75,165
Equity	1,185	35,736	1,708	—	38,629
Commodity and other	2,808	6,734	3,977	—	13,519
Netting ¹	(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 ⁵	237	197	958	—	1,392
Physical commodities	—	112	—	—	112
Total trading assets ⁵	174,372	123,170	13,177	(51,381)	259,338
Investment securities—AFS	29,120	34,050	—	—	63,170
Securities purchased under agreements to resell	—	302	—	—	302
Intangible assets	—	3	—	—	3
Total assets at fair value	\$ 203,492	\$ 157,525	\$ 13,177	\$ (51,381)	\$ 322,813

\$ in millions	At December 31, 2016				
	Level 1	Level 2	Level 3	Netting ¹	Total
Liabilities at fair value					
Deposits	\$ —	\$ 21	\$ 42	\$ —	\$ 63
Trading liabilities:					
U.S. Treasury and agency securities	11,636	61	—	—	11,697
Other sovereign government obligations	20,658	2,430	—	—	23,088
Corporate and other debt	—	6,121	36	—	6,157
Corporate equities ⁴	57,847	54	35	—	57,936
Derivative and other contracts:					
Interest rate	1,244	285,379	953	—	287,576
Credit	—	12,550	875	—	13,425
Foreign exchange	17	75,510	56	—	75,583
Equity	1,162	37,828	1,524	—	40,514
Commodity and other	2,663	6,845	2,377	—	11,885
Netting ¹	(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
Borrowings	47	37,081	2,014	—	39,142
Total liabilities at fair value	\$ 90,896	\$ 115,525	\$ 6,551	\$ (39,803)	\$ 173,169

MABS—Mortgage- and asset-backed securities

- 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 "Netting." Positions classified within the same level that are with the same counterparty are netted within that level. For further information on derivative instruments and hedging activities, see Note 4.
- During 2017, the Firm transferred from Level 2 to Level 1 \$1.2 billion and \$1.0 billion of Trading assets—Other sovereign government obligations and Trading liabilities—Other sovereign government obligations, respectively, due to increased market activity in these instruments.
- For further breakdown by type, see the following Loans and Lending Commitments at Fair Value table.
- For trading purposes, the Firm holds or sells short equity securities issued by entities in diverse industries and of varying sizes.
- 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.

Loans and Lending Commitments at Fair Value

\$ in millions	At	At
	December 31, 2017	December 31, 2016
Corporate	\$ 8,358	\$ 7,217
Residential real estate	799	966
Wholesale real estate	1,579	519
Total	\$ 10,736	\$ 8,702

Unsettled Fair Value of Futures Contracts¹

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Customer and other receivables, net	\$ 831	\$ 610

1. These contracts are primarily Level 1, actively traded, valued based on quoted prices from the exchange and are excluded from the previous recurring fair value tables.

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. 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, 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 income statements.

Rollforward of Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis for 2017

<i>\$ in millions</i>	Beginning Balance at December 31, 2016	Realized and Unrealized Gains (Losses)	Purchases ¹	Sales and Issuances ²	Settlements ¹	Net Transfers	Ending Balance at December 31, 2017	Unrealized Gains (Losses)
Assets at fair value								
Trading assets:								
U.S. Treasury and agency securities	\$ 74	\$ (1)	\$ —	\$ (240)	\$ —	\$ 167	\$ —	\$ —
Other sovereign government obligations	6	—	—	(5)	—	—	1	—
State and municipal securities	250	3	6	(83)	—	(168)	8	—
MABS	217	47	289	(158)	(37)	65	423	(7)
Corporate bonds	232	22	381	(218)	—	39	456	(4)
CDO	63	22	40	(31)	(9)	(1)	84	15
Loans and lending commitments	5,122	182	3,616	(1,561)	(1,463)	49	5,945	131
Other debt	180	38	66	(171)	—	48	161	12
Corporate equities	446	(54)	173	(632)	—	233	166	(6)
Net derivative and other contracts ³ :								
Interest rate	420	322	29	(18)	608	(143)	1,218	341
Credit	(373)	(43)	—	(1)	455	3	41	(18)
Foreign exchange	(43)	(108)	—	(1)	31	9	(112)	(89)
Equity	184	136	988	(524)	396	28	1,208	159
Commodity and other	1,600	515	24	(57)	(343)	(293)	1,446	20
Total net derivative and other contracts	1,788	822	1,041	(601)	1,147	(396)	3,801	413
Investments	958	96	102	(57)	(78)	(1)	1,020	88
Liabilities at fair value								
Deposits	\$ 42	\$ (3)	\$ —	\$ 12	\$ (3)	\$ (7)	\$ 47	\$ (3)
Trading liabilities:								
Corporate and other debt	36	—	(63)	11	—	19	3	—
Corporate equities	35	1	(76)	9	—	55	22	—
Securities sold under agreements to repurchase	149	—	—	1	—	—	150	—
Other secured financings	434	(35)	—	64	(251)	(43)	239	(28)
Borrowings	2,014	(196)	—	1,968	(424)	(770)	2,984	(173)

1. Loan originations and consolidations of VIEs are included in Purchases and deconsolidations of VIEs are included in Settlements.

2. Amounts related to entering into Net derivative and other contracts, Deposits, Other secured financings and Borrowings primarily represent issuances. Amounts for other line items primarily represent sales.

3. Net derivative and other contracts represent Trading assets—Derivative and other contracts, net of Trading liabilities—Derivative and other contracts. Amounts are presented before counterparty netting.

Rollforward of Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis for 2016

<i>\$ in millions</i>	Beginning Balance at December 31, 2015	Realized and Unrealized Gains (Losses)	Purchases ¹	Sales and Issuances ²	Settlements ¹	Net Transfers	Ending Balance at December 31, 2016	Unrealized Gains (Losses)
Assets at fair value								
Trading assets:								
U.S. Treasury and agency securities	\$ —	\$ (4)	\$ 72	\$ —	\$ —	\$ 6	\$ 74	\$ (4)
Other sovereign government obligations	4	1	4	(7)	—	4	6	—
State and municipal securities	19	—	249	(18)	—	—	250	—
MABS	438	(69)	82	(323)	—	89	217	(77)
Corporate bonds	267	9	310	(357)	—	3	232	(20)
CDO	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)
Corporate equities	434	(2)	242	(154)	—	(74)	446	—
Net derivative and other contracts ³ :								
Interest rate	260	529	1	—	(83)	(287)	420	463
Credit	(844)	(176)	—	(4)	623	28	(373)	(167)
Foreign exchange	141	(27)	—	—	(220)	63	(43)	(23)
Equity	(2,031)	539	809	(337)	1,073	131	184	376
Commodity and other	1,050	544	24	(114)	(44)	140	1,600	304
Total net derivative and other contracts	(1,424)	1,409	834	(455)	1,349	75	1,788	953
Investments	707	(32)	398	(75)	(59)	19	958	(50)
Intangible assets	5	—	—	—	—	(5)	—	—
Liabilities at fair value								
Deposits	\$ 19	\$ —	\$ —	\$ 23	\$ —	\$ —	\$ 42	\$ —
Trading liabilities:								
Corporate and other debt	4	(4)	(99)	145	—	(18)	36	—
Corporate equities	18	17	(10)	89	—	(45)	35	—
Securities sold under agreements to repurchase	151	2	—	—	—	—	149	2
Other secured financings	461	(5)	—	79	(45)	(66)	434	(5)
Borrowings	1,988	(19)	—	648	(305)	(336)	2,014	(30)

1. Loan originations and consolidations of VIEs are included in Purchases and deconsolidations of VIEs are included in Settlements.

2. Amounts related to entering into Net derivative and other contracts, Deposits, Other secured financings and Borrowings primarily represent issuances. Amounts for other line items primarily represent sales.

3. Net derivative and other contracts represent Trading assets—Derivative and other contracts, net of Trading liabilities—Derivative and other contracts. Amounts are presented before counterparty netting.

Rollforward of Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis for 2015

<i>\$ in millions</i>	Beginning Balance at December 31, 2014	Realized and Unrealized Gains (Losses)	Purchases ¹	Sales and Issuances ²	Settlements ¹	Net Transfers	Ending Balance at December 31, 2015	Unrealized Gains (Losses)
Assets at fair value								
Trading assets:								
Other sovereign government obligations	\$ 41	\$ (1)	\$ 2	\$ (30)	\$ —	\$ (8)	\$ 4	\$ —
State and municipal securities	—	2	3	—	—	14	19	2
MABS	347	(13)	226	(136)	—	14	438	(20)
Corporate bonds	386	(44)	374	(381)	(53)	(15)	267	(44)
CDOs	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)
Corporate equities	272	(1)	374	(333)	—	122	434	11
Net derivative and other contracts ³ :								
Interest rate	(173)	(51)	58	(54)	207	273	260	20
Credit	(743)	(172)	19	(121)	196	(23)	(844)	(179)
Foreign exchange	151	53	4	(2)	(18)	(47)	141	52
Equity	(2,165)	166	81	(311)	22	176	(2,031)	62
Commodity and other	1,146	433	35	(222)	(116)	(226)	1,050	402
Total net derivative and other contracts	(1,784)	429	197	(710)	291	153	(1,424)	357
Investments	1,158	(1)	33	(139)	(188)	(156)	707	(1)
Intangible assets	6	—	—	—	(1)	—	5	—
Liabilities at fair value								
Deposits	\$ —	\$ (1)	\$ —	\$ 18	\$ —	\$ —	\$ 19	\$ (1)
Trading liabilities:								
Corporate and other debt	121	5	(20)	13	(104)	(1)	4	5
Corporate equities	45	79	(86)	33	—	105	18	79
Securities sold under agreements to repurchase								
	153	2	—	—	—	—	151	2
Other secured financings	149	192	—	327	(232)	409	461	181
Borrowings	1,934	61	—	882	(364)	(403)	1,988	52

1. Loan originations and consolidations of VIEs are included in Purchases and deconsolidations of VIEs are included in Settlements.

2. Amounts related to entering into Net derivative and other contracts, Deposits, Other secured financings and Borrowings primarily represent issuances. Amounts for other line items primarily represent sales.

3. Net derivative and other contracts represent Trading assets—Derivative and other contracts, net of Trading liabilities—Derivative and other contracts. Amounts are presented before counterparty netting.

Significant Unobservable Inputs Used in Recurring and Nonrecurring 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 and nonrecurring 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. 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 and Nonrecurring Level 3 Fair Value Measurements

\$ in millions, except inputs	Predominant Valuation Techniques/ Significant Unobservable Inputs	Range (Weighted Average or Simple Average/Median) ¹	
		At December 31, 2017	At December 31, 2016
Recurring Fair Value Measurement			
Assets at fair value			
U.S. Treasury and agency securities (\$— and \$74)			
Comparable pricing:	Comparable bond price	N/A	96 to 105 points (102 points)
State and municipal securities (\$8 and \$250)			
Comparable pricing:	Comparable bond price	N/M	53 to 100 points (91 points)
MABS (\$423 and \$217)			
Comparable pricing:	Comparable bond price	0 to 95 points (26 points)	0 to 86 points (27 points)
Corporate bonds (\$456 and \$232)			
Comparable pricing:	Comparable bond price	3 to 134 points (59 points)	3 to 130 points (70 points)
Discounted cash flow:	Recovery rate	6% to 36% (27%)	N/A
CDO (\$84 and \$63)			
Comparable pricing:	Comparable bond price	16 to 101 points (67 points)	0 to 103 points (50 points)
Loans and lending commitments (\$5,945 and \$5,122)			
Expected recovery:	Asset coverage	N/M	43% to 100% (83%)
Margin loan model:	Discount rate	0% to 3% (1%)	2% to 8% (3%)
	Volatility skew	7% to 41% (22%)	21% to 63% (33%)
Comparable pricing:	Comparable loan price	55 to 102 points (95 points)	45 to 100 points (84 points)
Discounted cash flow:	WACC	N/M	5%
	Capitalization rate	N/M	4% to 10% (4%)
Other debt (\$161 and \$180)			
Option model:	At the money volatility	17% to 52% (52%)	16% to 52% (52%)
Discounted cash flow:	Discount rate	7% to 20% (14%)	7% to 12% (11%)
Comparable pricing:	Comparable loan price	N/M	1 to 74 points (23 points)
Corporate equities (\$166 and \$446)			
Comparable pricing:	Comparable equity price	100%	100%
Net derivative and other contracts ² :			
Interest rate (\$1,218 and \$420)			
Option model:	Interest rate - Foreign exchange correlation	N/M	28% to 58% (44% / 43%)
	Interest rate volatility skew	31% to 97% (41% / 47%)	19% to 117% (55% / 56%)
	Interest rate quanto correlation	N/M	-17% to 31% (1% / -5%)
	Interest rate curve correlation	N/M	28% to 96% (68% / 72%)
	Inflation volatility	23% to 63% (44% / 41%)	23% to 55% (40% / 39%)
	Interest rate curve	2%	N/M
Credit (\$41 and \$(373))			
Comparable pricing:	Cash synthetic basis	12 to 13 points (12 points)	5 to 12 points (11 points)
	Comparable bond price	0 to 75 points (25 points)	0 to 70 points (23 points)
Correlation model:	Credit correlation	38% to 100% (48%)	32% to 70% (45%)
Foreign exchange ³ (\$112 and \$(43))			
Option model:	Interest rate - Foreign exchange correlation	54% to 57% (56% / 56%)	28% to 58% (44% / 43%)
	Interest rate volatility skew	31% to 97% (41% / 47%)	34% to 117% (55% / 56%)
	Contingency probability	95% to 100% (96% / 95%)	N/M
	Interest rate quanto correlation	N/M	-17% to 31% (1% / -5%)

\$ in millions, except inputs	Predominant Valuation Techniques/ Significant Unobservable Inputs	Range (Weighted Average or Simple Average/Median) ¹	
		At December 31, 2017	At December 31, 2016
Equity³ (\$1,208 and \$184)			
Option model:	At the money volatility	7% to 54% (32%)	7% to 66% (33%)
	Volatility skew	-5% to 0% (-1%)	-4% to 0% (-1%)
	Equity - Equity correlation	5% to 99% (76%)	25% to 99% (73%)
	Equity - Foreign exchange correlation	-55% to 40% (36%)	-63% to 30% (-43%)
	Equity - Interest rate correlation	-7% to 49% (18% / 20%)	-8% to 52% (12% / 4%)
Commodity and other (\$1,446 and \$1,600)			
Option model:	Forward power price	\$4 to \$102 (\$31) per MWh	\$7 to \$90 (\$32) per MWh
	Commodity volatility	7% to 205% (17%)	6% to 130% (18%)
	Cross-commodity correlation	5% to 99% (92%)	5% to 99% (92%)
Investments (\$1,020 and \$958)			
Discounted cash flow:	WACC	8% to 15% (9%)	10%
	Exit multiple	8 to 11 times (10 times)	10 to 24 times (11 times)
Market approach:	EBITDA multiple	6 to 25 times (11 times)	6 to 24 times (12 times)
Comparable pricing:	Comparable equity price	45% to 100% (92%)	75% to 100% (93%)
Liabilities at Fair Value			
Securities sold under agreements to repurchase (\$150 and \$149)			
Discounted cash flow:	Funding spread	107 to 126 bps (120 bps)	118 to 127 bps (121 bps)
Other secured financings (\$239 and \$434)			
Discounted cash flow:	Funding spread	39 to 76 bps (57 bps)	63 to 92 bps (78 bps)
Option model:	Volatility skew	-1%	-1%
	At the money volatility	10% to 40% (26%)	N/M
Discounted cash flow:	Discount rate	N/M	4%
Borrowings (\$2,984 and \$2,014)			
Option model:	At the money volatility	5% to 35% (22%)	7% to 42% (30%)
	Volatility skew	-2% to 0% (0%)	-2% to 0% (-1%)
	Equity - Equity correlation	39% to 95% (86%)	35% to 99% (84%)
	Equity - Foreign exchange correlation	-55% to 10% (-18%)	-63% to 13% (-40%)
Option model:	Equity volatility discount	N/M	7% to 11% (10% / 10%)
Nonrecurring Fair Value Measurement			
Assets at fair value			
Loans (\$924 and \$2,443)			
Corporate loan model:	Credit spread	93 to 563 bps (239 bps)	90 to 487 bps (208 bps)
Expected recovery:	Asset coverage	95% to 99% (95%)	73% to 99% (97%)

Points—Percentage of par

- Amounts represent weighted averages except where simple averages and the median of the inputs are provided when more relevant.
- CVA and FVA are included in the balance but excluded from the Valuation Technique(s) and Significant Unobservable Inputs. 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.
- Includes derivative contracts with multiple risks (*i.e.*, hybrid products).

Significant Unobservable Inputs — Description	Sensitivity
<i>Asset coverage</i> —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.
<i>Capitalization rate</i> —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.
<i>Cash synthetic basis</i> —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.
<i>Comparable bond or loan price</i> —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 or loan, then adjusting that yield (or spread) to derive a value for the bond or loan. The adjustment to yield (or spread) should account for relevant differences in the bonds or loans such as maturity or credit quality.	In general, an increase (decrease) to the comparable bond or loan price for an asset would result in a higher (lower) fair value.

Significant Unobservable Inputs — Description	Sensitivity
Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond or loan being valued in order to establish the value of the bond or loan. Additionally, as the probability of default increases for a given bond or loan (<i>i.e.</i> , as the bond or loan becomes more distressed), the valuation of that bond or loan 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.	
<i>Comparable equity price</i> —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.
<i>Contingency probability</i> —Probability associated with the realization of an underlying event upon which the value of an asset is contingent.	In general, an increase (decrease) to the contingency probability for an asset would result in a higher (lower) fair value.
<i>Correlation</i> —A pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movement of two variables (<i>i.e.</i> , 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.
<i>Credit spread</i> —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 LIBOR.	In general, an increase (decrease) to the credit spread of an asset would result in a lower (higher) fair value.
<i>EBITDA multiple / Exit multiple</i> —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.
<i>Funding spread</i> —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 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.
<i>WACC</i> —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.
<i>Interest rate curve</i> —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.
<i>Recovery rate</i> —Amount expressed as a percentage of par that is expected to be received when a credit event occurs.	In general, an increase (decrease) to the recovery rate for an asset would result in a higher (lower) fair value.
<i>Volatility</i> —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 (<i>e.g.</i> , 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.
<i>Volatility skew</i> —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 Net Asset Value

Investments in Certain Funds Measured at NAV per Share

\$ in millions	At December 31, 2017		At December 31, 2016	
	Fair Value	Commitment	Fair Value	Commitment
Private equity	\$ 1,674	\$ 308	\$ 1,566	\$ 335
Real estate	800	183	1,103	136
Hedge ¹	90	4	147	4
Total	\$ 2,564	\$ 495	\$ 2,816	\$ 475

1. Investments in hedge funds may be subject to initial period lock-up or gate provisions, which restrict an investor from withdrawing from the fund during a certain initial period or restrict the redemption amount on any redemption date, respectively.

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 private equity and real estate 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.

Hedge Funds. Funds that pursue various investment strategies, including long-short equity, fixed income/credit, event-driven and multi-strategy.

Nonredeemable Funds by Contractual Maturity

\$ in millions	Fair Value at December 31, 2017	
	Private Equity	Real Estate
Less than 5 years	\$ 473	\$ 62
5-10 years	1,033	499
Over 10 years	168	239
Total	\$ 1,674	\$ 800

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)	Net Revenues
2017			
Securities purchased under agreements to resell	\$ (2)	\$ 3	\$ 1
Deposits	(3)	—	(3)
Securities sold under agreements to repurchase ¹	10	(18)	(8)
Borrowings ¹	(4,507)	(443)	(4,950)
2016			
Securities purchased under agreements to resell	\$ (3)	\$ 7	\$ 4
Deposits	(1)	(1)	(2)
Securities sold under agreements to repurchase ¹	6	(13)	(7)
Borrowings ¹	(707)	(483)	(1,190)
2015			
Securities purchased under agreements to resell	\$ (6)	\$ 10	\$ 4
Securities sold under agreements to repurchase ¹	13	(6)	7
Borrowings ¹	2,467	(528)	1,939

1. In 2017 and 2016, unrealized DVA gains (losses) are recorded in OCI and, when realized, in Trading revenues. In 2015, realized and unrealized DVA gains (losses) were recorded in Trading revenues. See Note 15 for further information.

