STATE STREET CORP
Form 10-K
February 26, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
Form 10-K
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017
OR
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File No. 001-07511
STATE STREET CORPORATION
(Exact name of registrant as specified in its charter)

Massachusetts	04-2456637
(State or other jurisdiction of incorporation)	(I.R.S. Employer Identification No.)
One Lincoln Street Boston, Massachusetts	02111
(Address of principal executive office)	(Zip Code)

617-786-3000
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

(Title of Each Class)	(Name of each exchange on which registered)
Common Stock, $1 par value per share	New York Stock Exchange
Depositary Shares, each representing a 1/4,000th ownership interest in a share of Non-Cumulative Perpetual Preferred Stock, Series C, without par value per share	New York Stock Exchange
Depositary Shares, each representing a 1/4,000th ownership interest in a share of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series D, without par value per share	New York Stock Exchange
Depositary Shares, each representing a 1/4,000th ownership interest in a share of Non-Cumulative Perpetual Preferred Stock, Series E, without par value per share	New York Stock Exchange
Depositary Shares, each representing a 1/4,000th ownership interest in a share of Non-Cumulative Perpetual Preferred Stock, Series G, without par value per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§

232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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. x

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

Large accelerated filer x	Accelerated filer ¨	Non-accelerated filer ¨	Smaller reporting company ¨
Emerging growth company ¨		(Do not check if a smaller reporting 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 the registrant is a shell company (as defined in Rule 12b-2 of the Act). ¨

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the per share price ($89.73) at which the common equity was last sold as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2017) was approximately $33.38 billion.

The number of shares of the registrant's common stock outstanding as of January 31, 2018 was 367,653,199.

Portions of the following documents are incorporated by reference into Parts of this Report on Form 10-K, to the extent noted in such Parts, as indicated below:

(1) The registrant's definitive Proxy Statement for the 2018 Annual Meeting of Shareholders to be filed pursuant to Regulation 14A on or before April 30, 2018 (Part III).

STATE STREET CORPORATION
ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED
December 31, 2017

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PART I
ITEM 1.BUSINESS
GENERAL
State Street Corporation, referred to as the Parent Company, is a financial holding company organized in 1969 under the laws of the Commonwealth of Massachusetts. Our executive offices are located at One Lincoln Street, Boston, Massachusetts 02111 (telephone (617) 786-3000). For purposes of this Form 10-K, unless the context requires otherwise, references to "State Street," "we," "us," "our" or similar terms mean State Street Corporation and its subsidiaries on a consolidated basis. The Parent Company is a source of financial and managerial strength to our subsidiaries.
Through our subsidiaries, including our principal banking subsidiary, State Street Bank and Trust Company, referred to as State Street Bank, we provide a broad range of financial products and services to institutional investors worldwide, with \$33.12 trillion of AUCA and \$2.78 trillion of AUM as of December 31, 2017.
As of December 31, 2017, we had consolidated total assets of \$238.43 billion, consolidated total deposits of \$184.90 billion, consolidated total shareholders' equity of \$22.32 billion and 36,643 employees. We operate in more than 100 geographic markets worldwide, including in the U.S., Canada, Europe, the Middle East and Asia.
On the "Investor Relations" section of our corporate website at www.statestreet.com, we make available, free of charge, all reports we electronically file with, or furnish to, the SEC including our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as any amendments to those reports, as soon as reasonably practicable after those documents have been filed with, or furnished to, the SEC. These documents are also accessible on the SEC's website at www.sec.gov. We have included the website addresses of State Street and the SEC in this report as inactive textual references only. Information on those websites is not part of this Form 10-K.
We have Corporate Governance Guidelines, as well as written charters for the Examining and Audit Committee, the Executive Committee, the Executive Compensation Committee, the Nominating and Corporate Governance Committee, the Risk Committee and the Technology Committee of our Board of Directors, or Board, and a Code of Ethics for senior financial officers, a Standard of Conduct for Directors and a Standard of Conduct for our employees. Each of these documents is posted on the "Investor Relations" section of our website under "Corporate Governance."

We provide additional disclosures required by applicable bank regulatory standards, including supplemental qualitative and quantitative information with respect to regulatory capital (including market risk associated with our trading activities) and the liquidity coverage ratio, summary results of semi-annual State Street-run stress tests which we conduct under the Dodd-Frank Act and resolution plan disclosures required under the Dodd-Frank Act. These additional disclosures are available on the "Investor Relations" section of our website under "Filings and Reports."
We use acronyms and other defined terms for certain business terms and abbreviations, as defined on the acronyms list and glossary included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.
BUSINESS DESCRIPTION
Overview
We conduct our business primarily through State Street Bank, which traces its beginnings to the founding of the Union Bank in 1792. State Street Bank's current charter was authorized by a special Act of the Massachusetts Legislature in 1891, and its present name was adopted in 1960. State Street Bank operates as a specialized bank, referred to as a trust or custody bank, that services and manages assets on behalf of its institutional clients.
Our clients include mutual funds, collective investment funds and other investment pools, corporate and public retirement plans, insurance companies, foundations, endowments and investment managers.
Additional Information
Additional information about our business activities is provided in the sections that follow. For information about our management of credit and counterparty risk; liquidity risk; operational risk; market risk associated with our trading activities; market risk associated with our non-trading, or asset-and-liability management, activities, primarily composed of interest-rate risk; and capital, as well as other risks inherent in our businesses, refer to "Risk Factors" included under Item 1A, the "Financial Condition" section of Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, or Management's Discussion and Analysis, and our consolidated financial statements and accompanying notes included under Item 8, Financial Statements and Supplementary Data, of

this Form 10-K.

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LINES OF BUSINESS

We have two lines of business: Investment Servicing and Investment Management.

Investment Servicing

Our Investment Servicing line of business performs core custody and related value-added functions, such as providing institutional investors with clearing, settlement and payment services. Our financial services and products allow our large institutional investor clients to execute financial transactions on a daily basis in markets across the globe. As most institutional investors cannot economically or efficiently build their own technology and operational processes necessary to facilitate their global securities settlement needs, our role as a global trust and custody bank is generally to aid our clients to efficiently perform services associated with the clearing, settlement and execution of securities transactions and related payments.

Our investment servicing products and services include: custody; product and participant level accounting; daily pricing and administration; master trust and master custody; depotbank services (a fund oversight role created by regulation); record-keeping; cash management; foreign exchange, brokerage and other trading services; securities finance; our enhanced custody product, which integrates principal securities lending and custody; deposit and short-term investment facilities; loans and lease financing; investment manager and alternative investment manager operations outsourcing; performance, risk and compliance analytics; and financial data management to support institutional investors.

We provide some or all of these integrated products and services to clients in the U.S. and in many other markets, including, among others, Australia, Cayman Islands, France, Germany, Ireland, Italy, Japan, Luxembourg and the U.K. As of December 31, 2017, we serviced AUCA of approximately $24.42 trillion in the Americas, approximately $7.03 trillion in Europe and the Middle East and approximately $1.67 trillion in the Asia-Pacific region.

Investment Management

Our Investment Management line of business, through SSGA, provides a broad array of investment management, investment research and investment advisory services to corporations, public funds and other sophisticated investors. SSGA offers passive and active asset management strategies across equity, fixed-income, alternative, multi-asset solutions (including OCIO) and cash asset classes. Products are distributed directly and through intermediaries using a variety of investment vehicles, including ETFs, such as the SPDR® ETF brand. As of December 31, 2017, SSGA had AUM of approximately $2.78 trillion.

Additional information about our lines of business is provided under “Line of Business Information” included under Item 7, Management's Discussion and Analysis, and in Note 24 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K. Additional information about our non-U.S. activities is provided in Note 25 to the consolidated financial statements included under Item 8 of this Form 10-K.

COMPETITION

We operate in a highly competitive environment and face global competition in all areas of our business. Our competitors include a broad range of financial institutions and servicing companies, including other custodial banks, deposit-taking institutions, investment management firms, insurance companies, mutual funds, broker/dealers, investment banks, benefits consultants, investment analytic businesses, business service and software companies and information services firms. As our businesses grow and markets evolve, we may encounter increasing and new forms of competition around the world.

We believe that many key factors drive competition in the markets for our business. For Investment Servicing, quality of service, technological expertise, economies of scale, quality and scope of services, sales and marketing, required levels of capital and price drive competition, and are critical to our servicing business. For Investment Management, key competitive factors include expertise, experience, availability of related service offerings, quality of service and performance and price.

Our competitive success may depend on our ability to develop and market new and innovative services, to adopt or develop new technologies, to bring new services to market in a timely fashion at competitive prices, to continue to expand our relationships with existing clients, and to attract new clients.

We are a systemically important financial institution and are subject to extensive regulation and supervision with respect to our operations and activities. Not all of our competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of our competitors may not be subject to the same limitations, requirements and standards with respect to their operations and activities. See "Supervision and Regulation" in this Item for more information.

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SUPERVISION AND REGULATION

State Street is registered with the Federal Reserve as a bank holding company pursuant to the Bank Holding Company Act of 1956. The Bank Holding Company Act generally limits the activities in which bank holding companies and their non-banking subsidiaries may engage to managing or controlling banks and to a range of activities that are considered to be closely related to banking. Bank holding companies that have elected to be treated as financial holding companies, such as the Parent Company, may engage in a broader range of activities considered to be "financial in nature." These limits also apply to non-banking entities that we are deemed to “control” for purposes of the Bank Holding Company Act, which may include companies of which we own or control more than 5% of a class of voting shares. The Federal Reserve may order a bank holding company to terminate any activity, or its ownership or control of a non-banking subsidiary, if the Federal Reserve finds that the activity, ownership or control constitutes a serious risk to the financial safety, soundness or stability of a banking subsidiary or is inconsistent with sound banking principles or statutory purposes. The Bank Holding Company Act also requires a bank holding company to obtain prior approval of the Federal Reserve before it acquires substantially all the assets of any bank, or ownership or control of more than 5% of the voting shares of any bank.