Gains (losses) are mainly attributable to changes in foreign currency rates or interest rates or movements in the reference price or index for Borrowings 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

<i>\$ in millions</i>	Trading Revenues	OCI
2017		
Loans and other debt ¹	\$ 159	\$ —
Lending commitments ²	(2)	—
Securities sold under agreements to repurchase ³	—	(7)
Borrowings ³	(12)	(903)
2016		
Loans and other debt ¹	\$ (71)	\$ —
Lending commitments ²	4	—
Borrowings ³	31	(460)
2015		
Loans and other debt ¹	\$ (193)	\$ —
Lending commitments ²	12	—
Borrowings ³	618	—

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Cumulative pre-tax DVA gain (loss) recognized in AOCI	\$ (1,831)	\$ (921)

- Loans and other debt instrument-specific credit gains (losses) were determined by excluding the non-credit components of gains and losses.
- 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.
- In 2017 and 2016, unrealized DVA gains (losses) are recorded in OCI and, when realized, in Trading revenues. In 2015, realized and unrealized DVA gains (losses) were recorded in Trading revenues. See Note 15 for further information.

Borrowings Measured at Fair Value on a Recurring Basis

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Business Unit Responsible for Risk Management		
Equity	\$ 25,903	\$ 21,066
Interest rates	19,230	16,051
Foreign exchange	666	1,114
Credit	815	647
Commodities	298	264
Total	\$ 46,912	\$ 39,142

Excess of Contractual Principal Amount Over Fair Value

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Loans and other debt ¹	\$ 13,481	\$ 13,495
Loans 90 or more days past due and/or on nonaccrual status ¹	11,253	11,502
Borrowings ²	71	720

- 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.
- 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 Loans on Nonaccrual Status

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Nonaccrual loans	\$ 1,240	\$ 1,536
Nonaccrual loans 90 or more days past due	\$ 779	\$ 787

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 Nonrecurring Basis**Carrying and Fair Values**

<i>\$ in millions</i>	At December 31, 2017		
	Fair Value		
	Level 2	Level 3 ¹	Total
Assets			
Loans	\$ 1,394	\$ 924	\$ 2,318
Other assets—Other investments	—	144	144
Total	\$ 1,394	\$ 1,068	\$ 2,462
Liabilities			
Other liabilities and accrued			
expenses—Lending commitments	\$ 158	\$ 38	\$ 196
Total	\$ 158	\$ 38	\$ 196

<i>\$ in millions</i>	At December 31, 2016		
	Fair Value		
	Level 2	Level 3 ¹	Total
Assets			
Loans	\$ 2,470	\$ 2,443	\$ 4,913
Other assets—Other investments	—	123	123
Other assets—Premises, equipment and software costs	22	3	25
Total	\$ 2,492	\$ 2,569	\$ 5,061
Liabilities			
Other liabilities and accrued			
expenses—Lending commitments	\$ 166	\$ 60	\$ 226
Total	\$ 166	\$ 60	\$ 226

- For significant Level 3 balances, refer to "Significant Unobservable Inputs Used in Recurring and Nonrecurring Level 3 Fair Value Measurements" section herein for details of the significant unobservable inputs used for nonrecurring fair value measurement.

Gains (Losses)¹

<i>\$ in millions</i>	2017	2016	2015
Assets			
Loans ²	\$ 18	\$ 40	\$ (220)
Other assets—Other investments ³	(66)	(52)	(3)
Other assets—Premises, equipment and software costs ⁴	(25)	(76)	(44)
Intangible assets ⁵	—	(2)	—
Other assets ⁶	—	—	(22)
Total	\$ (73)	\$ (90)	\$ (289)
Liabilities			
Other liabilities and accrued expenses—Lending commitments ²	\$ 75	\$ 121	\$ (207)
Total	\$ 75	\$ 121	\$ (207)

1. Gains and losses for Loans and Other assets—Other investments are classified in Other revenues. For other items, gains and losses are recorded in Other revenues if the item is held for sale, otherwise in Other expenses.

- Nonrecurring changes in the fair value of loans and lending commitments were calculated as follows: for the held for investment category, based on the value of the underlying collateral; and for the held for sale category, based on recently executed transactions, market price quotations, valuation models that incorporate market observable inputs where possible, such as comparable loan or debt prices and CDS spread levels adjusted for any basis difference between cash and derivative instruments, or default recovery analysis where such transactions and quotations are unobservable.
- 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.
- Losses related to Other assets—Premises, equipment and software costs were determined using techniques that included a default recovery analysis and recently executed transactions.
- Losses related to Intangible assets were determined using techniques that included discounted cash flow models and methodologies that incorporate multiples of certain comparable companies.
- Losses related to Other assets were determined primarily using a default recovery analysis.

Valuation Techniques for Assets and Liabilities Not Measured at Fair Value

<i>Investment Securities—HTM securities</i>
• Fair value is determined using quoted market prices.
<i>Securities purchased under agreements to resell/Securities sold under agreements to repurchase, Securities borrowed/Securities loaned, and Other secured financings</i>
• 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.
<i>Customer and other receivables</i>
• 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.
<i>Loans</i>
• 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 CDS spread levels along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable.
<i>Borrowings</i>
• 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 value 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

\$ in millions	At December 31, 2017				
	Carrying Value	Fair Value			Total
		Level 1	Level 2	Level 3	
Financial assets					
Cash and cash equivalents:					
Cash and due from banks	\$ 24,816	\$24,816	\$ —	\$ —	\$ 24,816
Interest bearing deposits with banks	21,348	21,348	—	—	21,348
Restricted cash	34,231	34,231	—	—	34,231
Investment securities—HTM	23,599	11,119	11,673	289	23,081
Securities purchased under agreements to resell	84,258	—	78,239	5,978	84,217
Securities borrowed	124,010	—	124,018	1	124,019
Customer and other receivables ¹	51,269	—	47,159	3,984	51,143
Loans ²	104,126	—	21,290	82,928	104,218
Other assets	433	—	433	—	433
Financial liabilities					
Deposits	\$ 159,232	\$ —	\$ 159,232	\$ —	\$ 159,232
Securities sold under agreements to repurchase	55,624	—	51,752	3,867	55,619
Securities loaned	13,592	—	13,191	401	13,592
Other secured financings	7,408	—	5,987	1,431	7,418
Customer and other payables ¹	188,464	—	188,464	—	188,464
Borrowings	145,670	—	151,692	30	151,722

\$ in millions	At December 31, 2016				
	Carrying Value	Fair Value			Total
		Level 1	Level 2	Level 3	
Financial assets					
Cash and cash equivalents:					
Cash and due from banks	\$ 22,017	\$22,017	\$ —	\$ —	\$ 22,017
Interest bearing deposits with banks	21,364	21,364	—	—	21,364
Restricted cash	33,979	33,979	—	—	33,979
Investment securities—HTM	16,922	5,557	10,896	—	16,453
Securities purchased under agreements to resell	101,653	—	97,825	3,830	101,655
Securities borrowed	125,236	—	125,093	147	125,240
Customer and other receivables ¹	41,679	—	36,962	4,575	41,537
Loans ²	94,248	—	20,906	74,121	95,027
Financial liabilities					
Deposits	\$ 155,800	\$ —	\$ 155,800	\$ —	\$ 155,800
Securities sold under agreements to repurchase	53,899	—	50,941	2,972	53,913
Securities loaned	15,844	—	15,853	—	15,853
Other secured financings	6,077	—	4,792	1,290	6,082
Customer and other payables ¹	187,497	—	187,497	—	187,497
Borrowings	126,574	—	130,361	51	130,412

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 nonrecurring basis.

Lending Commitments—Held for Investment and Held for Sale

\$ in millions	Commitment Amount ¹	Fair Value		
		Level 2	Level 3	Total
December 31, 2017	\$ 100,151	\$ 620	\$ 174	\$ 794
December 31, 2016	97,409	973	268	1,241

1. For further discussion on lending commitments, see Note 12.

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, equities, currencies, investment grade and non-investment grade corporate credits, loans, bonds, U.S. and other sovereign securities, emerging market bonds and loans, credit indices, ABS indices, property indices, mortgage-related and other ABS, 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 Fair Values

At December 31, 2017

\$ in millions	Assets			
	Bilateral OTC	Cleared OTC ¹	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate contracts	\$ 1,057	\$ —	\$ —	\$ 1,057
Foreign exchange contracts	57	6	—	63
Total	1,114	6	—	1,120
Not designated as accounting hedges				
Interest rate contracts	177,948	1,700	234	179,882
Credit contracts	5,740	2,282	—	8,022
Foreign exchange contracts	52,878	798	58	53,734
Equity contracts	24,452	—	20,538	44,990
Commodity and other contracts	8,861	—	1,802	10,663
Total	269,879	4,780	22,632	297,291
Total gross derivatives	\$ 270,993	\$ 4,786	\$ 22,632	\$ 298,411
Amounts offset				
Counterparty netting	(201,051)	(3,856)	(19,861)	(224,768)
Cash collateral netting	(42,141)	(689)	—	(42,830)
Total in Trading assets	\$ 27,801	\$ 241	\$ 2,771	\$ 30,813
Amounts not offset²				
Financial instruments collateral	(12,363)	—	—	(12,363)
Other cash collateral	(4)	—	—	(4)
Net amounts³	\$ 15,434	\$ 241	\$ 2,771	\$ 18,446
Derivative assets not subject to legally enforceable master netting or collateral agreements ³				\$ 3,154
\$ in millions	Liabilities			
	Bilateral OTC	Cleared OTC ¹	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate contracts	\$ 67	\$ 1	\$ —	\$ 68
Foreign exchange contracts	72	57	—	129
Total	139	58	—	197
Not designated as accounting hedges				
Interest rate contracts	161,758	1,178	144	163,080
Credit contracts	6,273	2,272	—	8,545
Foreign exchange contracts	54,191	925	23	55,139
Equity contracts	27,993	—	19,996	47,989
Commodity and other contracts	7,117	—	1,772	8,889
Total	257,332	4,375	21,935	283,642
Total gross derivatives	\$ 257,471	\$ 4,433	\$ 21,935	\$ 283,839
Amounts offset				
Counterparty netting	(201,051)	(3,856)	(19,861)	(224,768)
Cash collateral netting	(31,892)	(484)	—	(32,376)
Total in Trading liabilities	\$ 24,528	\$ 93	\$ 2,074	\$ 26,695
Amounts not offset²				
Financial instruments collateral	(5,523)	—	(412)	(5,935)
Other cash collateral	(18)	(14)	—	(32)
Net amounts³	\$ 18,987	\$ 79	\$ 1,662	\$ 20,728
Derivative liabilities not subject to legally enforceable master netting or collateral agreements ³				\$ 3,751

At December 31, 2016

\$ in millions	Assets			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate contracts	\$ 1,924	\$ 1,049	\$ —	\$ 2,973
Foreign exchange contracts	249	18	—	267
Total	2,173	1,067	—	3,240
Not designated as accounting hedges				
Interest rate contracts	200,336	99,217	384	299,937
Credit contracts	9,837	2,392	—	12,229
Foreign exchange contracts	73,645	1,022	231	74,898
Equity contracts	20,710	—	17,919	38,629
Commodity and other contracts	9,792	—	3,727	13,519
Total	314,320	102,631	22,261	439,212
Total gross derivatives	\$ 316,493	\$ 103,698	\$ 22,261	\$ 442,452
Amounts offset				
Counterparty netting	(243,488)	(100,477)	(19,607)	(363,572)
Cash collateral netting	(45,875)	(1,799)	—	(47,674)
Total in Trading assets	\$ 27,130	\$ 1,422	\$ 2,654	\$ 31,206
Amounts not offset²				
Financial instruments collateral	(10,293)	—	—	(10,293)
Other cash collateral	(124)	—	—	(124)
Net amounts³	\$ 16,713	\$ 1,422	\$ 2,654	\$ 20,789
Derivative assets not subject to legally enforceable master netting or collateral agreements ³				\$ 3,656
\$ in millions	Liabilities			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate contracts	\$ 77	\$ 647	\$ —	\$ 724
Foreign exchange contracts	15	25	—	40
Total	92	672	—	764
Not designated as accounting hedges				
Interest rate contracts	183,063	103,392	397	286,852
Credit contracts	11,024	2,401	—	13,425
Foreign exchange contracts	74,575	952	16	75,543
Equity contracts	22,531	—	17,983	40,514
Commodity and other contracts	8,303	—	3,582	11,885
Total	299,496	106,745	21,978	428,219
Total gross derivatives	\$ 299,588	\$ 107,417	\$ 21,978	\$ 428,983
Amounts offset				
Counterparty netting	(243,488)	(100,477)	(19,607)	(363,572)
Cash collateral netting	(30,405)	(5,691)	—	(36,096)
Total in Trading liabilities	\$ 25,695	\$ 1,249	\$ 2,371	\$ 29,315
Amounts not offset²				
Financial instruments collateral	(7,638)	—	(585)	(8,223)
Other cash collateral	(10)	(1)	—	(11)
Net amounts³	\$ 18,047	\$ 1,248	\$ 1,786	\$ 21,081
Derivative liabilities not subject to legally enforceable master netting or collateral agreements ³				\$ 3,497

Notes to Consolidated Financial Statements

- Effective in the first quarter of 2017, the Chicago Mercantile Exchange amended its rulebook for cleared OTC derivatives, resulting in the characterization of variation margin transfers as settlement payments as opposed to cash posted as collateral. In the quarter of adoption, the cleared OTC gross derivative assets and liabilities, and related counterparty and cash collateral netting amounts in total decreased by approximately \$13 billion and \$20 billion, respectively. Effective in the third quarter of 2017, derivatives cleared through LCH Clearnet Limited became subject to the rulebook under which variation margin transfers are settlement payments. As a result, cleared OTC gross derivative assets and liabilities, and related counterparty and cash collateral netting amounts in total decreased by approximately \$62 billion and \$59 billion, respectively.
- 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.
- Net 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.

See Note 3 for information related to the unsettled fair value of futures contracts not designated as accounting hedges, which are excluded from the table above.

Derivative Notionals

At December 31, 2017

Assets				
\$ in billions	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
Designated as accounting hedges				
Interest rate contracts	20 \$	46 \$	— \$	66
Foreign exchange contracts	4	—	—	4
Total	24	46	—	70
Not designated as accounting hedges				
Interest rate contracts	3,999	6,458	2,714	13,171
Credit contracts	194	100	—	294
Foreign exchange contracts	1,960	67	9	2,036
Equity contracts	397	—	334	731
Commodity and other contracts	86	—	72	158
Total	6,636	6,625	3,129	16,390
Total gross derivatives	\$ 6,660	\$ 6,671	\$ 3,129	\$ 16,460

Liabilities				
\$ in billions	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
Designated as accounting hedges				
Interest rate contracts	2 \$	102 \$	— \$	104
Foreign exchange contracts	4	2	—	6
Total	6	104	—	110
Not designated as accounting hedges				
Interest rate contracts	4,199	6,325	1,089	11,613
Credit contracts	226	80	—	306
Foreign exchange contracts	2,014	78	51	2,143
Equity contracts	394	—	405	799
Commodity and other contracts	68	—	61	129
Total	6,901	6,483	1,606	14,990
Total gross derivatives	\$ 6,907	\$ 6,587	\$ 1,606	\$ 15,100

At December 31, 2016

Assets				
\$ in billions	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
Designated as accounting hedges				
Interest rate contracts	30 \$	38 \$	— \$	68
Foreign exchange contracts	6	—	—	6
Total	36	38	—	74
Not designated as accounting hedges				
Interest rate contracts	3,586	6,224	2,586	12,396
Credit contracts	333	112	—	445
Foreign exchange contracts	1,580	52	13	1,645
Equity contracts	338	—	242	580
Commodity and other contracts	67	—	79	146
Total	5,904	6,388	2,920	15,212
Total gross derivatives	\$ 5,940	\$ 6,426	\$ 2,920	\$ 15,286

Liabilities				
\$ in billions	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
Designated as accounting hedges				
Interest rate contracts	2 \$	52 \$	— \$	54
Foreign exchange contracts	1	1	—	2
Total	3	53	—	56
Not designated as accounting hedges				
Interest rate contracts	3,462	6,087	897	10,446
Credit contracts	359	96	—	455
Foreign exchange contracts	1,557	48	14	1,619
Equity contracts	321	—	273	594
Commodity and other contracts	78	—	59	137
Total	5,777	6,231	1,243	13,251
Total gross derivatives	\$ 5,780	\$ 6,284	\$ 1,243	\$ 13,307

The Firm believes that the notional amounts of the derivative contracts generally overstate its exposure.

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

Gains (Losses) on Accounting Hedges

\$ in millions	2017	2016	2015
Fair Value Hedges—Recognized in Interest Expense			
Derivatives	\$ (1,591)	\$ (1,738)	\$ (700)
Borrowings	1,393	1,541	461
Total	\$ (198)	\$ (197)	\$ (239)
Net Investment Hedges—Foreign exchange contracts			
Effective portion—OCI	\$ (365)	\$ (1)	434
Forward points excluded from hedge effectiveness testing—Interest income	\$ (20)	\$ (74)	\$ (149)

Trading Revenues by Product Type

<i>\$ in millions</i>	2017	2016	2015
Interest rate contracts	\$ 2,091	\$ 1,522	\$ 1,249
Foreign exchange contracts	647	1,156	984
Equity security and index contracts ¹	6,291	5,690	5,695
Commodity and other contracts	740	56	793
Credit contracts	1,347	1,785	775
Subtotal	\$ 11,116	\$ 10,209	\$ 9,496
DVA ²	—	—	618
Total	\$ 11,116	\$ 10,209	\$ 10,114

- Dividend income is included within equity security and index contracts.
- In 2017 and 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 comprehensive income statements. In 2015, the DVA gains (losses) were recorded within Trading revenues in the income statements. See note 15 for further information.

The previous table summarizes gains and losses included in Trading revenues in the income statements. 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 its market-making and related risk management strategies. The trading revenues presented in the 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.

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

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Net derivative liabilities with credit risk-related contingent features	\$ 20,675	\$ 22,939
Collateral posted	16,642	17,040

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 S&P Global Ratings. 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

<i>\$ in millions</i>	At December 31, 2017
One-notch downgrade	\$ 635
Two-notch downgrade	382
Bilateral downgrade agreements included in the amounts above ¹	\$ 823

- Amount represents 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 CDS, 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 CDSs

<i>\$ in millions</i>	At December 31, 2017			
	Protection Sold		Protection Purchased	
	Notional	Fair Value (Asset)/ Liability	Notional	Fair Value (Asset)/ Liability
Single name	\$ 146,948	\$ (1,277)	\$ 164,773	\$ 1,658
Index and basket	131,073	(341)	120,348	209
Tranched index and basket	11,864	(342)	24,498	616
Total	\$ 289,885	\$ (1,960)	\$ 309,619	\$ 2,483

Single name and non-tranched index and basket with identical underlying reference obligations	\$ 274,473	\$ —	\$ 281,162	\$ —
---	------------	------	------------	------

<i>\$ in millions</i>	At December 31, 2016			
	Protection Sold		Protection Purchased	
	Notional	Fair Value (Asset)/Liability	Notional	Fair Value (Asset)/Liability
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
Single name and non-tranched index and basket with identical underlying reference obligations	\$395,536	\$ —	\$389,221	\$ —

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 CDSs where credit protection was sold.

Fair value amounts as shown in the table below are on a gross basis prior to cash collateral or counterparty netting. In order to provide an indication of the current payment status or performance risk of the CDSs, a breakdown of CDSs 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 ("CRM") 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.

Credit Ratings of Reference Obligation and Maturities of Credit Protection Sold

<i>\$ in millions</i>	At December 31, 2017					
	Maximum Potential Payout/Notional					Fair Value (Asset)/Liability
	Years to Maturity					
	Less than 1	1-3	3-5	Over 5	Total	
Single name CDSs						
Investment grade	\$ 39,721	\$ 42,591	\$ 18,157	\$ 8,872	\$ 109,341	\$ (1,167)
Non-investment grade	14,213	16,293	6,193	908	37,607	(110)
Total single name CDSs	53,934	58,884	24,350	9,780	146,948	(1,277)
Index and basket CDSs						
Investment grade	29,046	15,418	37,343	6,807	88,614	(1,091)
Non-investment grade	5,246	7,371	32,417	9,289	54,323	408
Total index and basket CDSs	34,292	22,789	69,760	16,096	142,937	(683)
Total CDSs sold	\$ 88,226	\$ 81,673	\$ 94,110	\$ 25,876	\$ 289,885	\$ (1,960)
Other credit contracts	2	—	—	134	136	16
Total credit derivatives and other credit contracts	\$ 88,228	\$ 81,673	\$ 94,110	\$ 26,010	\$ 290,021	\$ (1,944)

<i>\$ in millions</i>	At December 31, 2016					
	Maximum Potential Payout/Notional					Fair Value (Asset)/Liability
	Years to Maturity					
	Less than 1	1-3	3-5	Over 5	Total	
Single name CDSs						
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 CDSs	\$ 114,020	\$ 96,616	\$ 44,965	\$ 11,317	\$ 266,918	\$ (753)
Index and basket CDSs						
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 CDSs	\$ 52,665	\$ 44,371	\$ 46,819	\$ 18,957	\$ 162,812	\$ (296)
Total CDSs 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)

Credit Contracts

Single Name CDS. A CDS 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 CDS 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 CDS. Index and basket CDSs are products where credit protection is provided on a portfolio of single name CDSs. 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 CDS.