The Parent Company has elected to be treated as a financial holding company and, as such, may engage in a broader range of non-banking activities than permitted for bank holding companies and their subsidiaries that have not elected to become financial holding companies. Financial holding companies may engage directly or indirectly in activities that are defined by the Federal Reserve to be financial in nature, either de novo or by acquisition, provided that the financial holding company gives the Federal Reserve after-the-fact notice of the new activities. Activities defined to be financial in nature include, but are not limited to, the following: providing financial or investment advice; underwriting; dealing in or making markets in securities; making merchant banking investments, subject to significant limitations; and any activities previously found by the Federal Reserve to be closely related to banking. In order to maintain our status as a financial holding company, we and each of our U.S. depository institution subsidiaries must be well capitalized and well managed, as defined in applicable regulations and determined in part by the results of regulatory examinations, and must comply with Community Reinvestment Act obligations. Failure to maintain these standards may ultimately permit the Federal Reserve to take enforcement actions against us and restrict our ability to engage in activities defined to be financial in nature. Currently,

under the Bank Holding Company Act, we may not be able to engage in new activities or acquire shares or control of other businesses.

In response to the financial crisis, as well as other factors such as technological and market changes, both the scope of the laws and regulations and the intensity of the supervision to which our business is subject have increased in recent years. Regulatory enforcement and fines have also increased across the banking and financial services sector. Many of these changes have occurred as a result of the Dodd-Frank Act and its implementing regulations, most of which are now in place. The U.S. President has issued an executive order that sets forth principles for the reform of the federal financial regulatory framework, and the Republican majority in Congress has also suggested an agenda for financial regulatory reform. The implementation of any such reforms, or if implemented whether they would be beneficial to State Street, is uncertain. Irrespective of any regulatory change, we expect that our business will remain subject to extensive regulation and supervision.

In addition, increased regulatory requirements have been and are being implemented internationally with respect to financial institutions, including, but not limited to, the implementation of the Basel III final rule (refer to “Regulatory Capital Adequacy and Liquidity Standards” below in this “Supervision and Regulation” section and under "Capital" in “Financial Condition” included under Item 7, Management's Discussion and Analysis, of this Form 10-K for a discussion of Basel III), the Alternative Investment Fund Managers Directive (AIFMD), the Bank Recovery and Resolution Directive (BRRD), the European Market Infrastructure Regulation (EMIR), the Undertakings for Collective Investment in Transferable Securities (UCITS) directives, the Markets in Financial Instruments Directive II (MiFID II) and the Markets in Financial Instruments Regulation (MiFIR) (the majority of the provisions of MiFID II and MiFIR will apply from January 3, 2018) and the E.U. General Data Protection Regulation (GDPR).

Many aspects of our business are subject to regulation by other U.S. federal and state governmental and regulatory agencies and self-regulatory organizations (including securities exchanges), and by non-U.S. governmental and regulatory agencies and self-regulatory organizations. Some aspects of our public disclosure, corporate governance principles and internal control systems are subject to SOX, the Dodd-Frank Act and regulations and rules of the SEC and the NYSE.

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Regulatory Capital Adequacy and Liquidity Standards
Basel III Final Rule
We are subject to the Basel III framework in the U.S. Provisions of the Basel III final rule become effective under a transition timetable which began in January 2014, with full implementation required beginning on January 1, 2019. U.S. banking regulators have also jointly issued a final market risk capital rule to implement the changes to the market risk capital framework in the U.S. The final market risk capital rule became effective and was applicable to State Street in January 2013, and replaced the market risk capital framework associated with Basel I and Basel II.
The Basel III final rule provides for two frameworks: the “standardized” approach, intended to replace Basel I, and the “advanced” approaches, applicable to advanced approaches banking organizations, like State Street, as originally defined under Basel II. The standardized approach modifies the provisions of Basel I related to the calculation of RWA and prescribes standardized risk weights for certain on- and off-balance sheet exposures.
Among other things, the Basel III final rule does the following:

- Adds requirements for a minimum common equity tier 1 risk-based capital ratio of 4.5% and a minimum supplementary leverage ratio of 3% for advanced approaches banking organizations;
- Raises the minimum tier 1 risk-based capital ratio from 4% under Basel I and Basel II to 6%;
- Leaves the existing, minimum total capital ratio at 8%;
- Implements the capital conservation and countercyclical capital buffers, referenced below, as well as a G-SIB surcharge included under "Capital" in "Financial Condition" included under Item 7, Management's Discussion and Analysis, of this Form 10-K;
- Implements the previously described standardized approach to replace the calculation of RWA under Basel I; and
- Implements the advanced approaches for the calculation of RWA.

Additionally, beginning January 1, 2018, the SLR rule introduced a higher minimum SLR requirement for the eight U.S. G-SIBs of at least 6% for the insured banking entity (State Street Bank) in order to be well capitalized under the U.S. banking regulators’ PCA framework, as well as a requirement of a minimum SLR of 5% for the holding company (the Parent Company) in order to avoid any limitations on distributions and discretionary bonus payments. In

addition to the SLR, State Street is subject to a minimum tier 1 leverage ratio of 4%, which differs from the SLR primarily in that the denominator of the tier 1 leverage ratio is a quarterly average of on-balance sheet assets and does not include any off-balance sheet exposures. The Parent Company is required to include SLR disclosures, calculated on a transitional basis, with its other Basel disclosures.
Under the Basel III final rule, a banking organization would be able to make capital distributions (subject to other regulatory constraints, such as regulator review of its capital plans) and discretionary bonus payments without specified limitations, as long as it maintains the required capital conservation buffer of 2.5% plus applicable G-SIB surcharge over the minimum required common equity tier 1 risk-based capital ratio and each of the minimum required tier 1 and total risk-based capital ratios (plus any potentially applicable countercyclical capital buffer). Banking regulators would establish the minimum countercyclical capital buffer, which is initially set by banking regulators at zero, up to a maximum of 2.5% of total risk-weighted assets under certain economic conditions.
Under the Basel III final rule, our total regulatory capital is divided into three tiers, composed of common equity tier 1 capital, tier 1 capital (which includes common equity tier 1 capital), and tier 2 capital. The total of tier 1 and tier 2 capital, adjusted as applicable, is referred to as total regulatory capital.
Common equity tier 1 capital is composed of core capital elements, such as qualifying common shareholders' equity and related surplus; retained earnings; the cumulative effect of foreign currency translation; and net unrealized gains (losses) on debt and equity securities classified as AFS; reduced by treasury stock. Subject to certain phase-in or phase-out provisions, tier 1 capital is composed of common equity tier 1 capital plus additional tier 1 capital composed of qualifying perpetual preferred stock and minority interests. Goodwill and other intangible assets, net of related deferred tax liabilities, are deducted from common equity tier 1 capital and tier 1 capital. Subject to certain phase-in or phase-out provisions, tier 2 capital is composed primarily of qualifying subordinated long-term debt.
Certain other items, if applicable, must be deducted from tier 1 and tier 2 capital. These items primarily include deductible investments in unconsolidated banking, financial and insurance entities where we hold more than 50% of

the entities' capital; and the amount of expected credit losses that exceeds recorded allowances for loan and other credit losses. Expected credit losses are calculated for wholesale credit exposures by formula in conformity with the Basel III final rule.

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As required by the Dodd-Frank Act, we and State Street Bank, as advanced approaches banking organizations, are subject to a permanent "capital floor," also referred to as the Collins Amendment, in the assessment of our regulatory capital adequacy, including the capital conservation buffer and countercyclical capital buffer described above in this "Supervision and Regulation" section). Since 2015, our risk-based capital ratios for regulatory assessment purposes are the lower of each ratio calculated under the standardized approach and the advanced approaches.

Global Systemically Important Bank

In addition to the Basel III final rule, we are subject to the Federal Reserve's final rule imposing a capital surcharge on U.S. G-SIBs. The surcharge requirements within the final rule began to phase-in on January 2016 and will be fully effective on January 1, 2019. The eight U.S. banks deemed to be G-SIBs, including State Street, are required to calculate the G-SIB surcharge according to two methods, and be bound by the higher of the two:

- Method 1: Assesses systemic importance based upon five equally-weighted components: size, interconnectedness, complexity, cross-jurisdictional activity and substitutability;
- Method 2: Alters the calculation from Method 1 by factoring in a wholesale funding score in place of substitutability and applying a 2x multiplier to the sum of the five components

Method 2 is identified as the binding methodology for State Street and the applicable surcharge on January 1, 2017 was calculated to be 1.5%. Assuming completion of the phase-in period for the capital conservation buffer, and a countercyclical buffer of 0%, the minimum capital ratios as of January 1, 2019, including a capital conservation buffer of 2.5% and G-SIB surcharge of 1.5% in 2019, would be 8.5% for common equity tier 1 capital, 10.0% for tier 1 risk-based capital and 12.0% for total risk-based capital, in order for State Street to make capital distributions and discretionary bonus payments without limitation. Further, State Street, like all other U.S. G-SIBs, is also subject to a 2% leverage buffer under the Basel III final rule. If State Street fails to exceed the 2% leverage buffer, it will be subject to increased restrictions (depending upon the extent of the shortfall) regarding capital distributions and discretionary executive bonus payments. Not all of our competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of our competitors may not be subject to the same additional capital requirements.

Total Loss-Absorbing Capacity (TLAC)

In December 2016, the Federal Reserve released its final rule on TLAC, LTD and clean holding company requirements for U.S. domiciled G-SIBs, such as State Street, that are intended to improve the resiliency and resolvability of certain U.S. banking organizations through enhanced prudential standards. The TLAC final rule imposes: (1) TLAC requirements (i.e., combined eligible tier 1 regulatory capital and eligible LTD); (2) separate eligible LTD requirements; and (3) clean holding company requirements designed to make short-term unsecured debt (including deposits) and most other ineligible liabilities structurally senior to eligible LTD.

Among other things, the TLAC final rule requires State Street to comply with minimum requirements for external TLAC and external LTD, plus an external TLAC buffer. Specifically, State Street must hold (1) combined eligible tier 1 regulatory capital and eligible LTD in the amount equal to at least 21.5% of total risk-weighted assets (using an estimated G-SIB method 1 surcharge of 1%) and 9.5% of total leverage exposure, as defined by the SLR final rule, and (2) qualifying external LTD equal to the greater of 7.5% of risk-weighted assets (using an estimated G-SIB method 2 surcharge of 1.5%) and 4.5% of total leverage exposure, as defined by the SLR final rule.

Based upon current estimates, assumptions and guidance, we project that compliance with TLAC and LTD will result in increasing our outstanding LTD by approximately $1.5 billion at December 31, 2018 compared to debt outstanding at December 31, 2017. Our estimates regarding TLAC and LTD are subject to additional regulatory guidance and interpretation. State Street must comply with the TLAC final rule starting on January 1, 2019.

Liquidity Coverage Ratio and Net Stable Funding Ratio

In addition to capital standards, the Basel III final rule introduced two quantitative liquidity standards: the LCR and the NSFR.

We are subject to the final rule issued by the U.S. banking regulators implementing the BCBS' LCR in the U.S. The LCR is intended to promote the short-term resilience of internationally active banking organizations, like State Street, to improve the banking industry's ability to absorb shocks arising from market stress over a 30 calendar day period

and improve the measurement and management of liquidity risk.
The LCR measures an institution's HQLA against its net cash outflows. We report LCR to the Federal Reserve daily. As of December 31, 2017, our LCR was in excess of the requirement of 100%. In addition, we publicly disclose certain qualitative and quantitative information about our LCR consistent

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with the requirements of the Federal Reserve's December 2016 final rule.
Compliance with the LCR has required that we maintain an investment portfolio that contains an adequate amount of HQLA. In general, HQLA investments generate a lower investment return than other types of investments, resulting in a negative impact on our NII and our NIM. In addition, the level of HQLA we are required to maintain under the LCR is dependent upon our client relationships and the nature of services we provide, which may change over time. Deposits resulting from certain services provided (“operational deposits”) are treated as more resilient during periods of stress than other deposits. As a result, if balances of operational deposits increased relative to our total client deposit base, we would expect to require less HQLA in order to maintain our LCR. Conversely, if balances of operational deposits decreased relative to our total client deposit base, we would expect to require more HQLA.
The BCBS has also issued final guidance with respect to the NSFR. In the second quarter of 2016, the OCC, Federal Reserve and FDIC issued a proposal to implement the NSFR in the U.S. that is largely consistent with the BCBS guidance. The proposal would require banking organizations to maintain an amount of available stable funding, which is calculated by applying standardized weightings to its equity and liabilities based on their expected stability, that is no less than the amount of its required stable funding, which is calculated by applying standardized weightings to its assets, derivatives exposures, and certain other off-balance sheet exposures based on their liquidity characteristics.
Failure to meet current and future regulatory capital requirements could subject us to a variety of enforcement actions, including the termination of State Street Bank's deposit insurance by the FDIC, and to certain restrictions on our business, including those that are described above in this “Supervision and Regulation” section.
For additional information about our regulatory capital position and our regulatory capital adequacy, as well as current and future regulatory capital requirements, refer to "Capital" in “Financial Condition" included under Item 7, Management's Discussion and Analysis, and Note 16 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.
Capital Planning, Stress Tests and Dividends
Pursuant to the Dodd-Frank Act, the Federal Reserve has adopted capital planning and stress test requirements for large bank holding companies, including us, which form part of the Federal Reserve’s annual CCAR framework. CCAR is used by the

Federal Reserve to evaluate our management of capital, the adequacy of our regulatory capital and the potential requirement for us to maintain capital levels above regulatory minimums. Under the Federal Reserve’s capital plan final rule, we must conduct periodic stress testing of our business operations and submit an annual capital plan to the Federal Reserve, taking into account the results of separate stress tests designed by us and by the Federal Reserve. The capital plan must include a description of all of our planned capital actions over a nine-quarter planning horizon, including any issuance of debt or equity capital instruments, any capital distributions, such as payments of dividends on, or purchases of, our stock, and any similar action that the Federal Reserve determines could affect our consolidated capital. The capital plan must include a discussion of how we will maintain capital above the minimum regulatory capital ratios, including the minimum ratios under the Basel III final rule that are phased in over the planning horizon, and serve as a source of strength to our U.S. depository institution subsidiaries under supervisory stress scenarios. The capital plan requirements mandate that we receive no objection to our plan from the Federal Reserve before making a capital distribution. These requirements could require us to revise our stress-testing or capital management approaches, resubmit our capital plan or postpone, cancel or alter our planned capital actions. In addition, changes in our strategy, merger or acquisition activity or unanticipated uses of capital could result in a change in our capital plan and its associated capital actions, including capital raises or modifications to planned capital actions, such as purchases of our stock, and may require resubmission of the capital plan to the Federal Reserve for its non-objection if, among other reasons, we would not meet our regulatory capital requirements after making the proposed capital distribution.
In addition to its capital planning requirements, the Federal Reserve has the authority to prohibit or to limit the payment of dividends by the banking organizations it supervises, including the Parent Company and State Street Bank, if, in the Federal Reserve’s opinion, the 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 purchase our stock, or require us to provide capital assistance to State Street Bank and any other banking subsidiary.

In June 2017, we received the results of the Federal Reserve’s review of our 2017 capital plan in connection with its 2017 annual CCAR process. The Federal Reserve did not object to the capital actions we proposed in our 2017 capital plan and, in June 2017, our Board approved a new common stock

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purchase program authorizing the purchase of up to $1.4 billion of our common stock from July 1, 2017 through June 30, 2018. As of December 31, 2017, we purchased approximately 7.4 million shares of our common stock at an average per-share cost of $94.54 and an aggregate cost of approximately $700 million under this program. Our 2017 capital plan included an increase, subject to approval by our Board, to our quarterly stock dividend to $0.42 per share from $0.38 per share, beginning in the third quarter of 2017. Our common stock and other stock dividends, including the declaration, timing and amount thereof, remain subject to consideration and approval by our Board of Directors at the relevant times.

The Federal Reserve, under the Dodd-Frank Act, requires us to conduct semi-annual State Street-run stress tests and to publicly disclose the summary results of our State Street-run stress tests under the severely adverse economic scenario. In October 2017, we provided summary results of our 2017 mid-cycle State Street-run stress tests on the “Investor Relations” section of our corporate website. We are also required to undergo an annual supervisory stress test conducted by the Federal Reserve.

The Dodd-Frank Act also requires State Street Bank to conduct an annual stress test. State Street Bank must submit its 2018 annual State Street Bank-run stress test to the Federal Reserve by April 5, 2018.

In January 2017, the Federal Reserve adopted revisions to the capital plan and stress test requirements 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 one-quarter “blackout period” while the Federal Reserve is conducting CCAR during which firms are not permitted to submit de minimis exception notices or prior approval requests for additional capital distributions. The Federal Reserve is currently considering making further changes to CCAR requirements, which may change our minimum capital requirements.

The Volcker Rule

We are subject to the Volcker rule and implementing regulations. The Volcker rule prohibits banking entities, including us and our affiliates, from engaging in certain prohibited proprietary trading activities, as defined in the final Volcker rule regulations, subject to exemptions for market-making related activities, risk-mitigating hedging, underwriting and certain other activities. The Volcker rule also requires banking entities to either restructure or divest certain ownership interests in, and relationships with, covered funds (as such terms are defined in the final Volcker rule regulations).

The final Volcker rule regulations require banking entities to establish extensive programs designed to ensure compliance with the restrictions of the Volcker rule. We have established a compliance program which we believe complies with the final Volcker rule regulations as currently in effect. Such compliance program restricts our ability in the future to service certain types of funds, in particular covered funds for which SSGA acts as an advisor and certain types of trustee relationships. Consequently, Volcker rule compliance entails both the cost of a compliance program and loss of certain revenue and future opportunities.

Enhanced Prudential Standards

As a SIFI, we are subject to heightened prudential standards, including heightened capital, leverage, liquidity and risk management requirements, single-counterparty credit limits and early remediation requirements. Bank holding companies with $50 billion or more in consolidated assets, which includes us, became automatically subject to the systemic-risk regime in 2010.

The FSOC can recommend prudential standards, reporting and disclosure requirements to the Federal Reserve for SIFIs, and must approve any finding by the Federal Reserve that a financial institution poses a grave threat to financial stability and must undertake mitigating actions. The FSOC is also empowered to designate systemically important payment, clearing and settlement activities of financial institutions, subjecting them to prudential supervision and regulation, and, assisted by the Office of Financial Research within the U.S. Department of the Treasury can gather data and reports from financial institutions, including us.

Under the Federal Reserve's final rule implementing certain enhanced prudential standards for large bank holding companies, we are required to comply with various liquidity-related risk management standards and maintain a liquidity buffer of unencumbered highly liquid assets based on the results of internal liquidity stress testing. This liquidity buffer is in addition to other liquidity requirements, such as the LCR and, when implemented, the NSFR. The final rule also establishes requirements and responsibilities for our risk committee and mandates risk management standards. We became subject to these standards in January 2015.

In March 2016, the Federal Reserve re-proposed rules that would establish single-counterparty credit limits for large banking organizations, with more stringent limits for the largest banking organizations. U.S. G-SIBs, including us, would be subject to a limit of 15% of tier 1 capital for credit exposures to any “major counterparty” (defined as other U.S. G-SIBs, foreign G-SIBs and non-bank SIFIs supervised by the

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Federal Reserve) and to a limit of 25% of tier 1 capital for credit exposures to any other unaffiliated counterparty.

In September 2017, the Federal Reserve issued a final rule that imposes contractual requirements on certain “qualified financial contracts” to which U.S. G-SIBs, including us, and their subsidiaries are parties. Under the final rule, certain qualified financial contracts generally must expressly provide that transfer restrictions and default rights against a U.S. G-SIB, or subsidiary of a U.S. G-SIB, 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, certain qualified financial contracts may not, among other things, permit the exercise of any cross-default right against a U.S. G-SIB or subsidiary of a U.S. G-SIB 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 a first compliance date of January 1, 2019.

In addition, the final rules create an early-remediation regime to address financial distress or material management weaknesses determined with reference to four levels of early remediation, including heightened supervisory review, initial remediation, recovery, and resolution assessment, with specific limitations and requirements tied to each level. The systemic-risk regime also provides that, for institutions deemed to pose a grave threat to U.S. financial stability, the Federal Reserve, upon an FSOC vote, must limit that institution’s ability to merge, restrict its ability to offer financial products, require it to terminate activities, impose conditions on activities or, as a last resort, require it to dispose of assets. Upon a grave-threat determination by the FSOC, the Federal Reserve must issue rules that require financial institutions subject to the systemic-risk regime to maintain a debt-to-equity ratio of no more than 15 to 1 if the FSOC considers it necessary to mitigate the risk of the grave threat. The Federal Reserve also has the ability to establish further standards, including those regarding contingent capital, enhanced public disclosures, and limits on short-term debt, including off-balance sheet exposures.