5. Investment Securities**AFS and HTM Securities**

\$ in millions	At December 31, 2017			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS debt securities				
U.S. government and agency securities:				
U.S. Treasury securities	\$ 26,842	\$ —	\$ 589	\$ 26,253
U.S. agency securities ¹	22,803	28	247	22,584
Total U.S. government and agency securities	49,645	28	836	48,837
Corporate and other debt:				
CMBS:				
Agency	1,370	2	49	1,323
Non-agency	1,102	—	8	1,094
Corporate bonds	1,379	5	12	1,372
CLO	398	1	—	399
FFELP student loan ABS ²	2,165	15	7	2,173
Total corporate and other debt	6,414	23	76	6,361
Total AFS debt securities	56,059	51	912	55,198
AFS equity securities	15	—	10	5
Total AFS securities	56,074	51	922	55,203
HTM securities				
U.S. government and agency securities:				
U.S. Treasury securities	11,424	—	305	11,119
U.S. agency securities ¹	11,886	7	220	11,673
Total U.S. government and agency securities	23,310	7	525	22,792
Corporate and other debt:				
CMBS:				
Non-agency	289	1	1	289
Total corporate and other debt	289	1	1	289
Total HTM securities	23,599	8	526	23,081
Total investment securities	\$ 79,673	\$ 59	\$ 1,448	\$ 78,284

The Firm also enters into tranching and basket CDSs 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 CLN and CDO. The Firm has invested in 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.

\$ 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:				
CMBS:				
Agency	1,850	2	44	1,808
Non-agency	2,250	11	16	2,245
Auto loan ABS	1,509	1	1	1,509
Corporate bonds	3,836	7	22	3,821
CLO	540	—	1	539
FFELP student loan ABS 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 and agency 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

- U.S. agency securities consist mainly of agency-issued debt, agency mortgage pass-through pool securities and CMOs.
- 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, 2017					
	Less than 12 Months		12 Months or Longer		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
<i>\$ in millions</i>						
AFS debt securities						
U.S. government and agency securities:						
U.S. Treasury securities	\$ 21,941	\$ 495	\$ 4,287	\$ 94	\$ 26,228	\$ 589
U.S. agency securities	12,673	192	2,513	55	15,186	247
Total U.S. government and agency securities	34,614	687	6,800	149	41,414	836
Corporate and other debt:						
CMBS:						
Agency	930	49	—	—	930	49
Non-agency	257	1	559	7	816	8
Corporate bonds	316	3	389	9	705	12
FFELP student loan ABS	984	7	—	—	984	7
Total corporate and other debt	2,487	60	948	16	3,435	76
Total AFS debt securities	37,101	747	7,748	165	44,849	912
AFS equity securities	—	—	5	10	5	10
Total AFS securities	37,101	747	7,753	175	44,854	922
HTM securities						
U.S. government and agency securities:						
U.S. Treasury securities	6,608	86	4,512	219	11,120	305
U.S. agency securities	2,879	24	7,298	196	10,177	220
Total U.S. government and agency securities	9,487	110	11,810	415	21,297	525
Corporate and other debt:						
CMBS:						
Non-agency	124	1	—	—	124	1
Total corporate and other debt	124	1	—	—	124	1
Total HTM securities	9,611	111	11,810	415	21,421	526
Total investment securities	\$ 46,712	\$ 858	\$ 19,563	\$ 590	\$ 66,275	\$ 1,448

\$ in millions	At December 31, 2016					
	Less than 12 Months		12 Months or Longer		Total	
	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:						
CMBS:						
Agency	1,245	44	—	—	1,245	44
Non-agency	763	11	594	5	1,357	16
Auto loan ABS	659	1	123	—	782	1
Corporate bonds	2,050	21	142	1	2,192	22
CLO	178	—	239	1	417	1
FFELP student loan ABS	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

The Firm believes there are no securities in an unrealized loss position that are other-than-temporarily impaired after performing the analysis described in Note 2. 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. Furthermore, 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.

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

\$ in millions	At December 31, 2017		
	Amortized Cost	Fair Value	Average Yield
AFS debt securities			
U.S. government and agency securities:			
U.S. Treasury securities:			
Due within 1 year	\$ 6,501	\$ 6,478	0.9%
After 1 year through 5 years	15,195	14,901	1.5%
After 5 years through 10 years	5,146	4,874	1.5%
Total	26,842	26,253	
U.S. agency securities:			
Due within 1 year	46	45	1.1%
After 1 year through 5 years	2,485	2,475	0.9%
After 5 years through 10 years	1,280	1,263	1.9%
After 10 years	18,992	18,801	1.9%
Total	22,803	22,584	
Total U.S. government and agency securities	49,645	48,837	1.5%
Corporate and other debt:			
CMBS:			
Agency:			
Due within 1 year	3	3	0.9%
After 1 year through 5 years	380	379	1.4%
After 5 years through 10 years	153	154	1.1%
After 10 years	834	787	1.6%
Total	1,370	1,323	
Non-agency:			
After 5 years through 10 years	35	36	2.5%
After 10 years	1,067	1,058	1.7%
Total	1,102	1,094	
Corporate bonds:			
Due within 1 year	46	46	1.2%
After 1 year through 5 years	1,248	1,243	2.3%
After 5 years through 10 years	85	83	2.4%
Total	1,379	1,372	
CLO:			
After 5 years through 10 years	200	200	1.5%
After 10 years	198	199	2.4%
Total	398	399	
FFELP student loan ABS:			
After 1 year through 5 years	50	49	0.8%
After 5 years through 10 years	404	401	0.8%
After 10 years	1,711	1,723	1.1%
Total	2,165	2,173	
Total corporate and other debt	6,414	6,361	1.6%
Total AFS debt securities	56,059	55,198	1.5%
AFS equity securities	15	5	— %
Total AFS securities	56,074	55,203	1.5%
HTM securities			
U.S. government securities:			
U.S. Treasury securities:			
Due within 1 year	499	496	1.2%
After 1 year through 5 years	5,085	5,034	1.6%

\$ in millions	At December 31, 2017		
	Amortized Cost	Fair Value	Average Yield
After 5 years through 10 years	\$ 5,113	\$ 4,923	1.9%
After 10 years	727	666	2.3%
Total	11,424	11,119	
U.S. agency securities:			
After 10 years	11,886	11,673	2.5%
Total	11,886	11,673	
Total U.S. government and agency securities	23,310	22,792	2.3%
Corporate and other debt:			
CMBS:			
Non-agency:			
After 1 year through 5 years	95	95	3.6%
After 5 years through 10 years	175	175	3.8%
After 10 years	19	19	4.1%
Total	289	289	
Total corporate and other debt	289	289	0.1%
Total HTM securities	23,599	23,081	2.1%
Total investment securities	\$ 79,673	\$ 78,284	1.7%

Gross Realized Gains and Losses on Sales of AFS Securities

\$ in millions	2017	2016	2015
Gross realized gains	\$ 46	\$ 133	\$ 116
Gross realized (losses)	(11)	(21)	(32)
Total	\$ 35	\$ 112	\$ 84

Gross realized gains and losses are recognized in Other revenues in the 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 financings in a manner that reduces the potential refinancing risk of secured financ-

ings of 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

\$ in millions	At December 31, 2017				
	Gross Amounts	Amounts Offset	Net Amounts Presented	Amounts Not Offset ¹	Net Amounts
Assets					
Securities purchased under agreements to resell	\$ 199,044	\$ (114,786)	\$ 84,258	\$ (78,009)	\$ 6,249
Securities borrowed	133,431	(9,421)	124,010	(119,358)	4,652
Liabilities					
Securities sold under agreements to repurchase	\$ 171,210	\$ (114,786)	\$ 56,424	\$ (48,067)	\$ 8,357
Securities loaned	23,014	(9,422)	13,592	(13,271)	321
Not subject to legally enforceable master netting agreements²					
Securities purchased under agreements to resell					\$ 5,687
Securities borrowed					572
Securities sold under agreements to repurchase					6,945
Securities loaned					307

\$ in millions	At December 31, 2016				
	Gross Amounts	Amounts Offset	Net Amounts Presented	Amounts Not Offset ¹	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
Not subject to legally enforceable master netting agreements²					
Securities purchased under agreements to resell					\$ 7,765
Securities borrowed					2,591
Securities sold under agreements to repurchase					6,500
Securities loaned					154

1. 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.
2. Represents amounts within Net Amounts related to 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.

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, 2017				
	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Securities sold under agreements to repurchase	\$ 41,332	\$ 66,593	\$ 28,682	\$ 34,603	\$ 171,210
Securities loaned	12,130	873	1,577	8,434	23,014
Total included in the offsetting disclosure	\$ 53,462	\$ 67,466	\$ 30,259	\$ 43,037	\$ 194,224
Trading liabilities—Obligation to return securities received as collateral	22,555	—	—	—	22,555
Total	\$ 76,017	\$ 67,466	\$ 30,259	\$ 43,037	\$ 216,779

\$ 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	\$ 41,549	\$ 36,703	\$ 24,648	\$ 32,661	\$ 135,561
Securities loaned	9,487	851	2,863	7,341	20,542
Total 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

Gross Secured Financing Balances by Class of Collateral Pledged

\$ in millions	At December 31, 2017		At December 31, 2016	
	Securities sold under agreements to repurchase			
U.S. government and agency securities	\$ 43,346	\$ 56,372		
State and municipal securities	2,451	1,363		
Other sovereign government obligations	87,141	42,790		
ABS	1,130	1,918		
Corporate and other debt	7,737	9,086		
Corporate equities	28,497	23,152		
Other	908	880		
Total	\$ 171,210	\$ 135,561		
Securities loaned				
U.S. government and agency securities	\$ 81	\$ —		
Other sovereign government obligations	9,489	4,762		
Corporate and other debt	14	73		
Corporate equities	13,174	15,693		
Other	256	14		
Total	\$ 23,014	\$ 20,542		
Total included in the offsetting disclosure	\$ 194,224	\$ 156,103		
Trading liabilities—Obligation to return securities received as collateral				
Corporate equities	\$ 22,555	\$ 20,262		
Total	\$ 216,779	\$ 176,365		

Assets Pledged

The Firm pledges its trading assets and loans to collateralize securities sold under agreements to repurchase, securities loaned, other secured financings and derivatives. Counterparties may or may not have the right to sell or repledge the collateral.

Pledged financial instruments that can be sold or repledged by the secured party are identified as Trading assets (pledged to various parties) in the balance sheets.

Carrying Value of Assets Loaned or Pledged without Counterparty Right to Sell or Repledge

\$ in millions	At December 31, 2017		At December 31, 2016	
	Trading assets	\$ 31,324	\$ 41,358	
Loans (gross of allowance for loan losses)	228	—		
Total	\$ 31,552	\$ 41,358		

Collateral Received

The Firm receives collateral in the form of securities in connection with securities purchased under agreements to resell, securities borrowed, securities-for-securities transactions, 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.

Fair Value of Collateral Received with Right to Sell or Repledge

\$ in millions	At December 31, 2017		At December 31, 2016	
	Collateral received with right to sell or repledge	\$ 599,244	\$ 561,239	
Collateral that was sold or repledged	475,113	430,911		

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.

Concentration Based on the Firm's Total Assets

	At December 31, 2017	At December 31, 2016
Trading assets:		
U.S. government and agency securities and other sovereign government obligations ¹	9%	8%
Collateral held for:		
Resale agreements and bonds borrowed ²	14%	18%

1. Other sovereign government obligations principally comprise the U.K., Japan and Brazil.

2. 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 and Other

Margin lending allows clients to borrow against the value of qualifying securities. Margin loans are included within Customer and other receivables in the 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 an 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, 2017	At December 31, 2016
<i>\$ in millions</i>		
Net customer receivables representing margin loans	\$ 32,112	\$ 24,359

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 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).

Restricted Cash and Segregated Securities

	At December 31, 2017	At December 31, 2016
<i>\$ in millions</i>		
Restricted cash	\$ 34,231	\$ 33,979
Segregated securities ¹	20,549	23,756
Total	\$ 54,780	\$ 57,735

1. Securities segregated under federal regulations for the Firm's U.S. broker-dealers are sourced from Securities purchased under agreements to resell and Trading assets in the balance sheets.

7. Loans and Allowance for Credit Losses

Loans

The Firm's loan portfolio consists of the following types of loans:

- 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, which 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 and Liquidity Access Line 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 HELOC. 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 HELOC 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 by Type

\$ in millions	At December 31, 2017		
	Loans Held for Investment	Loans Held for Sale	Total Loans
Corporate loans	\$ 29,754	\$ 9,456	\$ 39,210
Consumer loans	26,808	—	26,808
Residential real estate loans	26,635	35	26,670
Wholesale real estate loans	9,980	1,682	11,662
Total loans, gross	93,177	11,173	104,350
Allowance for loan losses	(224)	—	(224)
Total loans, net	\$ 92,953	\$ 11,173	\$ 104,126

\$ in millions	At December 31, 2016		
	Loans Held for Investment	Loans Held for Sale	Total Loans
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

Loans by Interest Rate Type

\$ in millions	At December 31, 2017	At December 31, 2016
	Fixed	\$ 13,339
Floating or adjustable	90,787	82,353
Total loans, net	\$ 104,126	\$ 94,248

Loans to Non-U.S. Borrowers

\$ in millions	At December 31, 2017	At December 31, 2016
	Loans, net of allowance	\$ 9,977

See Note 3 for further information regarding Loans and lending commitments held at fair value.

Credit Quality

CRM 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.

CRM 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 agencies' 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

\$ in millions	At December 31, 2017				
	Corporate	Consumer	Residential Real Estate	Wholesale Real Estate	Total
Pass	\$ 29,166	\$ 26,802	\$ 26,562	\$ 9,480	\$ 92,010
Special mention	188	6	—	200	394
Substandard	393	—	73	300	766
Doubtful	7	—	—	—	7
Loss	—	—	—	—	—
Total	\$ 29,754	\$ 26,808	\$ 26,635	\$ 9,980	\$ 93,177

\$ in millions	At December 31, 2016				
	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	\$ 25,025	\$ 24,866	\$ 24,385	\$ 7,702	\$ 81,978

The following loans and lending commitments have been evaluated for a specific allowance. All remaining loans and lending commitments are assessed under the inherent allowance methodology.

Impaired Loans and Lending Commitments before Allowance

\$ in millions	At December 31, 2017		
	Corporate	Residential Real Estate	Total
Loans			
With allowance	\$ 16	\$ —	\$ 16
Without allowance ¹	118	45	163
UPB ²	146	46	192
Lending Commitments			
With allowance	\$ —	\$ —	\$ —
Without allowance ¹	199	—	199

\$ in millions	At December 31, 2016		
	Corporate	Residential Real Estate	Total
Loans			
With allowance	\$ 104	\$ —	\$ 104
Without allowance ¹	206	35	241
UPB ²	316	38	354
Lending Commitments			
With allowance	\$ —	\$ —	\$ —
Without allowance ¹	89	—	89

1. At December 31, 2017 and December 31, 2016, no allowance was recorded for these loans and lending commitments as the present value of the expected future cash flows (or, alternatively, the observable market price of the instrument or the fair value of the collateral held) equaled or exceeded the carrying value.
2. The impaired loans UPB 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.

Impaired Loans and Allowance by Region

\$ in millions	At December 31, 2017			
	Americas	EMEA	Asia	Total
Impaired loans	\$ 160	\$ 9	\$ 10	\$ 179
Allowance for loan losses	194	27	3	224

\$ in millions	At December 31, 2016			
	Americas	EMEA	Asia	Total
Impaired loans	\$ 320	\$ 9	\$ 16	\$ 345
Allowance for loan losses	245	28	1	274

Troubled Debt Restructurings

\$ in millions	At	At
	December 31, 2017	December 31, 2016
Loans	\$ 51	\$ 67
Lending commitments	28	14
Allowance for loan losses and lending commitments	10	—

Impaired loans and lending commitments classified as held for investment within corporate loans include TDRs as shown in the previous table. These restructurings typically include modifications of interest rates, collateral requirements, other loan covenants and payment extensions.

Allowance for Loan Losses Rollforward

\$ in millions	Corporate	Consumer	Residential	Wholesale	Total
			Real Estate	Real Estate	
December 31, 2016	\$ 195	\$ 4	\$ 20	\$ 55	\$ 274
Gross charge-offs	(75)	—	—	—	(75)
Recoveries	1	—	—	—	1
Net recoveries (charge-offs)	(74)	—	—	—	(74)
Provision (release)	5	—	4	13	22
Other	—	—	—	2	2
December 31, 2017	\$ 126	\$ 4	\$ 24	\$ 70	\$ 224
Inherent	\$ 119	\$ 4	\$ 24	\$ 70	\$ 217
Specific	7	—	—	—	7

\$ in millions	Corporate	Consumer	Residential	Wholesale	Total
			Real Estate	Real Estate	
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 (release)	110	(1)	4	18	131
Other ¹	(68)	—	—	—	(68)
December 31, 2016	\$ 195	\$ 4	\$ 20	\$ 55	\$ 274
Inherent	\$ 133	\$ 4	\$ 20	\$ 55	\$ 212
Specific	62	—	—	—	62

\$ in millions	Corporate	Consumer	Residential	Wholesale	Total
			Real Estate	Real Estate	
December 31, 2014	\$ 118	\$ 2	\$ 8	\$ 21	\$ 149
Gross charge-offs	—	—	(1)	—	(1)
Gross recoveries	1	—	—	—	1
Net recoveries (charge-offs)	1	—	(1)	—	—
Provision (release)	58	3	10	16	87
Other	(11)	—	—	—	(11)
December 31, 2015	\$ 166	\$ 5	\$ 17	\$ 37	\$ 225
Inherent	\$ 156	\$ 5	\$ 17	\$ 37	\$ 215
Specific	10	—	—	—	10

1. The reduction is related to loans of \$492 million that were transferred to loans held for sale during 2016.

Allowance for Lending Commitments Rollforward

\$ in millions	Corporate	Consumer	Residential	Wholesale	Total
			Real Estate	Real Estate	
December 31, 2016	\$ 185	\$ 1	\$ —	\$ 4	\$ 190
Provision (release)	8	—	—	(1)	7
Other	1	—	—	—	1
December 31, 2017	\$ 194	\$ 1	\$ —	\$ 3	\$ 198
Inherent	\$ 192	\$ 1	\$ —	\$ 3	\$ 196
Specific	2	—	—	—	2

\$ in millions	Corporate	Consumer	Residential	Wholesale	Total
			Real Estate	Real Estate	
December 31, 2015	\$ 180	\$ 1	\$ —	\$ 4	\$ 185
Provision (release)	13	—	—	—	13
Other	(8)	—	—	—	(8)
December 31, 2016	\$ 185	\$ 1	\$ —	\$ 4	\$ 190
Inherent	\$ 185	\$ 1	\$ —	\$ 4	\$ 190
Specific	—	—	—	—	—

\$ in millions	Corporate	Consumer	Residential	Wholesale	Total
			Real Estate	Real Estate	
December 31, 2014	\$ 147	\$ —	\$ —	\$ 2	\$ 149
Provision (release)	33	1	—	2	36
December 31, 2015	\$ 180	\$ 1	\$ —	\$ 4	\$ 185
Inherent	\$ 173	\$ 1	\$ —	\$ 4	\$ 178
Specific	7	—	—	—	7

Employee Loans

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Balance	\$ 4,185	\$ 4,804
Allowance for loan losses	(77)	(89)
Balance, net	\$ 4,108	\$ 4,715
Repayment term range, in years	1 to 20	1 to 12

Employee loans are granted in conjunction with a program established to retain and recruit certain employees, are full recourse and generally require periodic repayments. These loans are recorded in Customer and other receivables in the balance sheets. The Firm establishes an allowance for loan amounts it does not consider recoverable, and the related provision is recorded in Compensation and benefits expense.