Resolution Planning

State Street, like other bank holding companies with total consolidated assets of $50 billion or more, periodically submits a plan for rapid and orderly resolution in the event of material financial distress or failure — commonly referred to as a resolution plan or a living will — to the Federal Reserve and the FDIC under Section 165(d) of the Dodd-Frank Act. Through resolution planning, we seek, in the event of the insolvency of State Street, to maintain State Street

Bank’s role as a key infrastructure provider within the financial system, while minimizing risk to the financial system and maximizing value for the benefit of our stakeholders. We have and will continue to focus management attention and resources to meet regulatory expectations with respect to resolution planning.

We submitted our 2017 resolution plan describing our preferred resolution strategy to the Federal Reserve and FDIC on June 30, 2017. On December 19, 2017, the Federal Reserve and FDIC announced that they had completed their review and had not identified deficiencies or specific shortcomings. Nonetheless, the agencies identified four common areas in which more work may need to be done by all firms, including State Street, to continue to improve resolvability: intra-group liquidity; internal loss-absorbing capacity; derivatives; and payment, clearing and settlement activities. State Street’s next resolution plan is due July 1, 2019.

In the event of material financial distress or failure, our preferred resolution strategy is the SPOE Strategy. The SPOE Strategy provides that prior to the bankruptcy of the Parent Company and pursuant to a support agreement among the Parent Company, SSIF (a direct subsidiary of the Parent Company), State Street’s Beneficiary Entities (as defined below) and certain other State Street entities, SSIF is obligated, up to its available resources, to recapitalize and/or provide liquidity to State Street Bank and the other State Street entities benefiting from such capital and/or liquidity support (collectively with State Street Bank, “Beneficiary Entities”), in amounts designed to prevent the Beneficiary Entities from themselves entering into resolution proceedings. Following the recapitalization of, or provision of liquidity to the Beneficiary Entities, the Parent Company would enter into a bankruptcy proceeding under the U.S. Bankruptcy Code. The Beneficiary Entities and other State Street subsidiaries would be transferred to a newly organized holding company held by a reorganization trust for the benefit of the Parent Company’s claimants.

Under the support agreement, the Parent Company has pre-funded SSIF by contributing certain of its assets (primarily its liquid assets, cash deposits, investments in intercompany debt, investments in marketable securities and other cash and non-cash equivalent investments) to SSIF contemporaneous with entering into the support agreement and will continue to contribute such assets, to the extent available, on an on-going basis. In consideration for these contributions, SSIF has agreed in the support agreement to provide capital and liquidity support to the Parent Company and all of the Beneficiary Entities in accordance with the Parent Company's capital and liquidity policies. Under the support agreement, the Parent Company is only permitted to

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retain cash needed to meet its upcoming obligations and to fund expected expenses during a potential bankruptcy proceeding. SSIF has provided the Parent Company with a committed credit line and issued (and may issue) one or more promissory notes to the Parent Company (the "Parent Company Funding Notes") that together are intended to allow the Parent Company to continue to meet its obligations throughout the period prior to the occurrence of a "Recapitalization Event" (as defined below). The support agreement does not contemplate that SSIF is obligated to maintain any specific level of resources and SSIF may not have sufficient resources to implement the SPOE Strategy. In the event a Recapitalization Event occurs, the obligations outstanding under the Parent Company Funding Notes would automatically convert into or be exchanged for capital contributed to SSIF. The obligations of the Parent Company and SSIF under the support agreement are secured through a security agreement that grants a lien on the assets that the Parent Company and SSIF would use to fulfill their obligations under the support agreement to the Beneficiary Entities. SSIF is a distinct legal entity separate from the Parent Company and the Parent Company’s other affiliates.

In accordance with its policies, State Street is required to monitor, on an ongoing basis, the capital and liquidity needs of State Street Bank and the other Beneficiary Entities. To support this process, State Street has established a trigger framework that identifies key actions that would need to be taken or decisions that would need to be made if certain events tied to State Street’s financial condition occur. In the event that State Street experiences material financial distress, the support agreement requires State Street to model and calculate certain capital and liquidity triggers on a regular basis to determine whether or not the Parent Company should commence preparations for a bankruptcy filing and whether or not a Recapitalization Event has occurred.

Upon the occurrence of a Recapitalization Event: (1) SSIF would not be authorized to provide any further liquidity to the Parent Company; (2) the Parent Company would be required to contribute to SSIF any remaining assets it is required to contribute to SSIF under the support agreement (which specifically exclude amounts designated to fund expected expenses during a potential bankruptcy proceeding); (3) SSIF would be required to provide capital and liquidity support to the Beneficiary Entities to support such entities’ continued operation to the extent of its available resources and consistent with the support agreement; and (4) the Parent Company would be expected to commence Chapter 11 proceedings under the U.S. Bankruptcy Code. No person or entity, other than a party to the support agreement, should rely, including in evaluating any

State Street entity from a creditor's perspective or determining whether to enter into a contractual relationship with any State Street entity, on any State Street affiliate being or remaining a Beneficiary Entity or receiving capital or liquidity support pursuant to the support agreement.

A “Recapitalization Event” is defined under the support agreement as the earlier occurrence of one or more capital and liquidity thresholds being breached or the authorization by the Parent Company's Board of Directors for the Parent Company to commence bankruptcy proceedings. These thresholds are set at levels intended to provide for the availability of sufficient capital and liquidity to enable an orderly resolution without extraordinary government support. The SPOE Strategy and the obligations under the support agreement may result in the recapitalization of State Street Bank and the commencement of bankruptcy proceedings by the Parent Company at an earlier stage of financial stress than might otherwise occur without such mechanisms in place. An expected effect of the SPOE Strategy and applicable TLAC regulatory requirements is that State Street’s losses will be imposed on the Parent Company shareholders and the holders of long-term debt and other forms of TLAC securities currently outstanding or issued in the future by the Parent Company, as well as on any other Parent Company creditors, before any of its losses are imposed on the holders of the debt securities of the Parent Company's operating subsidiaries or any of their depositors or creditors, or before U.S. taxpayers are put at risk.

There can be no assurance that credit rating agencies, in response to our resolution plan or the support agreement, will not downgrade, place on negative watch or change their outlook on our debt credit ratings, generally or on specific debt securities. Any such downgrade, placement on negative watch or change in outlook could adversely affect our cost of borrowing, limit our access to the capital markets or result in restrictive covenants in future debt agreements and could also adversely impact the trading prices, or the liquidity, of our outstanding debt securities.

State Street Bank is also required to submit periodically to the FDIC a plan for resolution in the event of its failure, referred to as an IDI plan. Under the IDI plan rule, submission of the IDI plan is scheduled for July 1, 2018.

Orderly Liquidation Authority

Under the Dodd-Frank Act, certain financial companies, including bank holding companies such as State Street, and certain covered subsidiaries, can be subjected to the orderly liquidation authority. The U.S. Treasury Secretary, in consultation with the U.S. President, must first make certain extraordinary

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financial distress and systemic risk determinations, and action must be recommended by two-thirds of the FDIC Board and two-thirds of the Federal Reserve Board. Absent such actions, we, as a bank holding company, would remain subject to the U.S. Bankruptcy Code.

The orderly liquidation authority went into effect in 2010, and rulemaking is proceeding in stages, with some regulations now finalized and others planned but not yet proposed. If we were subject to the orderly liquidation authority, the FDIC would be appointed as the receiver of State Street Bank, which would give the FDIC considerable powers to resolve us, including: (1) the power to remove officers and directors responsible for our failure and to appoint new directors and officers; (2) the power to assign assets and liabilities to a third party or bridge financial company without the need for creditor consent or prior court review; (3) the ability to differentiate among creditors, including by treating junior creditors better than senior creditors, subject to a minimum recovery right to receive at least what they would have received in bankruptcy liquidation; and (4) broad powers to administer the claims process to determine distributions from the assets of the receivership to creditors not transferred to a third party or bridge financial institution.

In 2013, the FDIC released its proposed single-point-of-entry strategy for resolution of a SIFI under the orderly liquidation authority. The FDIC's release outlines how it would use its powers under the orderly liquidation authority to resolve a SIFI by placing its top-tier U.S. holding company in receivership and keeping its operating subsidiaries open and out of insolvency proceedings by transferring the operating subsidiaries to a new bridge holding company, recapitalizing the operating subsidiaries and imposing losses on the shareholders and creditors of the holding company in receivership according to their statutory order of priority.

Derivatives

Title VII of the Dodd-Frank Act imposed a comprehensive regulatory structure on the OTC derivatives market, including requirements for clearing, exchange trading, capital, margin, reporting and record-keeping. Title VII also requires certain persons to register as a major swap participant, a swap dealer or a securities-based swap dealer. The CFTC, the SEC, and other U.S. regulators have largely implemented key provisions of Title VII, although certain final regulations have only been in place a short period of time and others have not been finalized. Through this rulemaking process, these regulators collectively have adopted or proposed, among other things, regulations relating to reporting and record-keeping obligations, margin and capital requirements, the scope of registration and the

central clearing and exchange trading requirements for certain over-the-counter derivatives. The CFTC has also issued rules to enhance the oversight of clearing and trading entities. The CFTC, along with other regulators, including the Federal Reserve, have also issued final rules with respect to margin requirements for uncleared derivatives transactions.

State Street Bank has registered provisionally with the CFTC as a swap dealer. As a provisionally registered swap dealer, State Street Bank is subject to significant regulatory obligations regarding its swap activity and the supervision, examination and enforcement powers of the CFTC and other regulators. The CFTC has granted State Street Bank a limited-purpose swap dealer designation. Under this limited-purpose designation, interest-rate swap activity engaged in by State Street Bank's Global Treasury group is not subject to certain of the swap regulatory requirements otherwise applicable to swaps entered into by a registered swap dealer, subject to a number of conditions. For all other swap transactions, our swap activities remain subject to all applicable swap dealer regulations.

Money Market Funds

The SEC has adopted amendments to the regulations governing money market funds to address potential systemic risks and improve transparency for money market fund investors. Among other things, the amendments require a floating net asset value for institutional prime money market funds (i.e., money market funds that are either not restricted to natural person investors or not restricted to investing primarily in U.S. government securities) and permit (and in some cases require) all money market funds to impose redemption fees and gates under certain circumstances. As a result of these reforms, money market funds may be required to take certain steps that will affect their structure and/or operations, which could in turn affect the liquidity, marketability and return potential of such funds. Full conformance with these amendments was required by October 14, 2016.

Money market reforms are also being introduced in Europe in 2018 and 2019. The SEC's amended regulations, and the potential reforms in Europe, could alter the business models of money market fund sponsors and asset managers, including many of our servicing clients and SSGA, and may result in reduced levels of investment in money market funds. As a result, these requirements may have an adverse impact on our business, our operations or our consolidated results of operations.

Subsidiaries

The Federal Reserve is the primary federal banking agency responsible for regulating us and our subsidiaries, including State Street Bank, with respect to both our U.S. and non-U.S. operations.

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Our banking subsidiaries are subject to supervision and examination by various regulatory authorities. State Street Bank is a member of the Federal Reserve System, its deposits are insured by the FDIC and it is subject to applicable federal and state banking laws and to supervision and examination by the Federal Reserve, as well as by the Massachusetts Commissioner of Banks, the FDIC, and the regulatory authorities of those states and countries in which State Street Bank operates a branch. Our other subsidiary trust companies are subject to supervision and examination by the OCC, the Federal Reserve or by the appropriate state banking regulatory authorities of the states in which they are organized and operate. Our non-U.S. banking subsidiaries are subject to regulation by the regulatory authorities of the countries in which they operate.

We and our subsidiaries that are not subsidiaries of State Street Bank are affiliates of State Street Bank under federal banking laws, which impose restrictions on various types of transactions, including loans, extensions of credit, investments or asset purchases by or from State Street Bank, on the one hand, to us and those of our subsidiaries, on the other. Transactions of this kind between State Street Bank and its affiliates are limited with respect to each affiliate to 10% of State Street Bank’s capital and surplus, as defined by the aforementioned banking laws, and to 20% in the aggregate for all affiliates, and in some cases are also subject to strict collateral requirements. Derivatives, securities borrowing and securities lending transactions between State Street Bank and its affiliates became subject to these restrictions pursuant to the Dodd-Frank Act. The Dodd-Frank Act also expanded the scope of transactions required to be collateralized. In addition, the Volcker rule generally prohibits similar transactions between the Parent Company or any of its affiliates and covered funds for which we or any of our affiliates serve as the investment manager, investment adviser, commodity trading advisor or sponsor and other covered funds organized and offered pursuant to specific exemptions in the final Volcker rule regulations.

Federal law also requires that certain transactions by a bank with affiliates be on terms and under circumstances, including credit standards, that are substantially the same, or at least as favorable to the bank, as those prevailing at the time for comparable transactions involving other non-affiliated companies. Alternatively, in the absence of comparable transactions, the transactions must be on terms and under circumstances, including credit standards, that in good faith would be offered to, or would apply to, non-affiliated companies.

State Street Bank is also prohibited from engaging in certain tie-in arrangements in connection with any extension of credit or lease or sale of property or furnishing of services. Federal law provides as well for a depositor preference on amounts realized from the liquidation or other resolution of any depository institution insured by the FDIC.

Our subsidiaries, SSGA FM and SSGA Ltd., act as investment advisers to investment companies registered under the Investment Company Act of 1940. SSGA FM, incorporated in Massachusetts in 2001 and headquartered in Boston, Massachusetts, is registered with the SEC as an investment adviser under the Investment Advisers Act of 1940 and is registered with the CFTC as a commodity trading adviser and pool operator. SSGA Ltd., incorporated in 1990 as a U.K. limited company and domiciled in the U.K., is also registered with the SEC as an investment adviser under the Investment Advisers Act of 1940. SSGA Ltd. is also authorized and regulated by the FCA and is an investment firm under the MiFID. Our subsidiary, State Street Global Advisors Asia Limited (SSGA Asia), a Hong Kong incorporated company, is registered as an investment adviser with the SEC and additionally is licensed by the Securities and Futures Commission of Hong Kong to perform a variety of activities, including asset management. SSGA Asia also holds permits as a qualified foreign institutional Investor (QFII) and a renminbi qualified foreign institutional investor (RQFII), approved by the Securities Regulatory Commission in the People’s Republic of China, and in Korea is registered with the Financial Services Commission as a cross-border investment advisory company and a cross-border discretionary investment management company. In addition, a major portion of our investment management activities are conducted by State Street Global Advisors Trust Company, which is a subsidiary of State Street Bank and a Massachusetts chartered trust company subject to the supervision of the Massachusetts Commissioner of Banks and the Federal Reserve with respect to these activities. Many aspects of our investment management activities are subject to federal and state laws and regulations primarily intended to benefit the investment holder, rather than our shareholders.

These laws and regulations generally grant supervisory agencies and bodies broad administrative powers, including the power to limit or restrict us from conducting our investment management activities in the event that we fail to comply with such laws and regulations, and examination authority. Our business related to investment management and trusteeship of collective trust funds and separate accounts offered to employee benefit plans is subject to ERISA, and is regulated by the U.S. DOL.

State Street has two subsidiaries that operate as a U.S. broker/dealer and are registered as such with the SEC, are subject to regulation by the SEC (including the SEC's net capital rule) and are members of the Financial Industry Regulatory Authority, a self-regulatory organization. State Street Global Advisors Funds Distributors LLC, (SSGAFD) operates as a limited purpose broker/dealer distributing and related marketing activities for SSGA's U.S. mutual funds and ETFs. SSGAFD also acts as a placement agent for certain private funds advised by SSGA FM. Our other U.S. broker/dealer is State Street Global Markets LLC (SSGM LLC) which provides agency execution services. The U.K. broker/dealer business operates through our subsidiary, State Street Global Markets International Limited, which is registered in the U.K. as a regulated securities broker, is authorized and regulated by the FCA and is an investment firm under the MiFID, and is a member of the London Stock Exchange. In accordance with the rules of the FCA, the U.K. broker/dealer publishes information on its risk management objectives and on policies associated with its regulatory capital requirements and resources.

Our activities as a futures commission merchant are subject to regulation by the CFTC in the U.S. and various regulatory authorities internationally, as well as the membership requirements of the applicable clearinghouses. In addition, we have a subsidiary registered with the CFTC as a swap execution facility.

Our businesses, including our investment management and securities and futures businesses, are also regulated extensively by non-U.S. governments, securities exchanges, self-regulatory organizations, central banks and regulatory bodies, especially in those jurisdictions in which we maintain an office. For instance, among others, the FCA, the U.K. PRA and the Bank of England regulate our activities in the U.K.; the Central Bank of Ireland regulates our activities in Ireland; the German Federal Financial Supervisory Authority regulates our activities in Germany; the Commission de Surveillance du Secteur Financier regulates our activities in Luxembourg; our German banking group is also subject to direct supervision by the European Central Bank under the ECB Single Supervisory Mechanism; the Securities and Futures Commission regulates our asset management activities in Hong Kong; the Australian Prudential Regulation Authority and the Australian Securities and Investments Commission regulate our activities in Australia; and the Financial Services Agency and the Bank of Japan regulate our activities in Japan. We have established policies, procedures, and systems designed to comply with the requirements of these organizations. However, as a global financial services institution, we face complexity, costs and risks related to regulation.

The majority of our non-U.S. asset servicing operations are conducted pursuant to the Federal Reserve's Regulation K through State Street Bank’s Edge Act subsidiary or through international branches of State Street Bank. An Edge Act corporation is a corporation organized under federal law that conducts foreign business activities. In general, banks may not make investments in their Edge Act corporations (and similar state law corporations) that exceed 20% of their capital and surplus, as defined, and the investment of any amount in excess of 10% of capital and surplus requires the prior approval of the Federal Reserve.

In addition to our non-U.S. operations conducted pursuant to Regulation K, we also make new investments abroad directly (through us or through our non-banking subsidiaries) pursuant to the Federal Reserve's Regulation Y, or through international bank branch expansion, neither of which is subject to the investment limitations applicable to Edge Act subsidiaries.

Additionally, Massachusetts has its own bank holding company statute, under which State Street, among other things, may be required to obtain prior approval by the Massachusetts Board of Bank Incorporation for an acquisition of more than 5% of any additional bank's voting shares, or for other forms of bank acquisitions.

Anti-Money Laundering and Financial Transparency

We and certain of our subsidiaries are subject to the Bank Secrecy Act of 1970, as amended by the USA PATRIOT Act of 2001, and related regulations, which contain AML and financial transparency provisions and which require implementation of an AML compliance program, including processes for verifying client identification and monitoring client transactions and detecting and reporting suspicious activities. AML laws outside the U.S. contain similar requirements. We have implemented policies, procedures and internal controls that are designed to promote compliance with applicable AML laws and regulations. AML laws and regulations applicable to our operations may be more stringent than similar requirements applicable to our non-regulated competitors or financial institutions principally operating in other jurisdictions. Compliance with applicable AML and related requirements is a common

area of review for financial regulators, and any failure by us to comply with these requirements could result in fines, penalties, lawsuits, regulatory sanctions, difficulties in obtaining governmental approvals, restrictions on our business activities or harm to our reputation.
On June 1, 2015, we entered into a written agreement with the Federal Reserve and the Massachusetts Division of Banks relating to

deficiencies identified in our compliance programs with the requirements of the Bank Secrecy Act, AML regulations and U.S. economic sanctions regulations promulgated by OFAC. As part of this agreement, we have been required to, among other things, implement improvements to our compliance programs and retain an independent firm to conduct a review of account and transaction activity to evaluate whether any suspicious activity was not previously reported. If we fail to comply with the terms of the written agreement, we may become subject to fines and other regulatory sanctions, which may have a material adverse effect on us.

Deposit Insurance

FDIC-insured depository institutions are required to pay deposit insurance assessments to the FDIC. The Dodd-Frank Act made permanent the general $250,000 deposit insurance limit for insured deposits.

The FDIC’s DIF is funded by assessments on insured depository institutions. The FDIC assesses DIF premiums based on an insured depository institution's average consolidated total assets, less the average tangible equity of the insured depository institution during the assessment period. For larger institutions, such as State Street Bank, assessments are determined based on regulatory ratings and forward-looking financial measures to calculate the assessment rate, which is subject to adjustments by the FDIC, and the assessment base.

The FDIC is required to determine whether and to what extent adjustments to the assessment base are appropriate for “custody banks" that satisfy specified institutional eligibility criteria. The FDIC has concluded that certain liquid assets could be excluded from the deposit insurance assessment base of custody banks. This has the effect of reducing the amount of DIF insurance premiums due from custody banks. State Street Bank is a custody bank for this purpose. The custody bank assessment adjustment may not exceed total transaction account deposits identified by the institution as being directly linked to a fiduciary or custody and safekeeping asset.