8. Equity Method Investments**Overview**

The Firm's investments accounted for under the equity method of accounting (see Note 1) are included in Other assets in the balance sheets. Income (loss) from equity method investments is included in Other revenues in the income statements.

Equity Method Investment Balances

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Investments	\$ 2,623	\$ 2,837

<i>\$ in millions</i>	2017 ¹	2016	2015
Income (loss)	\$ (34)	\$ (79)	\$ 114

1. Includes a \$53 million impairment of the Investment Management business segment's interest in a third-party asset manager.

Japanese Securities Joint Venture

Included in the equity method investments is the Firm's 40% voting interest in Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. ("MUMSS"). MUFG holds a 60% voting interest. The Firm accounts for its equity method investment in MUMSS within the Institutional Securities business segment.

<i>\$ in millions</i>	2017	2016	2015
Income from investment in MUMSS	\$ 123	\$ 93	\$ 220

In 2011, MUFG contributed capital to MUMSS and in return received Class C stock from MUMSS ("Class C stock") to restore its capital base which was eroded by trading and other losses. Morgan Stanley did not have an obligation to make matching capital contributions to MUMSS at that time.

Accordingly, the Firm recorded increases in its investment, with corresponding increases in additional paid-in capital, reflecting the Firm's 40% share of the increase in the net asset value of MUMSS. In the fourth quarter of 2017, MUMSS partially redeemed the Class C stock issued to MUFG, and the Firm recorded a decrease in both its investment in MUMSS and additional paid-in capital of \$71 million.

9. Goodwill and Intangible Assets**Goodwill**

The Firm completed its annual goodwill impairment testing as of July 1, 2017 and July 1, 2016. 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

<i>\$ in millions</i>	IS	WM	IM	Total
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
Foreign currency and other	20	—	—	20
At December 31, 2017¹	\$ 295	\$ 5,533	\$ 769	\$ 6,597
Accumulated impairments ²	673	—	27	700

IS—Institutional Securities

WM—Wealth Management

IM—Investment Management

1. Balances represent the amount of the Firm's goodwill after accumulated impairments.

2. Balances represent amounts at December 31, 2017, 2016 and 2015.

Intangible Assets by Business Segment

<i>\$ in millions</i>	IS	WM	IM	Total
Amortizable intangibles	\$ 346	\$ 2,361	\$ 11	\$ 2,718
Mortgage servicing rights	—	3	—	3
At December 31, 2016	\$ 346	\$ 2,364	\$ 11	\$ 2,721
Amortizable intangibles	\$ 349	\$ 2,092	\$ 4	\$ 2,445
Mortgage servicing rights	—	3	—	3
At December 31, 2017	\$ 349	\$ 2,095	\$ 4	\$ 2,448

Gross Amortizable Intangible Assets by Type

\$ in millions	At December 31, 2017		At December 31, 2016	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Trademarks	\$ 1	\$ —	\$ 1	\$ —
Tradename	283	50	283	40
Customer relationships	4,059	2,193	4,059	1,939
Management contracts	503	299	467	275
Other	329	188	329	167
Total	\$ 5,175	\$ 2,730	\$ 5,139	\$ 2,421
Estimated annual amortization expense for the next five years	\$ 301			

Net Amortizable Intangible Assets Rollforward

\$ in millions	IS	WM	IM	Total
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
Acquired	51	—	—	51
Disposals	(15)	—	—	(15)
Amortization expense	(33)	(269)	(7)	(309)
At December 31, 2017	\$ 349	\$ 2,092	\$ 4	\$ 2,445

10. Deposits

Deposits

\$ in millions	At December 31, 2017	At December 31, 2016
Savings and demand deposits	\$ 144,487	\$ 154,559
Time deposits	14,949	1,304
Total	\$ 159,436	\$ 155,863
Deposits subject to FDIC insurance	\$ 127,017	\$ 127,992
Time deposits that equal or exceed the FDIC insurance limit	\$ 38	\$ 46

Time Deposit Maturities

\$ in millions	At December 31, 2017
2018	\$ 12,232
2019	2,481
2020	32
2021	6
2022	69
Thereafter	129

11. Borrowings and Other Secured Financings

Maturities and Terms of Borrowings

\$ in millions	Parent Company		Subsidiaries		At December 31, 2017	At December 31, 2016
	Fixed Rate	Variable Rate ¹	Fixed Rate	Variable Rate ¹		
Original maturities of one year or less:						
Next 12 months	\$ —	\$ —	\$ —	\$ 1,519	\$ 1,519	\$ 941
Original maturities greater than one year:						
2017	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 26,127
2018	13,154	5,625	14	5,077	23,870	19,292
2019	12,947	8,902	55	2,645	24,549	22,397
2020	11,175	7,668	14	2,557	21,414	16,736
2021	13,733	4,146	18	1,166	19,063	17,179
2022	6,536	8,717	17	2,316	17,586	5,338
Thereafter	56,866	17,765	201	9,749	84,581	57,706
Total	\$ 114,411	\$ 52,823	\$ 319	\$ 23,510	\$ 191,063	\$ 164,775
Total borrowings	\$ 114,411	\$ 52,823	\$ 319	\$ 25,029	\$ 192,582	\$ 165,716
Weighted average coupon at						
period-end ²	3.8%	1.8%	6.3%	N/M	3.3%	3.7%

1. Variable rate borrowings bear interest based on a variety of money market indices, including LIBOR and federal funds rates. Amounts include notes carried at fair value with various payment provisions, including notes linked to equity, credit, commodity or other indices.
2. Includes only borrowings with original maturities greater than one year. Weighted average coupon is 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.

Increases (Decreases) in Carrying Amount of Borrowings Associated with Fair Value Hedges

\$ in millions	At December 31, 2017
2018	\$ 73
2019	150
2020	154
2021	9
2022	(96)
Thereafter	(595)
Total	\$ (305)

Borrowings with Original Maturities Greater than One Year by Type

\$ in millions	At December 31, 2017	At December 31, 2016
Senior	\$ 180,835	\$ 154,472
Subordinated	10,228	10,303
Total	\$ 191,063	\$ 164,775
Weighted average stated maturity, in years	6.6	5.9

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 an option that effectively allows the holders to put the notes back to the Firm totaled \$3,023 million at December 31, 2017 and \$3,156 million at December 31, 2016. In addition, in certain circumstances, certain purchasers may be entitled to cause the repurchase of the notes through liquidity arrangements with the Firm. The aggregated value of notes subject to these arrangements was \$1,414 million at December 31, 2017 and \$1,117 million at December 31, 2016. Subordinated debt generally is issued to meet the capital requirements of the Firm or its regulated subsidiaries and primarily is U.S. dollar denominated.

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., S&P 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 borrowing 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 Notes 2 and 3 for further information on structured borrowings.

Subordinated Debt

	2017	2016
Contractual weighted average coupon	4.5%	4.5%

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 Borrowings with Original Maturities Greater than One Year

	At December 31,		
	2017	2016	2015
Contractual weighted average coupon ¹	3.3%	3.7%	4.0%
Effective average after swaps	2.5%	2.5%	2.1%

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 certain ELNs, transfers of financial assets that are accounted for as financings rather than sales, pledged commodities, consolidated VIEs where the Firm is deemed to be the primary beneficiary and other secured borrowings. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets. See Note 13 for further information on other secured financings related to VIEs and securitization activities.

Other Secured Financings by Original Maturity and Type

	At December 31,	
	2017	2016
<i>\$ in millions</i>		
Secured financings		
Original maturities:		
Greater than one year	\$ 8,685	\$ 9,404
One year or less	2,034	1,429
Failed sales ¹	552	285
Total	\$ 11,271	\$ 11,118

1. For more information on failed sales, see Note 13.

Maturities and Terms of Secured Financings

\$ in millions	At December 31, 2017			At December 31, 2016
	Fixed Rate	Variable Rate ¹	Total	
Original maturities of one year or less:				
Next 12 months	\$ 590	\$ 1,444	\$ 2,034	\$ 1,429
Original maturities greater than one year:				
2017	\$ —	\$ —	\$ —	3,377
2018	165	4,827	4,992	2,738
2019	36	2,601	2,637	2,813
2020	354	151	505	270
2021	2	—	2	—
2022	2	149	151	—
Thereafter	227	171	398	206
Total	\$ 786	\$ 7,899	\$ 8,685	\$ 9,404
Weighted average coupon at period-end ²	3.1%	1.5%	1.7%	1.0%

1. Variable rate borrowings bear interest based on a variety of money market indices, including LIBOR and federal funds rates. Amounts include notes carried at fair value with various payment provisions, including notes linked to equity, credit, commodity or other indices.
2. Includes only other secured financings with original maturities greater than one year. Weighted average coupon is 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 the fair value option was elected.

Failed Sales by Maturity

\$ in millions	At	
	December 31, 2017	December 31, 2016
2017	\$ —	\$ 112
2018	22	17
2019	4	53
2020	109	55
2021	69	28
2022	59	4
Thereafter	289	16
Total	\$ 552	\$ 285

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.

\$ in millions	Years to Maturity at December 31, 2017				
	Less than 1	1-3	3-5	Over 5	Total
Lending:					
Corporate	\$ 16,495	\$ 30,234	\$ 43,975	\$ 4,061	\$ 94,765
Consumer	6,319	—	8	3	6,330
Residential real estate	1	52	52	253	358
Wholesale real estate	108	508	—	—	616
Forward-starting secured financing receivables	67,883	—	—	579	68,462
Underwriting	336	—	—	—	336
Investment activities	506	126	44	245	921
Letters of credit and other financial guarantees	63	131	1	70	265
Total	\$ 91,711	\$ 31,051	\$ 44,080	\$ 5,211	\$ 172,053
Corporate lending commitments participated to third parties					\$ 6,414
Forward-starting secured financing receivables settled within three business days					\$ 54,236

Types of Commitments

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. This amount includes securities purchased under agreements to resell and securities borrowed that the Firm has entered into prior to the balance sheet date that will settle after the balance sheet date. Also included are commitments to enter into securities purchased under agreements to resell that are provided

to certain clearinghouses or associated depositories that the Firm is a member of and are contingent upon the default of a clearinghouse member or other stress event. These transactions are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations when they are funded.

Underwriting Commitments. The Firm provides underwriting commitments in connection with its capital raising sources to a diverse group of corporate and other institutional clients.

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 ("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.

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 traded and to satisfy various margin requirements in lieu of depositing cash or securities with these counterparties.

Premises and Equipment. The Firm has non-cancelable operating leases covering premises and equipment. Future minimum rental commitments under such leases (net of sublease commitments, principally on office rentals) were as follows:

Operating Premises Leases

<i>\$ in millions</i>	At December 31, 2017
2018	\$ 664
2019	624
2020	559
2021	494
2022	444
Thereafter	2,639
Total	\$ 5,424
Total minimum rental income to be received in the future under non-cancelable operating subleases	\$ 12

<i>\$ in millions</i>	2017	2016	2015
Rent expense	\$ 704	\$ 689	\$ 705

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.

Guarantees

Obligations under Guarantee Arrangements at December 31, 2017

<i>\$ in millions</i>	Maximum Potential Payout/Notional				Total
	Years to Maturity				
	Less than 1	1-3	3-5	Over 5	
Credit derivatives	\$ 88,226	\$ 81,673	\$ 94,110	\$ 25,876	\$ 289,885
Other credit contracts	2	—	—	134	136
Non-credit derivatives	1,505,001	1,085,197	343,121	549,989	3,483,308
Standby letters of credit and other financial guarantees issued ¹	830	1,152	1,215	5,036	8,233
Market value guarantees	38	58	68	—	164
Liquidity facilities	3,333	—	—	—	3,333
Whole loan sales guarantees	—	1	1	23,244	23,246
Securitization representations and warranties	—	—	—	60,157	60,157
General partner guarantees	32	52	324	25	433

<i>\$ in millions</i>	Carrying Amount (Asset)/Liability	Collateral/Recourse
Credit derivatives ²	\$ (1,960)	\$ —
Other credit contracts	16	—
Non-credit derivatives ²	37,123	—
Standby letters of credit and other financial guarantees issued ¹	(199)	6,743
Market value guarantees	—	—
Liquidity facilities	(5)	5,547
Whole loan sales guarantees	8	—
Securitization representations and warranties	91	—
General partner guarantees	60	—

1. These amounts include certain issued standby letters of credit participated to third parties, totaling \$0.7 billion of notional and collateral/recourse, due to the nature of the Firm's obligations under these arrangements.
2. 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.

Types of Guarantees

Derivative Contracts. Certain derivative contracts meet the accounting definition of a guarantee, including certain written options, contingent forward contracts and CDSs (see Note 4 regarding credit derivatives in which the Firm has sold credit protection to the counterparty). Information regarding all derivative contracts that could meet the accounting definition of a guarantee is included in the previous table wherein the notional amount is used 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 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's maximum potential payout related to such representations and warranties is equal to the current UPB of such loans. The Firm has information on the current UPB only when it services the loans. The Firm no longer services those loans and the amount included in the previous table represents the UPB at the time of sale or at the time when the Firm last serviced any of those loans. The current UPB balances could be substantially lower than the maximum potential payout amount included in the previous table. 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 securitizations 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 certain 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 or historical losses where known, and the UPB at the time of sale when the current UPB is not known.

The Firm has provided, or otherwise agreed to be responsible for, certain representations and warranties related to RMBS primarily containing U.S. residential loans that the Firm sponsored between 2004 and 2017. In certain cases, the Firm

has agreed to be responsible for representations and warranties made by third-party sellers, many of which are now insolvent.

The Firm also provided representations and warranties in connection with its role as an originator of certain commercial mortgage loans that it securitized into CMBS.

Securitization Representations and Warranties

\$ in millions	At December 31, 2017	
	RMBS	CMBS
Maximum potential payout/notional	\$ 25,508	\$ 34,649
Reserve for payments owed ¹	91	—

1. Reserved in the Firm's financial statements for payments to resolve claims related to breach of representations and warranties in connection with residential mortgages.

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 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 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 in 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 financial statements.

Contingencies

Legal. 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. 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 financial statements and the Firm can reasonably estimate the amount of that loss, the Firm accrues the estimated loss by a charge to income.

<i>\$ in millions</i>	2017	2016	2015
Legal expenses	\$ 342	\$ 263	\$ 563

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 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 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 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 CDS 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 CDS with CDIB. The complaint seeks compensatory damages related to the approximately \$228 million that CDIB alleges it has already lost under the CDS, 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 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 \$634 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. On June 20, 2017 the Appellate Division affirmed the lower court's June 10, 2014 order. On October 3, 2017, the Appellate Division denied the Firm's motion for leave to appeal to the New York Court of Appeals. At December 25, 2017, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$215 million, and the certificates had incurred actual losses of approximately \$88 million. Based on currently available information, the Firm believes it could incur a loss in this action up to the difference between the \$215 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, 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. On July 11, 2017, the Appellate Division affirmed in part and reversed in part the trial court's order that granted in part the Firm's motion to dismiss. On September 26, 2017, the Appellate Division denied plaintiff's motion for leave to appeal to the New York Court of Appeals. 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 ("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 January 10, 2018, the court reinstated plaintiff's breach of contract claim based on failure to notify, which had been dismissed in its April 3, 2015 order. On January 24, 2018, the court denied the Firm's motion for summary judgment. On February 5, 2018, the Firm filed a motion for judgment on the pleadings and a renewed motion for summary judgment. 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. On February 24, 2017, the Firm filed a notice of appeal of the denial of its motion to dismiss the complaint and perfected its appeal on November 22, 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. On February 24, 2017, the Firm filed a notice of appeal of the court's order and perfected its appeal on November 22, 2017. 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, and the appeal was fully briefed on August 19, 2016. 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 matters styled *Case number 15/3637* and *Case number 15/4353*, the Dutch Tax Authority ("Dutch Authority") is challenging, in the District Court in Amsterdam, the prior set-off by the Firm of approximately €124 million (approximately \$149 million) plus accrued interest of withholding tax credits against the Firm's corporation tax liabilities for the tax years 2007 to 2013. The Dutch Authority alleges that the Firm was not entitled to receive the withholding tax credits on the basis, inter alia, that a Firm subsidiary did not hold legal title to certain securities subject to withholding tax on the relevant dates. The Dutch Authority has also alleged that the Firm failed to provide certain information to the Dutch Authority and keep adequate books and records. A hearing took place in this matter on September 19, 2017. Based on currently available information, the Firm believes that it could incur a loss in this action of up to approximately €124 million (approximately \$149 million) plus accrued interest.

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 in 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. 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 based upon 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 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

Assets and Liabilities by Type of Activity

\$ in millions	At December 31, 2017		At December 31, 2016	
	VIE Assets	VIE Liabilities	VIE Assets	VIE Liabilities
CLN	\$ —	\$ —	\$ 501	\$ —
OSF	378	3	602	10
MABS ¹	249	210	397	283
Other ²	1,174	250	910	25
Total	\$ 1,801	\$ 463	\$ 2,410	\$ 318

OSF—Other structured financings

1. Amounts 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 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, 2017		At December 31, 2016	
Assets				
Cash and cash equivalents:				
Cash and due from banks	\$	69	\$	74
Restricted cash		222		255
Trading assets at fair value		833		1,295
Customer and other receivables		19		13
Goodwill		18		18
Intangible assets		155		177
Other assets		485		578
Total	\$	1,801	\$	2,410
Liabilities				
Other secured financings at fair value	\$	438	\$	289
Other liabilities and accrued expenses		25		29
Total	\$	463	\$	318

Consolidated VIE assets and liabilities are presented in the previous tables after intercompany eliminations. Most assets owned by consolidated VIEs cannot be removed unilaterally by the Firm and are not generally available to the Firm. Most related liabilities issued by consolidated VIEs are non-recourse to the Firm. In certain other consolidated VIEs, the Firm either has the unilateral right to remove assets or provides 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.

Select Information Related to Consolidated VIEs

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Noncontrolling interests	\$ 189	\$ 228
Maximum exposure to losses ¹	—	78

1. Primarily related to certain derivatives, commitments, guarantees and other forms of involvement not recognized in the financial statements.

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 VIEs

<i>\$ in millions</i>	At December 31, 2017				
	MABS	CDO	MTOB	OSF	Other
VIE assets (unpaid principal balance)	\$ 89,288	\$ 9,807	\$ 5,306	\$ 3,322	\$ 31,934
Maximum exposure to loss					
Debt and equity interests	\$ 10,657	\$ 1,384	\$ 80	\$ 1,628	\$ 4,730
Derivative and other contracts	—	—	3,333	—	1,686
Commitments, guarantees and other	1,214	668	—	164	433
Total	\$ 11,871	\$ 2,052	\$ 3,413	\$ 1,792	\$ 6,849

Carrying value of exposure to loss—Assets

Debt and equity interests	\$ 10,657	\$ 1,384	\$ 43	\$ 1,202	\$ 4,730
Derivative and other contracts	—	—	5	—	184
Total	\$ 10,657	\$ 1,384	\$ 48	\$ 1,202	\$ 4,914

<i>\$ in millions</i>	At December 31, 2016				
	MABS	CDO	MTOB	OSF	Other
VIE assets (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

MTOB—Municipal tender option bonds

Non-consolidated VIE Mortgage- and Asset-Backed Securitization Assets

<i>\$ in millions</i>	At December 31, 2017		At December 31, 2016	
	UPB	Debt and Equity Interests	UPB	Debt and Equity Interests
Residential mortgages	\$ 15,636	\$ 1,272	\$ 4,775	\$ 458
Commercial mortgages	46,464	2,331	54,021	2,656
U.S. agency collateralized mortgage obligations	16,223	3,439	14,796	2,758
Other consumer or commercial loans	10,965	3,615	28,324	5,371
Total	\$ 89,288	\$ 10,657	\$ 101,916	\$ 11,243

The Firm's maximum exposure to loss presented in the previous table often differs from the carrying value of the variable interests held by the Firm. The maximum exposure to loss presented in the previous table 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 the 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 presented in the previous table 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 presented in the previous table 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.

Additional VIE Assets Owned

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
VIE assets	\$ 11,318	\$ 11,685

These assets were either retained in connection with transfers of assets by the Firm, acquired in connection with secondary market-making activities, held as AFS securities in its Investment securities portfolio (see Note 5), or held as investments in funds. At December 31, 2017 and December 31, 2016, 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 highest risk 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 an explicit and implicit guarantee provided by the U.S. government 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 trust 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 Credit-Linked Notes

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 CDS, 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 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.

Derivative 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 invests in 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 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, ABS 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, 2017 and December 31, 2016.

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

Transfers of Assets with Continuing Involvement

\$ in millions	At December 31, 2017			
	RML	CML	U.S. Agency CMO	CLN and Other ¹
SPE assets (UPB) ²	\$ 15,555	\$ 62,744	\$ 11,612	\$ 17,060
Retained interests				
Investment grade	\$ —	\$ 293	\$ 407	\$ 4
Non-investment grade (fair value)	1	98	—	478
Total	\$ 1	\$ 391	\$ 407	\$ 482
Interests purchased in the secondary market (fair value)				
Investment grade	\$ —	\$ 94	\$ 439	\$ —
Non-investment grade	16	66	—	4
Total	\$ 16	\$ 160	\$ 439	\$ 4
Derivative assets (fair value)	\$ 1	\$ —	\$ —	\$ 226
Derivative liabilities (fair value)	—	—	—	85

\$ in millions	At December 31, 2016			
	RML	CML	U.S. Agency CMO	CLN and Other ¹
SPE assets (UPB) 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

RML—Residential mortgage loans

CML—Commercial mortgage loans

1. Amounts include CLO transactions managed by unrelated third parties.

2. Amounts include assets transferred by unrelated transferors.

\$ in millions	Fair Value at December 31, 2017		
	Level 2	Level 3	Total
Retained interests			
Investment grade	\$ 407	\$ 4	\$ 411
Non-investment grade	22	555	577
Total	\$ 429	\$ 559	\$ 988
Interests purchased in the secondary market			
Investment grade	\$ 531	\$ 2	\$ 533
Non-investment grade	57	29	86
Total	\$ 588	\$ 31	\$ 619
Derivative assets	\$ 78	\$ 149	\$ 227
Derivative liabilities	81	4	85

\$ in millions	Fair Value at December 31, 2016		
	Level 2	Level 3	Total
Retained interests			
Investment grade	\$ 385	\$ 12	\$ 397
Non-investment grade	14	895	909
Total	\$ 399	\$ 907	\$ 1,306
Interests purchased in the secondary market			
Investment grade	\$ 56	\$ —	\$ 56
Non-investment grade	84	14	98
Total	\$ 140	\$ 14	\$ 154
Derivative assets	\$ 348	\$ 2	\$ 350
Derivative liabilities	98	361	459

Transferred assets are carried at fair value prior to securitization, and any changes in fair value are recognized in the 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 generally carried at fair value in the balance sheets with changes in fair value recognized in the income statements.

Proceeds from New Securitization Transactions and Sales of Loans

\$ in millions	2017	2016	2015
New transactions ¹	\$ 23,939	\$ 18,975	\$ 21,243
Retained interests	2,337	2,701	3,062
Sales of corporate loans to CLO SPEs ^{1, 2}	191	475	1,110

1. Net gains on new transactions and sales of corporate loans to CLO entities at the time of the sale were not material for all periods presented.
2. Sponsored by non-affiliates.

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).

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.

Assets Sold with Retained Exposure

\$ in millions	At December 31, 2017	At December 31, 2016
Carrying value of assets derecognized at the time of sale and gross cash proceeds	\$ 19,115	\$ 11,209
Fair value	\$ 19,138	\$ 11,301
Assets sold	176	128
Derivative assets recognized in the balance sheets	153	36
Derivative liabilities recognized in the balance sheets		

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 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 provides 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

\$ in millions	At December 31, 2017		At December 31, 2016	
	Assets	Liabilities	Assets	Liabilities
Failed sales	\$ 552	\$ 552	\$ 285	\$ 285

14. Regulatory Requirements

Regulatory Capital Framework

The Firm is an FHC 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 (“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 OCC establishes similar capital requirements and standards for MSBNA and MSPBNA (collectively, our “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, RWAs and transition provisions follows.

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, intangible assets, 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 the following buffers:

- A greater than 2.5% Common Equity Tier 1 capital conservation buffer;
- The Common Equity Tier 1 G-SIB capital surcharge, currently at 3%; and
- Up to a 2.5% Common Equity Tier 1 CCyB, currently set by U.S. banking agencies at zero.

The phase-in amount for each of the buffers was 50% of the fully phased-in buffer requirement in 2017, and increases to 75% in 2018. 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, volatilities, correlations or other market factors, such as market liquidity; and
- Operational risk: Inadequate or failed processes or systems, from human factors or from external events (e.g., fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets).

The Firm's risk-based capital ratios for purposes of determining regulatory compliance are the lower of the capital ratios computed under (i) the standardized approaches for calculating credit risk and market risk RWAs ("Standardized Approach") and (ii) the applicable advanced approaches for calculating credit risk, market risk and operational risk RWAs ("Advanced Approach").

The Firm's Regulatory Capital and Capital Ratios

At December 31, 2017, the Firm's ratios are based on the Standardized Approach transitional rules. At December 31, 2016, the Firm's ratios were based on the Advanced Approach transitional rules.

Regulatory Capital

\$ in millions	At December 31, 2017		
	Amount	Ratio	Minimum Capital Ratio ¹
Common Equity Tier 1 capital	\$ 61,134	16.5%	7.3%
Tier 1 capital	69,938	18.9%	8.8%
Total capital	80,275	21.7%	10.8%
Tier 1 leverage	—	8.3%	4.0%
Total RWAs	\$ 369,578	N/A	N/A
Adjusted average assets ²	842,270	N/A	N/A

\$ in millions	At December 31, 2016		
	Amount	Ratio	Minimum Capital Ratio ¹
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	—	8.4%	4.0%
Total RWAs	\$ 358,141	N/A	N/A
Adjusted average assets ²	811,402	N/A	N/A

1. Percentages represent minimum regulatory capital ratios under the transitional rules.

2. 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 quarter ended December 31, 2017 and December 31, 2016, 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' and the Firm's 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 an FHC 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, 2017 and December 31, 2016, 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, 2017 and December 31, 2016, the U.S. Bank Subsidiaries' ratios are based on the Standardized Approach transitional rules.

MSBNA's Regulatory Capital

<i>\$ in millions</i>	At December 31, 2017		
	Amount	Ratio	Minimum Capital Ratio ¹
Common Equity Tier 1 capital	\$ 15,196	20.5%	6.5%
Tier 1 capital	15,196	20.5%	8.0%
Total capital	15,454	20.8%	10.0%
Tier 1 leverage	15,196	11.8%	5.0%

<i>\$ in millions</i>	At December 31, 2016		
	Amount	Ratio	Minimum 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%

1. Capital ratios that are required in order to be considered well-capitalized for U.S. regulatory purposes.

MSPBNA's Regulatory Capital

<i>\$ in millions</i>	At December 31, 2017		
	Amount	Ratio	Minimum Capital Ratio ¹
Common Equity Tier 1 capital	\$ 6,215	24.4%	6.5%
Tier 1 capital	6,215	24.4%	8.0%
Total capital	6,258	24.6%	10.0%
Tier 1 leverage	6,215	9.7%	5.0%

<i>\$ in millions</i>	At December 31, 2016		
	Amount	Ratio	Minimum 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%

1. Capital ratios that are required in order to be considered well-capitalized for U.S. regulatory purposes.

U.S. Broker-Dealer Regulatory Capital Requirements

MS&Co. Regulatory Capital

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Net capital	\$ 10,142	\$ 10,311
Excess net capital	8,018	8,034

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 SEC and the CFTC. MS&Co. has consistently operated with capital in excess of its regulatory capital requirements.

As an Alternative Net Capital broker-dealer, and in accordance with the market and credit risk standards of Appendix E of SEC Rule 15c3-1, MS&Co. is subject to minimum net capital and tentative net capital requirements. In addition, MS&Co. must notify the SEC if its tentative net capital falls below certain levels. At December 31, 2017 and December 31, 2016, MS&Co. has exceeded its net capital requirement and has tentative net capital in excess of the minimum and notification requirements.

MSSB LLC Regulatory Capital

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Net capital	\$ 2,567	\$ 3,946
Excess net capital	2,400	3,797

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.

Other Regulated Subsidiaries

MSIP, a London-based broker-dealer subsidiary, is subject to the capital requirements of the PRA, 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.

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.

Restrictions on Payments

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. The following table represents net assets of consolidated subsidiaries that may be restricted as to the payment of cash dividends and advances to the Parent Company.

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Restricted net assets	\$ 29,894	\$ 25,258

15. Total Equity**Morgan Stanley Shareholders' Equity****Common Stock****Rollforward of Common Stock Outstanding**

<i>in millions</i>	2017	2016
Shares outstanding at beginning of period	1,852	1,920
Treasury stock purchases ¹	(92)	(133)
Other ²	28	65
Shares outstanding at end of period	1,788	1,852

- The Firm's Board has authorized the repurchase of the Firm's outstanding stock under a share repurchase program ("Share Repurchase Program"). In addition to the Firm's Share Repurchase Program, Treasury stock purchases include repurchases of common stock for employee tax withholding.
- Other includes net shares issued to and forfeited from Employee stock trusts and issued for RSU conversions.

Dividends and Share Repurchases

<i>\$ in millions</i>	2017	2016
Repurchases of common stock	\$ 3,750	\$ 3,502

The Firm's 2017 Capital Plan ("Capital Plan") includes the share repurchase of up to \$5.0 billion of outstanding common stock for the period beginning July 1, 2017 through June 30, 2018, an increase from \$3.5 billion in the 2016 Capital Plan. Additionally, the Capital Plan includes quarterly common stock dividends of up to \$0.25 per share.

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 appro-

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

<i>\$ in millions</i>	2017	2016	2015
Dividends declared	\$ 523	\$ 468	\$ 452

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).

Preferred Stock Outstanding

<i>\$ in millions, except per share data</i>	Shares Outstanding		Carrying Value	
	At December 31, 2017	Liquidation Preference per Share	At December 31, 2017	At December 31, 2016
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
K	40,000	25,000	1,000	—
Total			\$ 8,520	\$ 7,520

- 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
K ^{5,8}	January 2017	40,000,000 Depositary Shares, each representing a 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K, \$0.01 par value	25,000	April 15, 2027	365.63

- The redemption price per share for Series A, E, F, G, I and K 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.
- Quarterly dividends (unless noted otherwise).
- The preferred stock is redeemable at the Firm's option, in whole or in part, on or after the redemption date.
- 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.
- 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).
- Dividend on Series H preferred stock is payable semiannually until July 15, 2019 and quarterly thereafter.
- 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.
- The Series K Preferred Stock offering (net of related issuance costs) in January 2017 resulted in proceeds of approximately \$994 million.

Comprehensive Income (Loss)

Accumulated Other Comprehensive Income (Loss)¹

\$ in millions	Foreign Currency Translation Adjustments	AFS Securities	Pensions, Postretirement and Other	DVA	Total
December 31, 2014	\$ (663)	\$ (73)	\$ (512)	\$ —	\$(1,248)
OCI during the period	(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	(23)	(269)	(100)	(283)	(675)
December 31, 2016	(986)	(588)	(474)	(595)	(2,643)
OCI during the period	219	41	(117)	(560)	(417)
December 31, 2017	\$ (767)	\$ (547)	\$ (591)	\$(1,155)	\$(3,060)

- Amounts net of tax and noncontrolling interests.
- 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 interests and tax, related to outstanding liabilities under the fair value option election from Retained earnings into AOCI.

Period Changes in OCI Components

\$ in millions	2017					Net
	Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests		
Foreign currency translation adjustments						
OCI activity	\$ 64	\$ 187	\$ 251	\$ 32		\$ 219
Reclassified to earnings	—	—	—	—		—
Net OCI	\$ 64	\$ 187	\$ 251	\$ 32		\$ 219
Change in net unrealized gains (losses) on AFS securities						
OCI activity	\$ 100	\$ (36)	\$ 64	\$ —		\$ 64
Reclassified to earnings ¹	(35)	12	(23)	—		(23)
Net OCI	\$ 65	\$ (24)	\$ 41	\$ —		\$ 41
Pension, postretirement and other						
OCI activity	\$ (193)	\$ 75	\$ (118)	\$ —		\$ (118)
Reclassified to earnings ¹	2	(1)	1	—		1
Net OCI	\$ (191)	\$ 74	\$ (117)	\$ —		\$ (117)
Change in net DVA						
OCI activity	\$ (922)	\$ 325	\$ (597)	\$ (28)		\$ (569)
Reclassified to earnings ¹	12	(3)	9	—		9
Net OCI	\$ (910)	\$ 322	\$ (588)	\$ (28)		\$ (560)

\$ in millions	2016 ²					Net
	Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests		
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 ¹	(113)	41	(72)	—		(72)
Net OCI	\$ (426)	\$ 157	\$ (269)	\$ —		\$ (269)
Pension, postretirement and other						
OCI activity	\$ (162)	\$ 64	\$ (98)	\$ —		\$ (98)
Reclassified to earnings ¹	(3)	1	(2)	—		(2)
Net OCI	\$ (165)	\$ 65	\$ (100)	\$ —		\$ (100)
Change in net DVA						
OCI activity	\$ (429)	\$ 153	\$ (276)	\$ (13)		\$ (263)
Reclassified to earnings ¹	(31)	11	(20)	—		(20)
Net OCI	\$ (460)	\$ 164	\$ (296)	\$ (13)		\$ (283)

\$ in millions	2015					Net
	Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests		
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 ¹	(84)	31	(53)	—		(53)
Net OCI	\$ (389)	\$ 143	\$ (246)	\$ —		\$ (246)
Pension, postretirement and other						
OCI activity	\$ 202	\$ (70)	\$ 132	\$ —		\$ 132
Reclassified to earnings ¹	9	(3)	6	—		6
Net OCI	\$ 211	\$ (73)	\$ 138	\$ —		\$ 138

1. Amounts reclassified to earnings related to: realized gains and losses from sales of AFS securities are classified within Other revenues in the income statements; Pension, postretirement and other are classified within Compensation and benefits expenses in the income statements; and realization of DVA are classified within Trading revenues in the income statements.

2. Exclusive of 2016 cumulative adjustment for accounting change related to DVA.

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. 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, 2017 and December 31, 2016 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, 2017	At December 31, 2016
Associated with net investments in subsidiaries with a non-U.S. dollar functional currency	\$ (1,434)	\$ (2,018)
Hedges, net of tax	667	1,032
Total	\$ (767)	\$ (986)
Carrying value of net investments in non-U.S. dollar functional currency subsidiaries subject to hedges	\$ 10,139	\$ 8,856

16. Earnings per Common Share

Calculation of Basic and Diluted EPS

<i>in millions, except for per share data</i>	2017	2016	2015
Basic EPS			
Income from continuing operations	\$ 6,235	\$ 6,122	\$ 6,295
Income (loss) from discontinued operations	(19)	1	(16)
Net income	6,216	6,123	6,279
Net income applicable to noncontrolling interests	105	144	152
Net income applicable to Morgan Stanley	6,111	5,979	6,127
Less: Preferred stock dividends and other	(523)	(471)	(456)
Earnings applicable to Morgan Stanley common shareholders	\$ 5,588	\$ 5,508	\$ 5,671
Weighted average common shares outstanding	1,780	1,849	1,909
Earnings per basic common share			
Income from continuing operations	\$ 3.15	\$ 2.98	\$ 2.98
Income (loss) from discontinued operations	(0.01)	—	(0.01)
Earnings per basic common share	\$ 3.14	\$ 2.98	\$ 2.97
Diluted EPS			
Earnings applicable to Morgan Stanley common shareholders	\$ 5,588	\$ 5,508	\$ 5,671
Weighted average common shares outstanding	1,780	1,849	1,909
Effect of dilutive securities:			
Stock options and RSUs ¹	41	38	44
Weighted average common shares outstanding and common stock equivalents	1,821	1,887	1,953
Earnings per diluted common share			
Income from continuing operations	\$ 3.08	\$ 2.92	\$ 2.91
Income (loss) from discontinued operations	(0.01)	—	(0.01)
Earnings per diluted common share	\$ 3.07	\$ 2.92	\$ 2.90
Weighted average antidilutive RSUs and stock options (excluded from the computation of diluted EPS) ¹	—	13	12

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.

17. Interest Income and Interest Expense

Interest income and Interest expense are classified in the income statements based on the nature of the instrument and related market conventions. When 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.

<i>\$ in millions</i>	2017	2016	2015
Interest income			
Investment securities	\$ 1,334	\$ 1,142	\$ 876
Loans	3,298	2,724	2,163
Securities purchased under agreements to resell and Securities borrowed ¹	169	(374)	(560)
Trading assets, net of Trading liabilities	2,029	2,131	2,262
Customer receivables and Other ²	2,167	1,393	1,094
Total interest income	\$ 8,997	\$ 7,016	\$ 5,835
Interest expense			
Deposits	\$ 187	\$ 83	\$ 78
Borrowings	4,285	3,606	3,497
Securities sold under agreements to repurchase and Securities loaned ³	1,237	977	1,024
Customer payables and Other ⁴	(12)	(1,348)	(1,857)
Total interest expense	\$ 5,697	\$ 3,318	\$ 2,742
Net interest	\$ 3,300	\$ 3,698	\$ 3,093

1. Includes fees paid on Securities borrowed.
2. Includes interest from Customer receivables, Restricted cash and Interest bearing deposits with banks.
3. Includes fees received on Securities loaned.
4. 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

Stock-Based Compensation Expense

<i>\$ in millions</i>	2017	2016	2015
RSUs	\$ 951	\$ 1,054	\$ 1,080
Stock options	—	2	(3)
PSUs	75	81	26
Total¹	\$ 1,026	\$ 1,137	\$ 1,103
Includes:			
Retirement-eligible awards ²	\$ 85	\$ 73	\$ 68

1. Net of cancellations.
2. Relates to stock-based compensation anticipated to be awarded in January of the following year that does not contain a future service requirement.

Tax Benefit Related to Stock-Based Compensation Expense

<i>\$ in millions</i>	2017	2016	2015
Tax benefit ¹	\$ 225	\$ 381	\$ 369

1. Excludes income tax consequences related to employee share-based award conversions.

Unrecognized Compensation Cost Related to Unvested Stock-Based Awards

<i>\$ in millions</i>	At December 31, 2017 ¹	
To be recognized in:		
2018	\$	357
2019		158
Thereafter		27
Total	\$	542

1. Amounts do not include forfeitures, cancellations, accelerations or 2017 performance year compensation awarded in January 2018, which will begin to be amortized in 2018 (see the Annual Compensation Cost for 2017 Performance Year Awards table herein).

In connection with awards under its stock-based compensation plans, the Firm is authorized to issue shares of common stock held in treasury or newly issued shares.

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 under its stock-based compensation plans. Share repurchases by the Firm are subject to regulatory approval.

Common Shares Available for Future Awards Under Stock-Based Compensation Plans

<i>in millions</i>	At December 31, 2017
Shares	146

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 award, 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 cancelled 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 if the awards vest.

Vested and Unvested RSU Activity

<i>shares in millions</i>	2017	
	Number of Shares	Weighted Average Award Date Fair Value
RSUs at beginning of period	100	\$ 29.35
Awarded	22	42.98
Conversions to common stock	(31)	30.03
Cancelled	(3)	31.96
RSUs at end of period¹	88	\$ 32.46
Aggregate intrinsic value of RSUs at end of period (dollars in millions)		\$ 4,633
Weighted average award date fair value		
RSUs awarded in 2016		\$ 25.48
RSUs awarded in 2015		34.76

1. At December 31, 2017, the weighted average remaining term until delivery for the outstanding RSUs was approximately 1.1 years.

Unvested RSU Activity

<i>shares in millions</i>	2017	
	Number of Shares	Weighted Average Award Date Fair Value
Unvested RSUs at beginning of period	65	\$ 28.70
Awarded	22	42.98
Vested	(34)	30.46
Cancelled	(3)	31.96
Unvested RSUs at end of period¹	50	\$ 33.64

1. Unvested RSUs represent awards where recipients have yet to satisfy either the explicit vesting terms or retirement-eligible requirements.