In March 2016, the FDIC issued a final rule that imposes on IDIs with at least $10 billion in assets, which includes State Street Bank, a surcharge of 4.5 cents per $100 per annum of their assessment base for deposit insurance, as defined by the FDIC, until the DIF reaches the required ratio of 1.35, which the FDIC estimates will occur in 2018. The surcharge took effect for the assessment period beginning July 2016.

Prompt Corrective Action

The FDIC Improvement Act of 1991 requires the appropriate federal banking regulator to take “prompt corrective action” with respect to a depository

institution if that institution does not meet certain capital adequacy standards, including minimum capital ratios. While these regulations apply only to banks, such as State Street Bank, the Federal Reserve is authorized to take appropriate action against a parent bank holding company, such as our Parent Company, based on the under-capitalized status of any banking subsidiary. In certain instances, we would be required to guarantee the performance of a capital restoration plan if one of our banking subsidiaries were undercapitalized.

Support of Subsidiary Banks

Under Federal Reserve regulations, a bank holding company such as our Parent Company is required to act as a source of financial and managerial strength to its banking subsidiaries. This requirement was added to the Federal Deposit Insurance Act by the Dodd-Frank Act. This means that we have a statutory obligation to commit resources to State Street Bank and any other banking subsidiary in circumstances in which we otherwise might not do so absent such a requirement. In the event of bankruptcy, any commitment by us to a federal bank regulatory agency to maintain the capital of a banking subsidiary will be assumed by the bankruptcy trustee and will be entitled to a priority payment.

Insolvency of an Insured U.S. Subsidiary Depository Institution

If the FDIC is appointed the conservator or receiver of an FDIC-insured U.S. subsidiary depository institution, such as State Street Bank, upon its insolvency or certain other events, the FDIC has the ability to transfer any of the depository institution’s assets and liabilities to a new obligor without the approval of the depository institution’s creditors, enforce the terms of the depository institution’s contracts pursuant to their terms or repudiate or disaffirm contracts or leases to which the depository institution is a party. Additionally, the claims of holders of deposit liabilities and certain claims for administrative expenses against an insured depository institution would be afforded priority over other general unsecured claims against such an institution, including claims of debt holders of the institution and, under current interpretation, depositors in non-U.S. branches and offices, in the liquidation or other resolution of such an institution by any receiver. As a result, such persons would be treated differently from and could receive, if anything, substantially less than the depositors in U.S. offices of the depository institution.

ECONOMIC CONDITIONS AND GOVERNMENT POLICIES

Economic policies of the U.S. government and its agencies influence our operating environment. Monetary policy conducted by the Federal Reserve

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directly affects the level of interest rates, which may affect overall credit conditions of the economy. Monetary policy is applied by the Federal Reserve through open market operations in U.S. government securities, changes in reserve requirements for depository institutions, and changes in the discount rate and availability of borrowing from the Federal Reserve. Government regulation of banks and bank holding companies is intended primarily for the protection of depositors of the banks, rather than for the shareholders of the institutions and therefore may, in some cases, be adverse to the interests of those shareholders. We are similarly affected by the economic policies of non-U.S. government agencies, such as the ECB.

CYBER RISK MANAGEMENT

In October 2016, the Federal Reserve, FDIC and OCC issued an advance notice of proposed rulemaking regarding enhanced cyber risk management standards, which would apply to a wide range of large financial institutions and their third-party service providers, including State Street and its banking subsidiaries. The proposed standards would expand existing cybersecurity regulations and guidance to focus on cyber risk governance and management; management of internal and external dependencies; and incident response, cyber resilience and situational awareness. In addition, the proposal contemplates more stringent standards for institutions with systems that are critical to the financial sector.

STATISTICAL DISCLOSURE BY BANK HOLDING COMPANIES

The following information, included under Items 6, 7 and 8 of this Form 10-K, is incorporated by reference herein:

“Selected Financial Data” table (Item 6) - presents return on average common equity, return on average assets, common dividend payout and equity-to-assets ratios.

“Distribution of Average Assets, Liabilities and Shareholders’ Equity; Interest Rates and Interest Differential” table (Item 8) - presents consolidated average balance sheet amounts, related fully taxable-equivalent interest earned and paid, related average yields and rates paid and changes in fully taxable-equivalent interest income and interest expense for each major category of interest-earning assets and interest-bearing liabilities.

“Investment Securities” section included in Management's Discussion and Analysis (Item 7) and Note 3, “Investment Securities,” to the consolidated financial statements (Item 8) - disclose information regarding book values, market values, maturities and weighted-average yields of securities (by category).

Note 4, “Loans and Leases,” to the consolidated financial statements (Item 8) - discloses our policy for placing loans and leases on non-accrual status.

“Loans and Leases” section included in Management’s Discussion and Analysis (Item 7) and Note 4, “Loans and Leases,” to the consolidated financial statements (Item 8) - disclose distribution of loans, loan maturities and sensitivities of loans to changes in interest rates.

“Loans and Leases” and “Cross-Border Outstandings” sections of Management’s Discussion and Analysis (Item 7) - disclose information regarding cross-border outstandings and other loan concentrations of State Street.

“Credit Risk Management” section included in Management’s Discussion and Analysis (Item 7) and Note 4, “Loans and Leases,” to the consolidated financial statements (Item 8) - present the allocation of the allowance for loan and lease losses, and a description of factors which influenced management’s judgment in determining amounts of additions or reductions to the allowance, if any, charged or credited to results of operations.

“Distribution of Average Assets, Liabilities and Shareholders’ Equity; Interest Rates and Interest Differential” table (Item 8) - discloses deposit information.

Note 8, “Short-Term Borrowings,” to the consolidated financial statements (Item 8) - discloses information regarding short-term borrowings of State Street.

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ITEM 1A. RISK FACTORS

Forward-Looking Statements

This Form 10-K, as well as other reports and proxy materials submitted by us under the Securities Exchange Act of 1934, registration statements filed by us under the Securities Act of 1933, our annual report to shareholders and other public statements we may make, may contain statements (including statements in the Management's Discussion and Analysis included in such reports, as applicable) that are considered “forward-looking statements” within the meaning of U.S. securities laws, including statements about our goals and expectations regarding our business, financial and capital condition, results of operations, strategies, cost savings and transformation initiatives, investment portfolio performance, dividend and stock purchase programs, outcomes of legal proceedings, market growth, acquisitions, joint ventures and divestitures, client growth and new technologies, services and opportunities, as well as industry, regulatory, economic and market trends, initiatives and developments, the business environment and other matters that do not relate strictly to historical facts.

Terminology such as “plan,” “expect,” “intend,” “objective,” “forecast,” “outlook,” “believe,” “priority,” “anticipate,” “estimat “may,” “will,” “trend,” “target,” “strategy” and “goal,” or similar statements or variations of such terms, are intended to identif forward-looking statements, although not all forward-looking statements contain such terms.

Forward-looking statements are subject to various risks and uncertainties, which change over time, are based on management's expectations and assumptions at the time the statements are made, and are not guarantees of future results. Management's expectations and assumptions, and the continued validity of the forward-looking statements, are subject to change due to a broad range of factors affecting the national and global economies, regulatory environment and the equity, debt, currency and other financial markets, as well as factors specific to State Street and its subsidiaries, including State Street Bank. Factors that could cause changes in the expectations or assumptions on which forward-looking statements are based cannot be foreseen with certainty and include, but are not limited to:

- the financial strength of the counterparties with which we or our clients do business and to which we have investment, credit or financial exposures that our clients have as a result of our acts as their agent, including an asset manager;
- increases in the volatility of, or declines in the level of, our NII, changes in the composition or valuation of the assets recorded in our consolidated statement of condition (and our ability to measure the fair value of investment securities) and changes in the manner in which we fund those assets;
- the liquidity of the U.S. and international securities markets, particularly the markets for fixed-income securities and inter-bank credits; the liquidity of the assets on our balance sheet and changes or volatility in the sources of such funding, particularly the deposits of our clients; and demands upon our liquidity, including the liquidity demands and requirements of our clients;
- the level and volatility of interest rates, the valuation of the U.S. dollar relative to other currencies in which we record revenue or accrue expenses and the performance and volatility of securities, credit, currency and other markets in the U.S. and internationally; and the impact of monetary and fiscal policy in the U.S. and internationally on prevailing rates of interest and currency exchange rates in the markets in which we provide services to our clients;
- the credit quality, credit-agency ratings and fair values of the securities in our investment securities portfolio, a deterioration or downgrade of which could lead to other-than-temporary impairment of the respective securities and the recognition of an impairment loss in our consolidated statement of income;
- our ability to attract deposits and other low-cost, short-term funding, our ability to manage the level and pricing of such deposits and the relative portion of our deposits that are determined to be operational under regulatory guidelines and our ability to deploy deposits in a profitable manner consistent with our liquidity needs, regulatory requirements and risk profile;
- the manner and timing with which the Federal Reserve and other U.S. and foreign regulators implement or reevaluate the regulatory framework applicable to our operations (as well as changes to that framework), including implementation or modification of the Dodd-Frank Act and related stress testing and resolution planning requirements, implementation of international standards applicable to financial institutions, such as those proposed by the Basel Committee and European legislation (such as the AIFMD, UCITS, the Money Market Funds Regulation and MiFID II / MiFIR); among other consequences, these regulatory changes impact the levels of regulatory capital and

liquidity we must maintain, acceptable levels of credit exposure to third parties, margin requirements applicable to derivatives, restrictions on banking and financial activities and the manner in which

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we structure and implement our global operations and servicing relationships. In addition, our regulatory posture and related expenses have been and will continue to be affected by changes in regulatory expectations for global systemically important financial institutions applicable to, among other things, risk management, liquidity and capital planning, resolution planning, compliance programs, and changes in governmental enforcement approaches to perceived failures to comply with regulatory or legal obligations;