Fair Value of RSU Activity

<i>\$ in millions</i>	2017	2016	2015
Conversions to common stock	\$ 1,333	\$ 1,068	\$ 1,646
Vested	1,470	1,088	1,693

Stock Options

The Firm had no stock options outstanding as of December 31, 2017, and did not grant stock options in 2017, 2016 or 2015.

Performance-Based Stock Units

PSUs will vest and convert to shares of common stock only if the Firm satisfies predetermined performance and market-based conditions over a three-year performance period. The number of PSUs that will actually vest ranges from 0% to 150% of the target award, based on the extent to which the Firm achieves the specified performance goals. One-half of the award will be earned based on the Firm's average return

on equity, excluding certain adjustments specified in the plan terms (“MS Adjusted ROE”). The other 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 Financials Sector Index (“Relative MS TSR”). PSUs have vesting, restriction and cancellation provisions that are generally similar to those of RSUs.

PSU Fair Value on Award Date

	2017	2016	2015
MS Adjusted ROE	\$ 42.64	\$ 25.19	\$ 34.58
Relative MS TSR	48.02	24.51	38.07

The Relative MS TSR fair values on the award date were estimated using a Monte Carlo simulation and the following assumptions.

Monte Carlo Simulation Assumptions

Award Year	Risk-Free Interest Rate	Expected Stock Price Volatility	Expected Dividend Yield
2017	1.5%	27.0%	0.0%
2016	1.1%	25.4%	0.0%
2015	0.9%	29.6%	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 Financials Sector Index.

PSU Activity

	2017
<i>shares in millions</i>	Number of Shares
PSUs at beginning of period	4
Awarded	1
Conversions to common stock	(2)
PSUs at end of period	3

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.

Deferred Cash-Based Compensation Expense

<i>\$ in millions</i>	2017	2016	2015
Deferred cash-based awards	\$ 1,039	\$ 950	\$ 660
Return on referenced investments	696	228	112
Total¹	\$ 1,735	\$ 1,178	\$ 772
Includes:			
Retirement-eligible awards ²	\$ 176	\$ 151	\$ 144

1. Net of cancellations.
2. Relates to deferred cash-based compensation anticipated to be awarded in January of the following year that does not contain a future service requirement.

Unrecognized Compensation Cost Related to Unvested Deferred Cash-Based Awards

<i>\$ in millions</i>	At December 31, 2017 ¹	
To be recognized in:		
2018	\$	375
2019		125
Thereafter		195
Total	\$	695

1. Amounts do not include unrecognized expense for returns on referenced investments, forfeitures, cancellations, accelerations or 2017 performance year compensation awarded in January 2018, which will begin to be amortized in 2018 (see below).

Annual Compensation Cost for 2017 Performance Year Awards¹

<i>\$ in millions</i>	2018	2019	Thereafter	Total
Stock-based awards	\$ 519	\$ 198	\$ 165	\$ 882
Deferred cash-based awards	616	290	121	1,027
Total	\$ 1,135	\$ 488	\$ 286	\$ 1,909

1. Awarded in January 2018 and contain a future service requirement. Amounts do not include forfeitures, cancellations, accelerations, or any future return on referenced investments.

19. Employee Benefit Plans

Pension and Other Postretirement Plans

Certain 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 (“U.S. Qualified Plan”). The U.S. Qualified Plan has ceased future benefit accruals.

Notes to Consolidated Financial Statements

Morgan Stanley

Unfunded supplementary plans (“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 (“SEREP”), a non-contributory defined benefit plan that is not qualified under Section 401(a) of the Internal Revenue Code, has ceased future benefit accruals.

Certain of the Firm’s non-U.S. subsidiaries also have defined benefit pension plans covering their eligible 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.

Components of Net Periodic Benefit Expense (Income)

\$ in millions	Pension Plans		
	2017	2016	2015
Service cost, benefits earned during the period	\$ 16	\$ 17	\$ 19
Interest cost on projected benefit obligation	146	150	152
Expected return on plan assets	(117)	(122)	(120)
Net amortization of prior service credit	—	—	(1)
Net amortization of actuarial loss	17	12	26
Settlement loss	—	—	2
Net periodic benefit expense (income)	\$ 62	\$ 57	\$ 78

\$ in millions	Other Postretirement Plan		
	2017	2016	2015
Service cost, benefits earned during the period	\$ 1	\$ 1	\$ 1
Interest cost on projected benefit obligation	3	4	3
Net amortization of prior service credit	(16)	(17)	(18)
Net periodic benefit expense (income)	\$ (12)	\$ (12)	\$ (14)

Pre-tax Amounts Recognized in OCI

\$ in millions	Pension Plans		
	2017	2016	2015
Net gain (loss)	\$ (205)	\$ (149)	\$ 212
Prior service credit (cost)	2	1	1
Amortization of prior service credit	—	—	(1)
Amortization of net loss	17	12	28
Total	\$ (186)	\$ (136)	\$ 240

\$ in millions	Other Postretirement Plan		
	2017	2016	2015
Net gain (loss)	\$ —	\$ (2)	\$ (3)
Prior service credit (cost)	—	—	(9)
Amortization of prior service credit	(16)	(17)	(18)
Total	\$ (16)	\$ (19)	\$ (30)

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 U.S. Qualified Plan and the SEREP amortize the unrecognized net gains and losses over the average life expectancy of participants. The remaining plans generally amortize the unrecognized net gains and losses and prior service credit over the average remaining service period of active participants.

Weighted Average Assumptions Used to Determine Net Periodic Benefit Expense (Income)

	Pension Plans		
	2017	2016	2015
Discount rate	4.01%	4.27%	3.86%
Expected long-term rate of return on plan assets	3.52%	3.61%	3.59%
Rate of future compensation increases	3.10%	3.19%	2.85%

	Other Postretirement Plan		
	2017	2016	2015
Discount rate	4.01%	4.13%	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 an 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 with 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

\$ in millions	Pension Plans		Other Postretirement Plan	
	2017	2016	2017	2016
Rollforward of benefit obligation				
Benefit obligation at beginning of year	\$ 3,711	\$ 3,604	\$ 88	\$ 87
Service cost	16	17	1	1
Interest cost	146	150	3	4
Actuarial loss (gain) ¹	304	223	—	1
Plan amendments	(2)	(1)	—	—
Plan settlements	(9)	(19)	—	—
Benefits paid	(242)	(219)	(6)	(5)
Other, including foreign currency exchange rate changes	42	(44)	—	—
Benefit obligation at end of year	\$ 3,966	\$ 3,711	\$ 86	\$ 88
Rollforward of fair value of plan assets				
Fair value of plan assets at beginning of year	\$ 3,431	\$ 3,497	\$ —	\$ —
Actual return on plan assets	217	196	—	—
Employer contributions	32	38	6	5
Benefits paid	(242)	(219)	(6)	(5)
Plan settlements	(9)	(19)	—	—
Other, including foreign currency exchange rate changes	39	(62)	—	—
Fair value of plan assets at end of year	\$ 3,468	\$ 3,431	\$ —	\$ —
Funded (unfunded) status	\$ (498)	\$ (280)	\$ (86)	\$ (88)
Amounts recognized in the balance sheets				
Assets	\$ 87	\$ 230	\$ —	\$ —
Liabilities	(585)	(510)	(86)	(88)
Net amount recognized	\$ (498)	\$ (280)	\$ (86)	\$ (88)

1. Amounts primarily reflect the impact of year-over-year discount rate fluctuations.

Amounts Recognized in AOCI

\$ in millions	Pension Plans		Other Postretirement Plan	
	At December 31, 2017	At December 31, 2016	At December 31, 2017	At December 31, 2016
Prior service credit (cost)	\$ 4	\$ 2	\$ 1	\$ 17
Net gain (loss)	(951)	(763)	—	—
Net gain (loss) recognized	\$ (947)	\$ (761)	\$ 1	\$ 17

Estimated Amortization from AOCI into Net Periodic Benefit Expense (Income) in 2018

\$ in millions	Pension Plans	Other Postretirement Plan
Prior service credit (cost)	\$ 1	\$ 1
Net gain (loss)	(27)	—

Pension Plans with Benefit Obligations in Excess of the Fair Value of Plan Assets

\$ in millions	At December 31, 2017	At December 31, 2016
Projected benefit obligation	\$ 3,676	\$ 566
Accumulated benefit obligation	3,663	552
Fair value of plan assets	3,091	56

Accumulated Benefit Obligation

\$ in millions	At December 31, 2017	At December 31, 2016
Pension plans	\$ 3,953	\$ 3,696

Weighted Average Assumptions Used to Determine Benefit Obligation

	Pension Plans		Other Postretirement Plan	
	At December 31, 2017	At December 31, 2016	At December 31, 2017	At December 31, 2016
Discount rate	3.46%	4.01%	3.44%	4.01%
Rate of future compensation increase	3.38%	3.10%	N/A	N/A

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, 2017	At December 31, 2016
Health care cost trend rate assumed for next year		
Medical	5.81%	5.96%
Prescription	8.49%	9.32%
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

Plan Assets

The U.S. Qualified Plan's assets represent 87% 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, 2017			
	Level 1	Level 2	Level 3	Total
Assets				
Investments:				
Cash and cash equivalents ¹	\$ 6	\$ —	\$ —	\$ 6
U.S. government and agency securities:				
U.S. Treasury securities	2,398	—	—	2,398
U.S. agency securities	—	318	—	318
Total U.S. government and agency securities	2,398	318	—	2,716
Corporate and other debt:				
CDO	—	14	—	14
Total corporate and other debt	—	14	—	14
Derivative contracts ²	—	1	—	1
Other investments	—	—	47	47
Other receivables ¹	26	—	—	26
Total assets³	\$ 2,430	\$ 333	\$ 47	\$ 2,810
Liabilities				
Derivative contracts ²	\$ —	\$ 2	\$ —	\$ 2
Other payables ¹	11	—	—	11
Total liabilities	\$ 11	\$ 2	\$ —	\$ 13

\$ 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:				
CDO	—	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 assets³	\$ 1,548	\$ 671	\$ 38	\$ 2,257
Liabilities				
Derivative contracts	\$ —	\$ 225	\$ —	\$ 225
Total liabilities	\$ —	\$ 225	\$ —	\$ 225

- Cash and cash equivalents, other receivables and other payables are valued at their carrying value, which approximates fair value.
- During 2017, the Chicago Mercantile Exchange amended its rulebook for cleared OTC derivatives, resulting in the characterization of variation margin transfers as settlement payments as opposed to cash posted as collateral.
- 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 Plan Assets Measured at NAV" herein.

Rollforward of Level 3 Plan Assets

\$ in millions	2017	2016
Balance at beginning of period	\$ 38	\$ 35
Actual return on plan assets related to assets held at end of period	1	—
Purchases, sales, other settlements and issuances, net	8	3
Balance at end of period	\$ 47	\$ 38

There were no transfers between levels during 2017 and 2016.

Fair Value of Plan Assets Measured at NAV

\$ in millions	At December 31, 2017	At December 31, 2016
Commingled trust funds		
Fixed income	\$ —	\$ 999
Money market	285	86
Foreign funds		
Fixed income	126	111
Liquidity	41	9
Targeted cash flow	219	194
Total	\$ 671	\$ 1,399

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, 2017, the Firm expected to contribute approximately \$50 million to its pension and postretirement benefit plans in 2018 based upon the plans' current funded status and expected asset return assumptions for 2018.

Expected Future Benefit Payments

\$ in millions	At December 31, 2017	
	Pension Plans	Other Postretirement Plan
2018	\$ 140	\$ 7
2019	142	7
2020	148	7
2021	156	7
2022	166	7
2023-2027	922	31

Morgan Stanley 401(k) Plan

U.S. employees meeting certain eligibility requirements may participate in the Morgan Stanley 401(k) Plan. Eligible employees receive discretionary 401(k) matching cash contributions as determined annually by the Firm. For 2017, 2016 and 2015, the Firm made a \$1 for \$1 Firm match up to 4% of eligible pay, up to the IRS limit. Matching contributions were invested among available funds according to each participant's

investment direction on file. Eligible employees with eligible pay less than or equal to \$100,000 also received a fixed contribution under the 401(k) Plan equal to 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.

401(k) Expense

<i>\$ in millions</i>	2017	2016	2015
Expense	\$ 258	\$ 250	\$ 255

Defined Contribution Pension Plans

The Firm maintains separate defined contribution pension plans that cover eligible employees of certain non-U.S. subsidiaries. Under such plans, benefits are generally determined based on a fixed rate of base salary with certain vesting requirements.

Defined Contribution Pension Expense

<i>\$ in millions</i>	2017	2016	2015
Expense	\$ 106	\$ 101	\$ 111

20. Income Taxes**Provision for (Benefit from) Income Taxes****Components of Provision for (Benefit from) Income Taxes**

<i>\$ in millions</i>	2017	2016	2015
Current			
U.S.:			
Federal	\$ 476	\$ 330	\$ 239
State and local	125	221	144
Non-U.S.:			
U.K.	401	196	247
Japan	56	28	19
Hong Kong	48	14	24
Other	308	359	333
Total	\$ 1,414	\$ 1,148	\$ 1,006
Deferred			
U.S.:			
Federal	\$ 2,656	\$ 1,336	\$ 1,031
State and local	84	74	43
Non-U.S.:			
U.K.	18	56	(56)
Japan	(17)	127	58
Hong Kong	(2)	31	50
Other	15	(46)	68
Total	\$ 2,754	\$ 1,578	\$ 1,194
Provision for income taxes from continuing operations	\$ 4,168	\$ 2,726	\$ 2,200
Provision for (benefit from) income taxes from discontinued operations	\$ (7)	\$ 1	(7)

Selected Other Non-U.S. Tax Provisions

<i>\$ in millions</i>	Tax Provisions
2017:	
Brazil	\$ 82
India	49
Canada	36
2016:	
Brazil	125
India	46
France	38
2015:	
Mexico	68
Brazil	62
Netherlands	58
India	45
France	42

Net Income Tax Provision (Benefit) Accrued in Additional Paid-in Capital Related to Employee Share-Based Compensation

<i>\$ in millions</i>	2017	2016	2015
Additional paid-in capital ¹	\$ —	\$ 24	\$ (203)

1. Beginning in 2017, the income tax consequences related to employee share-based awards are required to be recognized in Provision for income taxes in the income statements upon the conversion of employee share-based awards instead of additional paid-in capital. See Note 2 to the financial statements for information on the adoption of the accounting update *Improvements to Employee Share-Based Payment Accounting*. See Note 21 for more information on the net discrete tax provisions (benefits).

Effective Income Tax Rate**Reconciliation of the U.S. Federal Statutory Income Tax Rate to the Effective Income Tax Rate**

	2017	2016	2015
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	1.4	2.2	1.4
Domestic tax credits	(1.6)	(2.5)	(1.5)
Tax exempt income	(0.1)	(0.1)	(0.2)
Non-U.S. earnings			
Foreign tax rate differential	(5.0)	(3.1)	(8.7)
Change in reinvestment assertion	—	—	0.2
Change in foreign tax rates	—	0.1	—
Tax Act enactment	11.5	—	—
Employee share-based awards	(1.5)	—	—
Other	0.4	(0.8)	(0.3)
Effective income tax rate	40.1%	30.8%	25.9%

The Firm's effective tax rate from continuing operations for 2017 included an intermittent net discrete tax provision of \$968 million, which included approximately \$1.2 billion primarily related to the remeasurement of certain net deferred tax assets as a result of the Tax Act, partially offset by \$233 million of net discrete tax benefits primarily associated with the remeasurement of reserves and related interest due to new information regarding the status of multi-year IRS tax examinations.

The Tax Act, enacted on December 22, 2017, significantly revised U.S. corporate income tax law by, among other things, reducing the corporate income tax rate to 21%, and implementing a modified territorial tax system that includes a one-time transition tax on deemed repatriated earnings of foreign subsidiaries; imposes a minimum tax on GILTI and an alternative base erosion and anti-abuse tax ("BEAT") on U.S. corporations that make deductible payments to non-U.S. related persons in excess of specified amounts; and broadens the tax base by partially or wholly eliminating tax deductions for certain historically deductible expenses (e.g., FDIC premiums and executive compensation).

The Firm's effective tax rate from continuing operations for 2016 included intermittent 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 multi-year IRS tax examinations, partially offset by adjustments for other tax matters.

The Firm's effective tax rate from continuing operations for 2015 included intermittent 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.

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

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Gross deferred tax assets		
Tax credits and net operating loss carryforwards	\$ 391	\$ 731
Employee compensation and benefit plans	2,146	3,504
Valuation and liability allowances	377	656
Valuation of inventory, investments and receivables	645	1,062
Other	—	21
Total deferred tax assets	3,559	5,974
Deferred tax assets valuation allowance	144	164
Deferred tax assets after valuation allowance	\$ 3,415	\$ 5,810
Gross deferred tax liabilities		
Non-U.S. operations	\$ 20	\$ 270
Fixed assets	627	773
Other	194	—
Total deferred tax liabilities	\$ 841	\$ 1,043
Net deferred tax assets	\$ 2,574	\$ 4,767

The Firm had tax credit carryforwards for which a related deferred tax asset of \$114 million and \$465 million was recorded at December 31, 2017 and December 31, 2016, respectively. These carryforwards are subject to annual limitations on utilization, with the earliest expiration beginning in 2037, if not utilized.

The Firm believes the recognized net deferred tax assets (after valuation allowance) at December 31, 2017 are more likely than not to be realized based on expectations as to future taxable income in the jurisdictions in which it operates.

The earnings of certain foreign subsidiaries are indefinitely reinvested due to regulatory and other capital requirements in foreign jurisdictions. As a result of the Tax Act's one-time transition tax on the earnings of foreign subsidiaries, as of December 31, 2017 the Firm expects the unrecognized deferred tax liability attributable to indefinitely reinvested earnings to be immaterial.

Unrecognized Tax Benefits**Rollforward of Unrecognized Tax Benefits**

<i>\$ in millions</i>	2017	2016	2015
Balance at beginning of period	\$ 1,851	\$ 1,804	\$ 2,228
Increase based on tax positions related to the current period	63	172	230
Increase based on tax positions related to prior periods	170	14	114
Decrease based on tax positions related to prior periods	(312)	(134)	(753)
Decreases related to settlements with taxing authorities	(155)	—	(7)
Decreases related to lapse of statute of limitations	(23)	(5)	(8)
Balance at end of period	\$ 1,594	\$ 1,851	\$ 1,804
Net unrecognized tax benefits ¹	\$ 873	\$ 1,110	\$ 1,144

1. Represent ending unrecognized tax benefits adjusted for the impact of the federal benefit of state issues, competent authority and foreign tax credit offsets. If recognized, these net benefits would favorably impact the effective tax rate in future periods.

Interest Expense (Benefit), Net of Federal and State Income Tax Benefits

<i>\$ in millions</i>	2017	2016	2015
Recognized in income statements	\$ (3)	\$ 28	\$ 18
Accrued at end of period	147	150	122

Interest and penalties related to unrecognized tax benefits are classified as provision for income taxes. Penalties related to unrecognized tax benefits for the years mentioned above were immaterial.

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 has established a liability for unrecognized tax benefits, and associated interest, if applicable (“tax liabilities”), that it believes is adequate in relation to the potential for additional assessments. Once established, the Firm adjusts such tax liabilities only when new information is available or when an event occurs necessitating a change.

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 2007-2014, respectively. During the fourth quarter of 2017, the Firm agreed to proposed adjustments associated with the expected closure of the field audits for tax years 2006-2008.

The Firm believes that the resolution of the above tax matters will not have a material effect on the annual financial statements, although a resolution could have a material impact in the income statements and effective tax rate for any period in which such resolution occurs.

Additionally, during the fourth quarter of 2017, the Firm received new information relating to the expected closure of the IRS field audits for tax years 2009-2012 resulting in a remeasurement and an overall net decrease in the Firm’s recorded tax liabilities.

Also, during the fourth quarter of 2017, the Firm reached agreement with the IRS on resolution of claims filed with the IRS to contest certain items associated with tax years 1999-2005, which did not have a material impact on the annual statements or effective tax rate. Furthermore, during the fourth quarter of 2017, the Firm reached a conclusion with the U.K. tax authorities on certain issues through tax year 2010, the resolution of which did not have a material impact on the annual financial statements or effective tax rate.

See Note 12 regarding the Dutch Tax Authority’s challenge, in the District Court in Amsterdam (matters styled *Case number 15/3637* and *Case number 15/4353*), of the Firm’s entitlement to certain withholding tax credits which may impact the balance of unrecognized tax benefits.

It is reasonably possible that significant changes in the balance of unrecognized tax benefits occur within the next 12 months. 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	2011
U.K.	2010
Japan	2015

Income from Continuing Operations before Income Tax Expense (Benefit)

<i>\$ in millions</i>	2017	2016	2015
U.S.	\$ 5,686	\$ 5,694	\$ 5,360
Non-U.S. ¹	4,717	3,154	3,135
Total	\$ 10,403	\$ 8,848	\$ 8,495

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	2017				
	IS	WM	IM ^{1,2}	I/E	Total
Total non-interest revenues	\$ 19,622	\$ 12,731	\$ 2,586	\$ (294)	\$ 34,645
Interest income	5,377	4,591	4	(975)	8,997
Interest expense	6,186	486	4	(979)	5,697
Net interest	(809)	4,105	—	4	3,300
Net revenues	\$ 18,813	\$ 16,836	\$ 2,586	\$ (290)	\$ 37,945
Income from continuing operations before income taxes	\$ 5,644	\$ 4,299	\$ 456	\$ 4	\$ 10,403
Provision for income taxes ³	1,993	1,974	201	—	4,168
Income from continuing operations	3,651	2,325	255	4	6,235
Income (loss) from discontinued operations, net of income taxes	(19)	—	—	—	(19)
Net income	3,632	2,325	255	4	6,216
Net income applicable to noncontrolling interests	96	—	9	—	105
Net income applicable to Morgan Stanley	\$ 3,536	\$ 2,325	\$ 246	\$ 4	\$ 6,111

\$ in millions	2016				
	IS ⁴	WM ⁴	IM ^{1,2}	I/E	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 ³	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				
	IS ⁴	WM ⁴	IM ¹	I/E	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 ³	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

I/E—Intersegment Eliminations

- For information on fee waivers, see the table below.
- For information on net unrealized performance-based fees see the table below.
- The Firm's effective tax rate from continuing operations included net discrete tax provisions (benefits). See table below for further information.

4. 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.

The Firm waives a portion of its fees in the Investment Management business segment from certain registered money market funds that comply with the requirements of Rule 2a-7 of the Investment Company Act of 1940.

Reduction of Fees due to Fee Waivers

<i>\$ in millions</i>	2017	2016	2015
Fee waivers	\$ 86	\$ 91	\$ 197

For certain management fee arrangements in the Investment Management business segment, the Firm is entitled to receive performance-based fees (also referred to as incentive fees and includes carried interest) when the return on assets under management exceeds certain benchmark returns or other performance targets. In such arrangements, performance fee revenues are accrued (or reversed) quarterly based on measuring account/fund performance to date versus the performance benchmark stated in the investment management agreement. The Firm's portion of net unrealized cumulative performance-based fees (for which the Firm is not obligated to pay compensation) are at risk of reversing if the fund performance falls below the stated investment management agreement benchmarks. See Note 12 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.

Net Unrealized Performance-based Fees

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Net cumulative unrealized performance-based fees at risk of reversing	\$ 442	\$ 397

Net Discrete Tax Provision (Benefit) by Segment

<i>\$ in millions</i>	2017			
	IS	WM	IM	Total
Intermittent:				
Tax Act enactment ¹	\$ 705	\$ 402	\$ 94	\$ 1,201
Remeasurement of reserves and related interest	(168)	—	—	(168)
Other	(66)	9	(8)	(65)
Total intermittent net discrete tax provision (benefit)	\$ 471	\$ 411	\$ 86	\$ 968
Recurring:				
Employee share-based awards	(93)	(54)	(8)	(155)
Total	\$ 378	\$ 357	\$ 78	\$ 813
2016 ²				\$ (68)
2015 ²				(564)

- For further discussion on the Tax Act, see Note 20.
- The intermittent net discrete tax benefits for 2016 and 2015 were primarily within the Institutional Securities business segment.

Total Assets by Business Segment

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Institutional Securities	\$ 664,974	\$ 629,149
Wealth Management	182,009	181,135
Investment Management	4,750	4,665
Total¹	\$ 851,733	\$ 814,949

- Parent 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 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

<i>\$ in millions</i>	2017	2016	2015
Americas	\$ 27,817	\$ 25,487	\$ 25,080
EMEA	5,714	4,994	5,353
Asia	4,414	4,150	4,722
Net revenues	\$ 37,945	\$ 34,631	\$ 35,155

Total Assets by Region

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Americas	\$ 570,489	\$ 581,750
EMEA	191,398	158,819
Asia	89,846	74,380
Total	\$ 851,733	\$ 814,949

22. Parent Company

Parent Company Only—Condensed Income Statements and Comprehensive Income Statements

<i>\$ in millions</i>	2017	2016	2015
Revenues			
Dividends from non-bank subsidiaries	\$ 2,567	\$ 2,448	\$ 4,942
Trading	(260)	96	574
Other	64	38	53
Total non-interest revenues	2,371	2,582	5,569
Interest income	3,783	3,008	3,055
Interest expense	4,079	4,036	4,073
Net interest	(296)	(1,028)	(1,018)
Net revenues	2,075	1,554	4,551
Non-interest expenses	240	126	(195)
Income before income taxes	1,835	1,428	4,746
Provision for (benefit from) income taxes	(206)	(383)	(83)
Net income before undistributed gain of subsidiaries	2,041	1,811	4,829
Undistributed gain of subsidiaries	4,070	4,168	1,298
Net income	6,111	5,979	6,127
OCI, net of tax:			
Foreign currency translation adjustments	219	(23)	(300)
Change in net unrealized gains (losses) on AFS securities	41	(269)	(246)
Pensions, postretirement and other	(117)	(100)	138
Change in net DVA	(560)	(283)	—
Comprehensive income	\$ 5,694	\$ 5,304	\$ 5,719
Net income	\$ 6,111	\$ 5,979	\$ 6,127
Preferred stock dividends and other	523	471	456
Earnings applicable to Morgan Stanley common shareholders	\$ 5,588	\$ 5,508	\$ 5,671

Parent Company Only—Condensed Balance Sheets

<i>\$ in millions, except share data</i>	At December 31, 2017	At December 31, 2016
Assets		
Cash and cash equivalents:		
Cash and due from banks	\$ 11	\$ 116
Deposits with banking subsidiaries	8,120	3,600
Restricted cash	1	3
Trading assets at fair value	5,752	139
Investment securities at fair value	19,268	—
Securities purchased under agreement to resell with affiliates	38,592	57,906
Advances to subsidiaries:		
Bank and BHC	30,145	28,186
Non-bank	112,557	95,684
Equity investments in subsidiaries:		
Bank and BHC	35,971	34,329
Non-bank	31,856	31,246
Other assets	2,704	4,613
Total assets	\$ 284,977	\$ 255,822
Liabilities		
Trading liabilities at fair value	\$ 148	\$ 49
Securities sold under agreements to repurchase with affiliates	8,753	—
Payables to subsidiaries	28,781	26,957
Other liabilities and accrued expenses	2,421	2,040
Borrowings	167,483	150,726
Total liabilities	207,586	179,772
Commitments and contingent liabilities (see Note 12)		
Equity		
Preferred stock	8,520	7,520
Common stock, \$0.01 par value:		
Shares authorized: 3,500,000,000; Shares issued: 2,038,893,979; Shares outstanding: 1,788,086,805 and 1,852,481,601	20	20
Additional paid-in capital	23,545	23,271
Retained earnings	57,577	53,679
Employee stock trusts	2,907	2,851
AOCI	(3,060)	(2,643)
Common stock held in treasury at cost, \$0.01 par value (250,807,174 and 186,412,378 shares)	(9,211)	(5,797)
Common stock issued to employee stock trusts	(2,907)	(2,851)
Total shareholders' equity	77,391	76,050
Total liabilities and equity	\$ 284,977	\$ 255,822

Parent Company Only—Condensed Cash Flow Statements

<i>\$ in millions</i>	2017	2016	2015
Cash flows from operating activities			
Net income	\$ 6,111	\$ 5,979	\$ 6,127
Adjustments to reconcile net income to net cash provided by (used for) operating activities:			
Undistributed gain of subsidiaries	(4,070)	(4,168)	(1,298)
Other operating activities	1,087	1,367	1,084
Changes in assets and liabilities	619	(151)	(2,984)
Net cash provided by (used for) operating activities	3,747	3,027	2,929
Cash flows from investing activities			
Proceeds from (payments for):			
Investment securities:			
Purchases	(5,263)	—	—
Proceeds from sales	3,620	—	—
Proceeds from paydowns and maturities	1,038	—	—
Securities purchased under agreements to resell with affiliates	19,314	(10,846)	(5,459)
Securities sold under agreements to repurchase with affiliates	8,753	—	—
Advances to and investments in subsidiaries	(33,825)	(2,502)	1,364
Net cash provided by (used for) investing activities	(6,363)	(13,348)	(4,095)
Cash flows from financing activities			
Proceeds from:			
Issuance of preferred stock, net of issuance costs	994	—	1,493
Issuance of Borrowings	36,833	32,795	28,575
Payments for:			
Borrowings	(24,668)	(24,793)	(23,458)
Repurchases of common stock and employee tax withholdings	(4,292)	(3,933)	(2,773)
Cash dividends	(2,085)	(1,746)	(1,455)
Other financing activities	26	66	—
Net cash provided by (used for) financing activities	6,808	2,389	2,382
Effect of exchange rate changes on cash and cash equivalents	221	(250)	(65)
Net increase (decrease) in cash and cash equivalents	4,413	(8,182)	1,151
Cash and cash equivalents, at beginning of period	3,719	11,901	10,750
Cash and cash equivalents, at end of period	\$ 8,132	\$ 3,719	\$ 11,901
Cash and cash equivalents:			
Cash and due from banks	\$ 11	\$ 116	\$ 5,166
Deposits with banking subsidiaries	8,120	3,600	4,311
Interest bearing deposits with banks	—	—	2,421
Restricted cash	1	3	3
Cash and cash equivalents, at end of period	\$ 8,132	\$ 3,719	\$ 11,901
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	\$ 3,570	\$ 3,650	\$ 3,959
Income taxes, net of refunds	201	201	255

Parent Company's Borrowings with Original Maturities Greater than One Year

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Senior	\$ 157,255	\$ 140,422
Subordinated	10,228	10,303
Total	\$ 167,483	\$ 150,725

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.

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 in 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.

Guarantees of Debt Instruments and Warrants Issued by Subsidiaries

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Aggregate balance	\$ 19,392	\$ 11,538

In connection with subsidiary lease obligations, the Parent Company has issued guarantees to various lessors.

Guarantees under Subsidiary Lease Obligations

<i>\$ in millions</i>	At December 31, 2017	At December 31, 2016
Aggregate balance ¹	\$ 1,082	\$ 1,090

1. Amounts primarily relate to the U.K.

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

As indicated in the Firm's 2017 resolution plan submitted to the Federal Reserve and the FDIC, the Parent Company has amended and restated its support agreement with its material entities, as defined in the Firm's 2017 resolution plan. Under the secured amended and restated support agreement, upon the occurrence of a resolution scenario, the Parent Company would be obligated to contribute or loan on a subordinated basis all of its contributable material assets, other than shares in subsidiaries of the Parent Company and certain intercompany receivables, to provide capital and liquidity, as applicable, to its material entities.

23. Quarterly Results (Unaudited)

\$ in millions, except per share data	2017 Quarter ¹			
	First	Second	Third	Fourth ^{2, 3}
Total non-interest revenues	\$ 8,974	\$ 8,752	\$ 8,414	\$ 8,505
Net interest	771	751	783	995
Net revenues	9,745	9,503	9,197	9,500
Total non-interest expenses	6,937	6,861	6,715	7,029
Income from continuing operations before income taxes	2,808	2,642	2,482	2,471
Provision for income taxes	815	846	697	1,810
Income from continuing operations	1,993	1,796	1,785	661
Income (loss) from discontinued operations	(22)	(5)	6	2
Net income	1,971	1,791	1,791	663
Net income applicable to noncontrolling interests	41	34	10	20
Net income applicable to Morgan Stanley	\$ 1,930	\$ 1,757	\$ 1,781	\$ 643
Preferred stock dividends and other	90	170	93	170
Earnings applicable to Morgan Stanley common shareholders	\$ 1,840	\$ 1,587	\$ 1,688	\$ 473
Earnings (loss) per basic common share ⁴ :				
Income from continuing operations	\$ 1.03	\$ 0.89	\$ 0.95	\$ 0.27
Income (loss) from discontinued operations	(0.01)	—	—	—
Earnings per basic common share	\$ 1.02	\$ 0.89	\$ 0.95	\$ 0.27
Earnings (loss) per diluted common share ⁴ :				
Income from continuing operations	\$ 1.01	\$ 0.87	\$ 0.93	\$ 0.26
Income (loss) from discontinued operations	(0.01)	—	—	—
Earnings per diluted common share	\$ 1.00	\$ 0.87	\$ 0.93	\$ 0.26
Dividends declared per common share	\$ 0.20	\$ 0.20	\$ 0.25	\$ 0.25
Book value per common share	\$ 37.48	\$ 38.22	\$ 38.87	\$ 38.52

\$ in millions, except per share data	2016 Quarter			
	First	Second	Third	Fourth ^{2, 5}
Total non-interest revenues	\$ 6,893	\$ 7,996	\$ 7,906	\$ 8,138
Net interest	899	913	1,003	883
Net revenues	7,792	8,909	8,909	9,021
Total non-interest expenses	6,054	6,426	6,528	6,775
Income from continuing operations before income taxes	1,738	2,483	2,381	2,246
Provision for income taxes	578	833	749	566
Income from continuing operations	1,160	1,650	1,632	1,680
Income (loss) from discontinued operations	(3)	(4)	8	—
Net income	1,157	1,646	1,640	1,680
Net income applicable to noncontrolling interests	23	64	43	14
Net income applicable to Morgan Stanley	\$ 1,134	\$ 1,582	\$ 1,597	\$ 1,666
Preferred stock dividends and other	79	157	79	156
Earnings applicable to Morgan Stanley common shareholders	\$ 1,055	\$ 1,425	\$ 1,518	\$ 1,510
Earnings (loss) per basic common share ⁴ :				
Income from continuing operations	\$ 0.56	\$ 0.77	\$ 0.82	\$ 0.84
Income (loss) from discontinued operations	—	(0.01)	0.01	—
Earnings per basic common share	\$ 0.56	\$ 0.76	\$ 0.83	\$ 0.84
Earnings (loss) per diluted common share ⁴ :				
Income from continuing operations	\$ 0.55	\$ 0.75	\$ 0.80	\$ 0.81
Income (loss) from discontinued operations	—	—	0.01	—
Earnings per diluted common share	\$ 0.55	\$ 0.75	\$ 0.81	\$ 0.81
Dividends declared per common share	\$ 0.15	\$ 0.15	\$ 0.20	\$ 0.20
Book value per common share	\$ 35.34	\$ 36.29	\$ 37.11	\$ 36.99

1. For information on recurring-type discrete tax benefits related to the adoption of the accounting update *Improvements to Employee Share-Based Payment Accounting*, see the following table and Note 2.
2. The fourth quarter of 2017 included an intermittent net discrete tax provision of approximately \$1.2 billion, primarily related to the remeasurement of certain net deferred tax assets using the lower corporate tax rate as a result of the enactment of the Tax Act. The fourth quarter of 2017 and 2016 also included net intermittent discrete tax benefits of \$168 million and \$135 million, respectively, primarily related to the remeasurement of reserves and related interest due to new information regarding the status of multi-year IRS tax examinations. Income tax consequences arising from conversion of employee share-based awards are excluded from intermittent net discrete tax provisions (benefits), as we anticipate conversion activity each year (see Notes 2 and 20).
3. The fourth quarter of 2017 included a \$53 million impairment of the Investment Management business segment's equity method investment in a third-party asset manager.

4. The sum 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.
5. 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.

Employee Share-Based Awards

<i>\$ in millions</i>	2017 Quarter			
	First	Second	Third	Fourth
Discrete tax benefit	\$ 112	\$ 16	\$ 11	\$ 16

24. Subsequent Events

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

Financial Data Supplement (Unaudited)
Average Balances and Interest Rates and Net Interest Income

Morgan Stanley

\$ in millions	2017			2016			2015			
	Average Daily Balance	Interest	Average Rate	Average Daily Balance	Interest	Average Rate	Average Daily Balance	Interest	Average Rate	
Interest earning assets¹										
Investment securities ²	\$ 76,746	\$ 1,334	1.7%	\$ 78,562	\$ 1,142	1.5%	\$ 67,993	\$ 876	1.3%	
Loans ²	98,727	3,298	3.3	89,875	2,724	3.0	75,110	2,163	2.9	
Securities purchased under agreements to resell and Securities borrowed ³ :										
U.S.	125,453	606	0.5	144,744	(172)	(0.1)	172,481	(618)	(0.4)	
Non-U.S.	95,478	(437)	(0.5)	86,622	(202)	(0.2)	80,490	58	0.1	
Trading assets, net of Trading liabilities ⁴ :										
U.S.	59,335	1,876	3.2	49,746	1,894	3.8	41,934	1,874	4.5	
Non-U.S.	4,326	153	3.5	12,843	237	1.8	17,267	388	2.2	
Customer receivables and Other ⁵ :										
U.S.	68,760	1,614	2.3	72,725	1,080	1.5	79,418	934	1.2	
Non-U.S.	27,801	553	2.0	23,874	313	1.3	27,955	160	0.6	
Total	\$ 556,626	\$ 8,997	1.6%	\$ 558,991	\$ 7,016	1.3%	\$ 562,648	\$ 5,835	1.0%	
Interest bearing liabilities¹										
Deposits ²	\$ 151,442	\$ 187	0.1%	\$ 155,143	\$ 83	0.1%	\$ 141,502	\$ 78	0.1%	
Borrowings ^{2, 6}	184,453	4,285	2.3	163,647	3,606	2.2	159,781	3,497	2.2	
Securities sold under agreements to repurchase and Securities loaned ⁷ :										
U.S.	30,866	900	2.9	32,359	555	1.7	51,115	437	0.9	
Non-U.S.	39,396	337	0.9	31,491	422	1.3	34,306	587	1.7	
Customer payables and Other ⁸ :										
U.S.	128,274	(213)	(0.2)	114,606	(1,187)	(1.0)	120,100	(1,529)	(1.3)	
Non-U.S.	65,496	201	0.3	76,096	(161)	(0.2)	67,663	(328)	(0.5)	
Total	\$ 599,927	\$ 5,697	0.9%	\$ 573,342	\$ 3,318	0.6%	\$ 574,467	\$ 2,742	0.5%	
Net interest income and net interest rate spread										
		\$ 3,300	0.7%		\$ 3,698	0.7%		\$ 3,093	0.5%	

1. Prior period amounts have been revised to conform to the current presentation.
2. Amounts include primarily U.S. balances.
3. Includes fees paid on Securities borrowed.
4. Trading assets, net of Trading liabilities exclude non-interest earning assets and non-interest bearing liabilities, such as equity securities.
5. Includes interest from Customer receivables, Restricted cash and Interest bearing deposits with banks.
6. 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 financial statements).
7. Includes fees received on Securities loaned.
8. Includes fees received from prime brokerage customers for stock loan transactions incurred to cover customers' short positions.