- adverse changes in the regulatory ratios that we are, or will be, required to meet, whether arising under the Dodd-Frank Act or implementation of international standards applicable to financial institutions, such as those proposed by the Basel Committee, or due to changes in regulatory positions, practices or regulations in jurisdictions in which we engage in banking activities, including changes in internal or external data, formulae, models, assumptions or other advanced systems used in the calculation of our capital or liquidity ratios that cause changes in those ratios as they are measured from period to period;
- requirements to obtain the prior approval or non-objection of the Federal Reserve or other U.S. and non-U.S. regulators for the use, allocation or distribution of our capital or other specific capital actions or corporate activities, including, without limitation, acquisitions, investments in subsidiaries, dividends and stock purchases, without which our growth plans, distributions to shareholders, share repurchase programs or other capital or corporate initiatives may be restricted;
- changes in law or regulation, or the enforcement of law or regulation, that may adversely affect our business activities or those of our clients or our counterparties, and the products or services that we sell, including additional or increased taxes or assessments thereon, capital adequacy requirements, margin requirements and changes that expose us to risks related to the adequacy of our controls or compliance programs;
- economic or financial market disruptions in the U.S. or internationally, including those which may result from recessions or political instability; for example, the U.K.'s decision to exit from the European Union may continue to disrupt financial markets or economic growth in Europe or potential changes in bi-lateral and multi-lateral trade agreements proposed by the U.S.;
- our ability to create cost efficiencies through changes in our operational processes and to

further digitize our processes and interfaces with our clients, any failure of which, in whole or in part, may among other things, reduce our competitive position, diminish the cost-effectiveness of our systems and processes or provide an insufficient return on our associated investment;
- our ability to promote a strong culture of risk management, operating controls, compliance oversight, ethical behavior and governance that meets our expectations and those of our clients and our regulators, and the financial, regulatory, reputation and other consequences of our failure to meet such expectations;
- the impact on our compliance and controls enhancement programs associated with the appointment of a monitor under the deferred prosecution agreement with the DOJ and compliance consultant appointed under a settlement with the SEC, including the potential for such monitor and compliance consultant to require changes to our programs or to identify other issues that require substantial expenditures, changes in our operations, or payments to clients or reporting to U.S. authorities;
- the results of our review of our billing practices, including additional findings or amounts we may be required to reimburse clients, as well as potential consequences of such review, including damage to our client relationships or our reputation and adverse actions by governmental authorities;
- the results of, and costs associated with, governmental or regulatory inquiries and investigations, litigation and similar claims, disputes, or civil or criminal proceedings;
- changes or potential changes in the amount of compensation we receive from clients for our services, and the mix of services provided by us that clients choose;
- the large institutional clients on which we focus are often able to exert considerable market influence and have diverse investment activities, and this, combined with strong competitive market forces, subjects us to significant pressure to reduce the fees we charge, to potentially significant changes in our AUCA or our AUM in the event of the acquisition or loss of a client, in whole or in part, and to potentially significant changes in our fee revenue in the event a client re-balances or changes its investment approach or otherwise re-directs assets to lower- or higher-fee asset classes;

- the potential for losses arising from our investments in sponsored investment funds;

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- the possibility that our clients will incur substantial losses in investment pools for which we act as agent, the possibility of significant reductions in the liquidity or valuation of assets underlying those pools and the potential that clients will seek to hold us liable for such losses;
- our ability to anticipate and manage the level and timing of redemptions and withdrawals from our collateral pools and other collective investment products;
- the credit agency ratings of our debt and depositary obligations and investor and client perceptions of our financial strength;
- adverse publicity, whether specific to State Street or regarding other industry participants or industry-wide factors, or other reputational harm;
- our ability to control operational risks, data security breach risks and outsourcing risks, our ability to protect our intellectual property rights, the possibility of errors in the quantitative models we use to manage our business and the possibility that our controls will prove insufficient, fail or be circumvented;
- our ability to expand our use of technology to enhance the efficiency, accuracy and reliability of our operations and our dependencies on information technology and our ability to control related risks, including cyber-crime and other threats to our information technology infrastructure and systems (including those of our third-party service providers) and their effective operation both independently and with external systems, and complexities and costs of protecting the security of such systems and data;
- changes or potential changes to the competitive environment, including changes due to regulatory and technological changes, the effects of industry consolidation and perceptions of State Street as a suitable service provider or counterparty;
- our ability to complete acquisitions, joint ventures and divestitures, including the ability to obtain regulatory approvals, the ability to arrange financing as required and the ability to satisfy closing conditions;
- the risks that our acquired businesses and joint ventures will not achieve their anticipated financial, operational and product innovation benefits or will not be integrated successfully, or that the integration will take longer than anticipated, that expected synergies will not be achieved or unexpected negative synergies or liabilities will be experienced, that client and deposit retention goals will not be met, that other regulatory or operational challenges will be experienced, and that disruptions from the transaction will harm our relationships with our clients, our employees or regulators;
- our ability to recognize evolving needs of our clients and to develop products that are responsive to such trends and profitable to us, the performance of and demand for the products and services we offer, and the potential for new products and services to impose additional costs on us and expose us to increased operational risk;
- our ability to grow revenue, manage expenses, attract and retain highly skilled people and raise the capital necessary to achieve our business goals and comply with regulatory requirements and expectations;
- changes in accounting standards and practices; and
- the impact of the U.S. tax legislation enacted in 2017, and changes in tax legislation and in the interpretation of existing tax laws by U.S. and non-U.S. tax authorities that affect the amount of taxes due.

Actual outcomes and results may differ materially from what is expressed in our forward- looking statements and from our historical financial results due to the factors discussed in this section and elsewhere in this Form 10-K or disclosed in our other SEC filings. Forward-looking statements in this Form 10-K should not be relied on as representing our expectations or beliefs as of any time subsequent to the time this Form 10-K is filed with the SEC. We undertake no obligation to revise our forward-looking statements after the time they are made. The factors discussed herein are not intended to be a complete statement of all risks and uncertainties that may affect our businesses. We cannot anticipate all developments that may adversely affect our business or operations or our consolidated results of operations, financial condition or cash flows.

Forward-looking statements should not be viewed as predictions, and should not be the primary basis on which investors evaluate State Street. Any investor in State Street should consider all risks and uncertainties disclosed in our SEC filings, including our filings under the Securities Exchange Act of 1934, in particular our annual reports on Form

10-K, our quarterly reports on Form 10-Q, and our current reports on Form 8-K, or registration statements filed under the Securities Act of 1933, all of which are accessible on the SEC's website at www.sec.gov or on the “Investor Relations” section of our corporate website at www.statestreet.com.

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Risk Factors

In the normal course of our business activities, we are exposed to a variety of risks. The following is a discussion of various risk factors applicable to State Street. Additional information about our risk management framework is included under "Risk Management" in Management's Discussion and Analysis included under Item 7 of this Form 10-K. Additional risks beyond those described in Management's Discussion and Analysis or in the following discussion may apply to our activities or operations as currently conducted, or as we may conduct them in the future, or in the markets in which we operate or may in the future operate.

Credit and Counterparty, Liquidity and Market Risks

We assume significant credit risk to counterparties, many of which are major financial institutions. These financial institutions and other counterparties may also have substantial financial dependencies with other financial institutions and sovereign entities. This credit exposure and concentration could expose us to financial loss.

The financial markets are characterized by extensive interdependencies among numerous parties, including banks, central banks, broker/dealers, insurance companies and other financial institutions. These financial institutions also include collective investment funds, such as mutual funds, UCITS and hedge funds that share these interdependencies. Many financial institutions, including collective investment funds, also hold, or are exposed to, loans, sovereign debt, fixed-income securities, derivatives, counterparty and other forms of credit risk in amounts that are material to their financial condition. As a result of our own business practices and these interdependencies, we and many of our clients have concentrated counterparty exposure to other financial institutions and collective investment funds, particularly large and complex institutions, sovereign issuers, mutual funds, UCITS and hedge funds. Although we have procedures for monitoring both individual and aggregate counterparty risk, significant individual and aggregate counterparty exposure is inherent in our business, as our focus is on servicing large institutional investors.

In the normal course of our business, we assume concentrated credit risk at the individual obligor, counterparty or group level. Such concentrations may be material and can often exceed 10% of our consolidated total shareholders' equity. Our material counterparty exposures change daily, and the counterparties or groups of related counterparties to which our risk exposure exceeds 10% of our consolidated total shareholders' equity are also variable during any reported period; however,

our largest exposures tend to be to other financial institutions.

Concentration of counterparty exposure presents significant risks to us and to our clients because the failure or perceived weakness of our counterparties (or in some cases of our clients' counterparties) has the potential to expose us to risk of financial loss. Changes in market perception of the financial strength of particular financial institutions or sovereign issuers can occur rapidly, are often based on a variety of factors and are difficult to predict.

This was observed during the financial crisis, when economic, market, political and other factors contributed to the perception of many financial institutions and sovereign issuers as being less credit worthy. This led to credit downgrades of numerous large U.S. and non-U.S. financial institutions and several sovereign issuers (which exposure stressed the perceived creditworthiness of financial institutions, many of which invest in, accept collateral in the form of, or value other transactions based on the debt or other securities issued by sovereigns). These or other factors could again contribute to similar consequences or other market risks associated with reduced levels of liquidity. As a result, we may be exposed to increased counterparty risks, either resulting from our role as principal or because of commitments we make in our capacity as agent for some of our clients.

Additional areas where we experience exposure to credit risk include:

- Short-term credit. The degree of client demand for short-term credit tends to increase during periods of market turbulence, which may expose us to further counterparty- related risks. For example, investors in collective investment vehicles for which we act as custodian may experience significant redemption activity due to adverse market or economic news. Our relationship with our clients and the nature of the settlement process for some types of payments may result in the extension of short-term credit in such circumstances. We also provide committed lines of credit to support such activity. For some types of clients, we provide credit to allow them to leverage their portfolios, which may expose us to potential loss if the client experiences investment losses or other credit difficulties.
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Industry and country risks. In addition to our exposure to financial institutions, we are from time to time exposed to concentrated credit risk at an industry or country level. This concentration risk also applies to groups of unrelated counterparties that may have similar investment strategies involving one or more particular industries, regions, or other

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characteristics. These unrelated counterparties may concurrently experience adverse effects to their performance, liquidity or reputation due to events or other factors affecting such investment strategies. Though potentially not material individually (relative to any one such counterparty), our credit exposures to such a group of counterparties could expose us to a single market or political event or a correlated set of events that, in the aggregate, could have a material adverse impact on our business.