Financial Data Supplement (Unaudited)
Rate/Volume Analysis

Morgan Stanley

Effect of Volume and Rate Changes on Net Interest Income

<i>\$ in millions</i>	2017 versus 2016			2016 versus 2015		
	Increase (Decrease) Due to Change in:		Net Change	Increase (Decrease) Due to Change in:		Net Change
	Volume	Rate		Volume	Rate	
Interest earning assets						
Investment securities	\$ (26)	\$ 218	\$ 192	\$ 136	\$ 130	\$ 266
Loans	268	306	574	426	135	561
Securities purchased under agreements to resell and Securities borrowed:						
U.S.	23	755	778	99	347	446
Non-U.S.	(21)	(214)	(235)	4	(264)	(260)
Trading assets, net of Trading liabilities:						
U.S.	365	(383)	(18)	349	(329)	20
Non-U.S.	(157)	73	(84)	(99)	(52)	(151)
Customer receivables and Other:						
U.S.	(59)	593	534	(79)	225	146
Non-U.S.	51	189	240	(23)	176	153
Change in interest income	\$ 444	\$ 1,537	\$ 1,981	\$ 813	\$ 368	\$ 1,181
Interest bearing liabilities						
Deposits	\$ (2)	\$ 106	\$ 104	\$ 8	\$ (3)	\$ 5
Borrowings	458	221	679	85	24	109
Securities sold under agreements to repurchase and Securities loaned:						
U.S.	(26)	371	345	(160)	278	118
Non-U.S.	106	(191)	(85)	(48)	(117)	(165)
Customer payables and Other:						
U.S.	(142)	1,116	974	70	272	342
Non-U.S.	22	340	362	(41)	208	167
Change in interest expense	\$ 416	\$ 1,963	\$ 2,379	\$ (86)	\$ 662	\$ 576
Change in net interest income	\$ 28	\$ (426)	\$ (398)	\$ 899	\$ (294)	\$ 605

Deposits

\$ in millions	Average Daily Deposits					
	2017		2016		2015	
	Average Amount	Average Rate	Average Amount	Average Rate	Average Amount	Average Rate
Deposits¹:						
Savings	\$ 144,870	0.1%	\$ 153,387	—%	\$ 139,169	0.1%
Time	6,572	1.6%	1,756	2.4%	2,333	0.6%
Total	\$ 151,442	0.1%	\$ 155,143	0.1%	\$ 141,502	0.6%

1. The Firm's deposits were primarily held in U.S. offices.

Ratios

	2017	2016	2015
Net income to average assets	0.7%	0.7%	0.7%
ROE ¹	8.0%	8.0%	8.5%
Return on total equity ²	7.8%	7.8%	8.3%
Dividend payout ratio ³	29.3%	24.0%	19.0%
Total average common equity to average assets	8.2%	8.5%	8.0%
Total average equity to average assets	9.2%	9.4%	8.9%

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 earnings per diluted share.

Securities Sold under Agreements to Repurchase and Securities Loaned

\$ in millions	2017	2016 ¹	2015 ¹
Period-end balance	\$ 70,016	\$ 70,472	\$ 56,050
Average balance ²	70,262	63,850	85,421
Maximum balance at any month-end	77,063	72,154	111,019
Weighted average interest rate during the period ³	1.8%	1.5%	1.2%
Weighted average interest rate on period-end balance ³	1.5%	0.6%	1.3%

1. Prior period amounts have been revised to conform to the current presentation.
2. The Firm calculated its average balances based upon daily amounts.
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 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 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.”

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, 2017, December 31, 2016 and December 31, 2015, respectively, in accordance with the FFIEC guidelines:

\$ in millions	At December 31, 2017				
	Banks	Governments	Non-banking Financial Institutions	Other	Total
	Country:				
Japan	\$ 12,239	\$ 18,103	\$ 18,125	\$ 10,874	\$ 59,341
U.K.	4,870	6,741	24,731	13,992	50,334
France	3,401	900	12,781	8,445	25,527
Cayman Islands	17	1	16,041	4,999	21,058
Ireland	391	52	8,577	4,601	13,621
Germany	1,045	1,191	6,286	3,765	12,287
Canada	4,225	621	3,072	3,695	11,613
Brazil	2,761	3,470	315	3,809	10,355
China	902	1,713	940	5,852	9,407
South Korea	447	2,871	1,020	4,922	9,260
Netherlands	313	982	2,446	4,377	8,118

\$ in millions	At December 31, 2016 ¹				
	Banks	Governments	Non-banking Financial Institutions	Other	Total
	Country:				
Japan	\$ 12,465	\$ 12,388	\$ 32,380	\$ 9,264	\$ 66,497
U.K.	3,589	4,794	22,456	11,637	42,476
France	3,069	6,264	15,917	7,623	32,873
Cayman Islands	5	—	16,272	3,124	19,401
Germany	1,609	3,828	4,983	3,524	13,944
Ireland	478	160	6,998	4,504	12,140
Canada	3,503	838	2,570	3,419	10,330
Brazil	1,682	4,675	159	2,236	8,752
South Korea	290	2,563	996	4,233	8,082

\$ in millions	At December 31, 2015 ¹				
	Banks	Governments	Non-banking Financial Institutions	Other	Total
	Country:				
U.K.	\$ 5,294	\$ 2,333	\$ 26,409	\$ 12,114	\$ 46,150
Japan	6,192	12,736	16,801	7,982	43,711
France	2,798	928	12,711	6,484	22,921
Cayman Islands	40	—	14,848	3,675	18,563
Germany	1,363	4,866	4,130	4,664	15,023
Ireland	195	399	6,620	3,615	10,829
Singapore	1,894	5,810	339	313	8,356
China	2,061	1,497	1,088	3,187	7,833
Canada	3,116	871	1,549	2,175	7,711

1. Prior period amounts have been revised to conform to the current presentation.

For cross-border exposure including derivative contracts that exceeds 0.75% but does not exceed 1% of the Firm's consolidated assets, Australia, European Central Bank, Luxembourg and India had a total cross-border exposure of \$29,257 million at December 31, 2017; Singapore and Switzerland had a total cross-border exposure of \$14,626 million at December 31, 2016; and Brazil, Switzerland, South Korea and Spain had a total cross-border exposure of \$25,470 million at December 31, 2015.

Glossary of Common Acronyms

Morgan Stanley

2017 Form 10-K—Annual Report on Form 10-K for year ended December 31, 2017 filed with the SEC

ABS—Asset-backed securities

AFS—Available-for-sale

AML—Anti-money laundering

AOCI—Accumulated other comprehensive income (loss)

AUM—Assets under management or supervision

BHC—Bank holding company

bps—Basis points; one basis point equals 1/100th of 1%

CCAR—Comprehensive Capital Analysis and Review

CCyB—Countercyclical capital buffer

CDO—Collateralized debt obligations, including collateralized loan obligations

CDS—Credit default swap

CECL—Current expected credit loss

CFTC—U.S. Commodity Futures Trading Commission

CLN—Credit-linked note

CLO—Collateralized loan obligations

CMBS—Commercial mortgage-backed securities

CMO—Collateralized mortgage obligations

CVA—Credit valuation adjustment

DVA—Debt valuation adjustment

EBITDA—Earnings before interest, taxes, depreciation and amortization

ELN—Equity-linked note

EMEA—Europe, Middle East and Africa

EPA—Environmental Protection Agency

EPS—Earnings per common share

ERISA—Employee Retirement Income Security Act of 1974

ERM—Enterprise risk management

E.U.—European Union

FCA—Financial Conduct Authority

FDIC—Federal Deposit Insurance Corporation

FFELP—Family Education Loan Program

FFIEC—Federal Financial Institutions Examination Council

FHC—Financial holding company

FICO—Fair Isaac Corporation

FINRA—Financial Industry Regulatory Authority, Inc.

FVA—Funding valuation adjustment

GLR—Global liquidity reserve

G-SIB—Global systemically important bank

HELOC—Home equity lines of credit

HQLA—High-quality liquid assets

HTM—Held-to-maturity

I/E—Intersegment eliminations

IHC—Intermediate holding company

IM—Investment Management

IRS—Internal Revenue Service

IS—Institutional Securities

LCR—Liquidity coverage ratio, as adopted by the U.S. banking agencies

LIBOR—London Interbank Offered Rate

M&A—Merger, acquisition and restructuring transaction

MiFID II—Markets in Financial Instrument Regulation and a revision of the Markets in Financial Instruments Directive

MSBNA—Morgan Stanley Bank, N.A.

MS&Co.—Morgan Stanley & Co. LLC

MSIP—Morgan Stanley & Co. International plc

MSMS—Morgan Stanley MUFG Securities Co., Ltd.

MSPBNA—Morgan Stanley Private Bank, National Association

MSSB LLC—Morgan Stanley Smith Barney LLC

Glossary of Common Acronyms

Morgan Stanley

MUFG—Mitsubishi UFJ Financial Group, Inc.

MUMSS—Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

MWh—Megawatt hour

N/A—Not Applicable

NAV—Net asset value

NFA—National Futures Association

N/M—Not Meaningful

Non-GAAP—Non-generally accepted accounting principles

NSFR—Net stable funding ratio, as proposed by the U.S. banking agencies

OCC—Office of the Comptroller of the Currency

OCI—Other comprehensive income (loss)

OFAC—Office of Foreign Assets Control

OIS—Overnight indexed swap

OTC—Over-the-counter

OTTI—Other-than-temporary impairment

PRA—Prudential Regulation Authority

PSU—Performance-based stock unit

QFC—Qualified financial contracts

RMBS—Residential mortgage-backed securities

ROE—Return on average common equity

ROTCE—Return on average tangible common equity

RSU—Restricted stock unit

RWA—Risk-weighted asset

SEC—U.S. Securities and Exchange Commission

SLR—Supplementary leverage ratio

S&P—Standard & Poor's

S&P 500—Standard & Poor's 500 Index

SPE—Special purpose entity

SPOE—Single point of entry

TDR—Troubled debt restructuring

TLAC—Total loss-absorbing capacity

U.K.—United Kingdom

UPB—Unpaid principal balance

U.S.—United States of America

U.S. DOL—U.S. Department of Labor

U.S. GAAP—Accounting principles generally accepted in the United States of America

VaR—Value-at-Risk

VAT—Value-added tax

VIE—Variable interest entities

WACC—Implied weighted average cost of capital

WM—Wealth Management

Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

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, 2017. 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, 2017.

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 Shareholders and Board of Directors of Morgan Stanley:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Morgan Stanley and subsidiaries (the “Firm”) as of December 31, 2017, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements of the Firm as of and for the year ended December 31, 2017 and our report dated February 27, 2018 expressed an unqualified opinion on those financial statements.

Basis for Opinion

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 are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. 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.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process 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. 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 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.

/s/ Deloitte & Touche LLP
New York, New York
February 27, 2018

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, 2017 that materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

Other Information

On February 26, 2018 the Compensation, Management Development and Succession Committee of the Board of Directors ("CMDS Committee") of Morgan Stanley approved amendments to each of the 2015, 2016 and 2017 Long-Term Incentive Program Award Certificates ("Award Certificates") covering awards of performance stock units granted under the Morgan Stanley Equity Incentive Compensation Plan to named executive officers of the Firm. Under the terms of the Award Certificates, participants are entitled to an award that will vest and convert to shares of the Firm's common stock based on achievement of predetermined performance goals with respect to return on equity ("MS ROE," as defined in the Award Certificates) and total stockholder return ("Relative TSR," as defined in the Award Certificates), in each case over a three-year performance period. The CMDS Committee amended each Award Certificate to include a new section entitled "Equitable Adjustments" which provides that, if the Committee determines, in its sole discretion, that any of the performance measures, as set forth in the Award Certificate, are no longer appropriate, including due to any unusual or non-recurring event affecting the particular performance measure or any change in applicable tax, legal or regulatory requirements or accounting methods, practices or policies, the CMDS Committee will equitably adjust the calculation of such performance measures to maintain the intended economics and to carry out the intent of the original terms of applicable award.

On February 26, 2018 the CMDS Committee further determined to use its authority under the Equitable Adjustment provision of the amended Award Certificates, to make equitable adjustments to the calculation of MS ROE for the Firm's 2017 fiscal year with respect to awards granted under each Award Certificate to account for the impact of the enactment of tax reform under the Tax Cuts and Jobs Act. As a result, the Firm's named executive officers will receive a payout of performance stock units under the 2015 Long-Term Incentive Program Award Certificates based on a performance multiplier of approximately 1.03.

This description of the Award Certificates is qualified in its entirety by reference to the full text of the Award Certificates, a form of which is filed hereto as Exhibit 10.35.

Directors, Executive Officers and Corporate Governance

Information relating to the Firm's directors and nominees in the Firm's definitive proxy statement for its 2018 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 the "Business" section 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.

Executive Compensation

Information relating to director and executive officer compensation in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Equity Compensation Plan Information

The following table provides information about outstanding awards and shares of common stock available for future awards under all of Morgan Stanley's equity compensation plans as of December 31, 2017. Morgan Stanley has not made any grants of common stock outside of its equity compensation plans.

<i>plan category</i>	(a)	(b)	(c)
	Number of securities to be issued upon exercise of outstanding options, warrants and rights ¹	Weighted-average exercise price of outstanding options, warrants and rights ²	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	95,253,190	\$ —	145,511,986 ³
Equity compensation plans not approved by security holders	5,880	—	— ⁴
Total	95,259,070	\$ —	145,511,986

1. Includes outstanding equity awards, which consist of restricted stock units and performance stock units. The number of outstanding performance stock units is based on the target number of units granted to senior executives.
2. Restricted stock units and performance stock units do not provide for an exercise price.
3. Includes the following:
 - (a) 39,182,870 shares available under the Morgan Stanley Employee Stock Purchase Plan ("ESPP"). Pursuant to this plan, which is qualified under Section 423 of the Internal Revenue Code, eligible employees were permitted to purchase shares of common stock at a discount to market price through regular payroll deduction. The CMDS Committee approved the discontinuation of the ESPP, effective June 1, 2009, such that no further contributions to the plan will be permitted following such date, until such time as the CMDS Committee determines to recommence contributions under the plan.
 - (b) 89,944,961 shares available under the Equity Incentive Compensation Plan. Awards may consist of stock options, stock appreciation rights, restricted stock, restricted stock units to be settled by the delivery of shares of common stock (or the value thereof), performance-based units, other awards that are valued by reference to or otherwise based on the fair market value of common stock, and other equity-based or equity-related awards approved by the CMDS Committee.
 - (c) 14,869,924 shares available under the Employee Equity Accumulation Plan, which includes 733,757 shares available for awards of restricted stock and restricted stock units. Awards may consist of stock options, stock appreciation rights, restricted stock, restricted stock units to be settled by the delivery of shares of common stock (or the value thereof), other awards that are valued by reference to or otherwise based on the fair market value of common stock, and other equity-based or equity-related awards approved by the CMDS Committee.
 - (d) 355,243 shares available under the Tax Deferred Equity Participation Plan. Awards consist of restricted stock units, which are settled by the delivery of shares of common stock.
 - (e) 1,158,988 shares available under the Directors' Equity Capital Accumulation Plan. This plan provides for periodic awards of shares of common stock and stock units to non-employee directors and also allows non-employee directors to defer the cash fees they earn for services as a director in the form of stock units.
4. As of December 31, 2017, no shares remained available for future issuance under the Morgan Stanley 2009 Replacement Equity Incentive Compensation Plan for Morgan Stanley Smith Barney Employees ("REICP"), which was terminated effective December 31, 2012. However, awards remained outstanding under the REICP as of December 31, 2017. The REICP was adopted in connection with the Morgan Stanley Wealth Management joint venture and without stockholder approval pursuant to the employment inducement award exception under the NYSE Corporate Governance Listing Standards. The equity awards granted pursuant to the REICP were limited to awards to induce certain Citigroup Inc. employees to join the new Morgan Stanley Wealth Management joint venture by replacing the value of Citigroup awards that were forfeited in connection with the employees' transfer of employment to Wealth Management. Awards under the REICP were authorized in the form of restricted stock units, stock appreciation rights, stock options and restricted stock, and other forms of stock-based awards.

The foregoing description does not purport to be complete and is qualified in its entirety by reference to the REICP plan document, which, along with all plans under which awards were available for grant in 2017, is included as an exhibit to the 2017 Form 10-K.

Other information relating to security ownership of certain beneficial owners and management is set forth under the caption "Beneficial Ownership of Company Common Stock" in Morgan Stanley's Proxy Statement and such information is incorporated by reference herein.

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.

Principal Accountant Fees and Services

Information regarding principal accountant fees and services in Morgan Stanley's Proxy Statement is incorporated by reference herein.

Exhibits and Financial Statement Schedules

Documents filed as part of this report

- The financial statements required to be filed in this Annual Report on Form 10-K are included in the section titled "Financial Statements and Supplementary Data."
- An exhibit index has been filed as part of this report beginning on page E-1 and is incorporated by reference herein.

Form 10-K Summary

None.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

EXHIBITS TO FORM 10-K

For the year ended December 31, 2017
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	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).
4.2	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).
4.3	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).
4.4	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)).
4.5	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).

(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
4.6	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).
4.7	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).
4.8	Depository Receipt for Depository Shares, representing Floating Rate Non-Cumulative Preferred Stock, Series A (included in Exhibit 4.7 hereto).
4.9	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).
4.10	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E (included in Exhibit 4.9 hereto).
4.11	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).
4.12	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F (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 G Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated April 28, 2014).
4.14	Depository Receipt for Depository Shares, representing 6.625% Non-Cumulative Preferred Stock, Series G (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 H Preferred stock described therein (Exhibit 4.6 to Morgan Stanley's Current Report on Form 8-K dated April 29, 2014).
4.16	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series H (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 I Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated September 17, 2014).
4.18	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I (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 J Preferred Stock described therein (Exhibit 4.3 to Morgan Stanley's Current Report on Form 8-K dated March 18, 2015).
4.20	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series J (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 K Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Current Report on Form 8-A dated January 30, 2017).
4.22	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K (included in Exhibit 4.21 hereto).

Exhibit No.	Description
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), Amendment (Exhibit 10.5 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2015) and Amendment (Exhibit 10.4 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2016).
10.4†*	Amendment to Morgan Stanley 401(k) Plan, dated as of December 12, 2017.
10.5†*	Amendment to Morgan Stanley 401(k) Plan, dated as of January 17, 2018.
10.6†	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).
10.7†	Directors' Equity Capital Accumulation Plan as amended and restated as of March 20, 2017 (Exhibit 10.2 to Morgan Stanley's Current Report on Form 8-K dated May 22, 2017).
10.8†	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).
10.9†	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).
10.10†	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).
10.11†	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).
10.12†	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).
10.14†	Morgan Stanley UK Share Ownership Plan (Exhibit 4.1 to Morgan Stanley's Registration Statement on Form S-8 (No. 333-146954)).

Exhibit No.	Description
10.15†	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).
10.16†	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).
10.17†	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).
10.18†	Form of Restrictive Covenant Agreement (Exhibit 10 to Morgan Stanley's Current Report on Form 8-K dated November 22, 2005).
10.19†	Morgan Stanley Performance Formula and Provisions (Exhibit 10.2 to Morgan Stanley's Current Report on Form 8-K dated May 14, 2013).
10.20†	Equity Incentive Compensation Plan, as amended and restated as of March 30, 2017 (Exhibit 10.1 to Morgan Stanley's Current Report on Form 8-K dated May 22, 2017).
10.21†	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).
10.22†	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).
10.23†	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).
10.24†	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).
10.25†	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).
10.26†	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)).
10.27†	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).
10.28†	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).
10.29†	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).
10.30†	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).
10.31†	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).
10.32†	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).
10.33†*	Form of Award Certificate for Discretionary Retention Awards of Stock Units.
10.34†*	Form of Award Certificate for Discretionary Retention Awards under the Morgan Stanley Compensation Incentive Plan.

Exhibit No.	Description
10.35†*	Form of Award Certificate for Long-Term Incentive Program Awards.
10.36†	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).
10.37†	Agreement between Morgan Stanley and James A. Rosenthal, dated January 17, 2017 (Exhibit 10.41 to Morgan Stanley's Annual Report on Form 10-K for the year ended December 31, 2016).
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, 2017, December 31, 2016, and December 31, 2015, (ii) the Consolidated Comprehensive Income Statements—Twelve Months Ended December 31, 2017, December 31, 2016 and December 31, 2015, (iii) the Consolidated Balance Sheets—December 31, 2017 and December 31, 2016, (iv) the Consolidated Statements of Changes in Total Equity—Twelve Months Ended December 31, 2017, December 31, 2016 and December 31, 2015, (v) the Consolidated Cash Flow Statements—Twelve Months Ended December 31, 2017, December 31, 2016 and December 31, 2015, 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).

Note: Other 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.

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, 2018.

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, 2018.

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/ ELIZABETH CORLEY (Elizabeth Corley)	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/ JAMI MISCIK (Jami Miscik)	Director

Signature	Title
<hr/> <i>/s/</i> DENNIS M. NALLY <hr/> (Dennis M. Nally)	Director
<hr/> <i>/s/</i> HUTHAM S. OLAYAN <hr/> (Hutham S. Olayan)	Director
<hr/> <i>/s/</i> JAMES W. OWENS <hr/> (James W. Owens)	Director
<hr/> <i>/s/</i> RYOSUKE TAMAKOSHI <hr/> (Ryosuke Tamakoshi)	Director
<hr/> <i>/s/</i> PERRY M. TRAQUINA <hr/> (Perry M. Traquina)	Director
<hr/> <i>/s/</i> RAYFORD WILKINS, JR. <hr/> (Rayford Wilkins, Jr.)	Director