- Subcustodian risks. Our use of unaffiliated subcustodians exposes us to credit risk, in addition to other risks, such as operational risk, dependencies on credit extensions and risks of the legal systems of the jurisdictions in which the subcustodians operate, each of which may be material. These risks are amplified due to changing regulatory requirements with respect to our financial exposures in the event those subcustodians are unable to return a client's assets, including, in some regulatory regimes, such as the E.U.'s UCITS and AIFM directives, requirements that we be responsible for resulting losses suffered by our clients.
- Settlement risks. We are exposed to settlement risks, particularly in our payments and foreign exchange activities. Those activities may lead to extension of credit and consequent losses in the event of a counterparty breach, failure to provide credit extensions or an operational error. Due to our membership in several industry clearing or settlement exchanges, we may be required to guarantee obligations and liabilities, or provide financial support, in the event that other members do not honor their obligations or default. Moreover, not all of our counterparty exposure is secured, and even when our exposure is secured, the realizable value of the collateral may have declined by the time we exercise our rights against that collateral. This risk may be particularly acute if we are required to sell the collateral into an illiquid or temporarily-impaired market or with respect to clients protected by sovereign immunity. We are exposed to risk of short-term credit or overdraft of our clients in connection with the process to facilitate settlement of trades and related foreign exchange activities, particularly when contractual settlement has been agreed with our clients. The occurrence of overdrafts at peak volatility could create significant credit exposure to our clients depending upon the value of such clients' collateral at the time.
- Securities lending and repurchase agreement indemnification. On behalf of clients enrolled in our securities lending program, we lend securities to banks, broker/dealers and other institutions. In the event of a failure of the borrower to return such securities, we typically agree to indemnify our clients for the amount by which the fair market value of those securities exceeds the proceeds of the disposition of the collateral recalled from the borrower in connection with such transaction. We also lend and borrow securities as riskless principal, and in connection with those transactions receive a security interest in securities from the borrowers of securities and advances as collateral to securities lenders. Borrowers are generally required to provide collateral equal to a contractually agreed percentage equal to or in excess of the fair market value of the loaned securities. As the fair market value of the loaned securities or collateral changes, additional collateral is provided by the borrower or collateral is returned to the borrower. In addition, our agency securities lending clients often purchase securities or other financial instruments from financial counterparties, including broker/dealers, under repurchase arrangements, frequently as a method of reinvesting the cash collateral they receive from lending their securities. Under these arrangements, the counterparty is obligated to repurchase these securities or financial instruments from the client at the same price (plus an agreed rate of return) at some point in the future. The value of the collateral is intended to exceed the counterparty's payment obligation, and collateral is adjusted daily to account for shortfall under, or excess over, the agreed-upon collateralization level. As with the securities lending program, we agree to indemnify our clients from any loss that would arise on a default by the counterparty under these repurchase arrangements if the proceeds from the disposition of the securities or other financial assets held as collateral are less than the amount of the repayment obligation by the client's counterparty. In such instances of counterparty default, for both securities lending and repurchase agreements, we, rather than our client, are exposed to the risks associated with collateral value.
- Stable value arrangements. We provide benefit-responsive contracts, known as wraps, to defined contribution plans that offer a stable value option to their participants. During the financial crisis, the book value of

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obligations under many of these contracts exceeded the market value of the underlying portfolio holdings. Concerns regarding the portfolio of investments protected by such contracts, or regarding the investment manager overseeing such an investment option, may result in redemption demands from stable value products covered by benefit-responsive contracts at a time when the portfolio's market value is less than its book value, potentially exposing us to risk of loss.

- U.S. municipal obligations remarketing credit facilities. We provide credit facilities in connection with the remarketing of U.S. municipal obligations, potentially exposing us to credit exposure to the municipalities issuing such bonds and to their increased liquidity demands. In the current economic environment, where municipalities are subject to increased investor concern, the risks associated with such businesses increase.
- Senior secured bank loans. In recent years, we have increased our investment in senior secured bank loans, both in the U.S. and in Europe. We invest in these loans to non-investment grade borrowers through participation in loan syndications in the non-investment grade lending market. We rate these loans as "speculative" under our internal risk-rating framework, and these loans have significant exposure to credit losses relative to higher-rated loans. We are therefore at a higher risk of default with respect to these investments relative to other of our investments activities. In addition, unlike other financial institutions that may have an active role in managing individual loan compliance, our investment in these loans is generally as a passive investor with limited control. As this portfolio grows and becomes more seasoned, our allowance for loan losses related to these loans may increase through additional provisions for credit losses.
- Unavailability of netting. We are generally not able to net exposures across counterparties that are affiliated entities and may not be able in all circumstances to net exposures to the same legal entity across multiple products. As a consequence, we may incur a loss in relation to one entity or product even though our exposure to an entity's affiliates or across product types is over-collateralized.

Under evolving regulatory restrictions on credit exposure we may be required to limit our exposures to specific issuers or counterparties or groups of counterparties, including financial institutions and

sovereign issuers, to levels that we may currently exceed. These credit exposure restrictions under such evolving regulations may adversely affect our businesses, may require that we expand our credit exposure to a broader range of issuers and counterparties, including issuers and counterparties that represent increased credit risk and may require that we modify our operating models or the policies and practices we use to manage our consolidated statement of condition. The effects of these considerations may increase when evaluated under a stressed environment in stress testing, including CCAR. In addition, we are an adherent to the ISDA 2015 Universal Resolution Stay Protocol and as such are subject to restrictions against the exercise of rights and remedies against fellow adherents, including other major financial institutions, in the event they or an affiliate of theirs enters into resolution. Although our overall business is subject to these factors, several of our activities are particularly sensitive to them, including our currency trading business and our securities finance business.

Given the limited number of strong counterparties in the current market, we are not able to mitigate all of our and our clients' counterparty credit risk.

Our investment securities portfolio, consolidated financial condition and consolidated results of operations could be adversely affected by changes in market factors including interest rates, credit spreads and credit performance.

Our investment securities portfolio represented approximately 41% of our total assets as of December 31, 2017. The gross interest income associated with our investment portfolio represented approximately 15% of our total gross revenue for the year ended December 31, 2017 and has represented as much as 30% of our total gross revenue in the fiscal years since 2007. As such, our consolidated financial condition and results of operations are materially exposed to the risks associated with our investment portfolio, including, without limitation, changes in interest rates, credit spreads, credit performance (including risk of default), credit ratings, our access to liquidity, foreign exchange markets, mark- to-market valuations, and our ability to profitably manage changes in repayment rates of principal with respect to these securities. Despite recent increases to interest rates in the U.S., the continued low interest-rate environment that has persisted since the financial crisis began in mid-2007 limits our ability to achieve a NIM consistent with our historical averages. Any further increases in interest rates in the U.S. have the potential to improve

NII and NIM over time. However, any such improvement could be mitigated due to a greater disparity between interest rates in the U.S. and international markets, especially to the extent that interest rates remain low

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in Europe and Japan. Higher interest rates could also reduce mark-to-market valuations further. In addition, new and proposed regulatory liquidity standards, such as the LCR, require that we maintain minimum levels of high quality liquid assets in our investment portfolio, which generally generate lower rates of return than other investment assets. This has resulted in increased levels of high quality liquid assets as a percentage of our investment portfolio and an associated negative impact on our NII and our NIM. As a result of this we may not be able to attain our historical levels of NII and NIM. For additional information regarding these liquidity requirements, refer to the "Liquidity Coverage Ratio and Net Stable Funding Ratio" section of "Supervision and Regulation" included under Item 1, Business, of this Form 10-K. We may enter into derivative transactions to hedge or manage our exposure to interest rate risk, as well as other risks, such as foreign exchange risk and credit risk. Derivative instruments that we hold for these or other purposes may not achieve their intended results and could result in unexpected losses or stresses on our liquidity or capital resources.

Our investment securities portfolio represents a greater proportion of our consolidated statement of condition and our loan and lease portfolios represent a smaller proportion (approximately 10% of our total assets as of December 31, 2017), in comparison to many other major financial institutions. In some respects, the accounting and regulatory treatment of our investment securities portfolio may be less favorable to us than a more traditional held-for-investment lending portfolio. For example, under the Basel III final rule, after-tax changes in the fair value of AFS investment securities, such as those which represent a majority of our investment portfolio, are included in tier 1 capital. Since loans held for investment are not subject to a fair value accounting framework, changes in the fair value of loans (other than incurred credit losses) are not similarly included in the determination of tier 1 capital under the Basel III final rule. Due to this differing treatment, we may experience increased variability in our tier 1 capital relative to other major financial institutions whose loan-and-lease portfolios represent a larger proportion of their consolidated total assets than ours.

Additional risks associated with our investment portfolio include:

- Asset class concentration. Our investment portfolio continues to have significant concentrations in several classes of securities, including agency residential MBS, commercial MBS and other ABS, and securities with concentrated exposure to consumers. These classes and types of securities experienced significant liquidity, valuation and credit quality deterioration

during the financial crisis that began in mid-2007. We also hold non-U.S. MBS and ABS with exposures to European countries, whose sovereign-debt markets have experienced increased stress at times since 2011 and may continue to experience stress in the future. For further information, refer to the risk factor titled "Our businesses have significant European operations, and disruptions in European economies could have an adverse effect on our consolidated results of operations or financial condition".

Further, we hold a large portfolio of U.S. state and municipal bonds. In view of the budget deficits that a number of states and municipalities currently face, the risks associated with this portfolio are significant.

- Effects of market conditions. If market conditions deteriorate, our investment portfolio could experience a decline in market value, whether due to a decline in liquidity or an increase in the yield required by investors to hold such securities, regardless of our credit view of our portfolio holdings. For example, we recorded significant losses not related to credit in connection with the consolidation of our off-balance sheet asset-backed commercial paper conduits in 2009 and the repositioning of our investment portfolio in 2010. In addition, in general, deterioration in credit quality, or changes in management's expectations regarding repayment timing or in management's investment intent to hold securities to maturity, in each case with respect to our portfolio holdings, could result in OTTI. Similarly, if a material portion of our investment portfolio were to experience credit deterioration, our capital ratios as calculated pursuant to the Basel III final rule could be adversely affected. This risk is greater with portfolios of investment securities that contain credit risk than with holdings of U.S. Treasury securities.
- Effects of interest rates. Our investment portfolio is further subject to changes in both U.S. and non-U.S. (primarily in Europe) interest rates, and could be negatively affected by changes in those rates, whether or not expected. This is particularly true in the case of a quicker-than-anticipated increase in interest rates, which would decrease market values in the near-term, or monetary policy that results in persistently low or negative rates of interest on certain

investments. The latter has been the case, for example, with respect to ECB monetary policy, including negative interest rates in

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some jurisdictions, with associated negative effects on our investment portfolio reinvestment, NII and NIM. The effect on our NII has been exacerbated by the effects in recent fiscal years, but not in 2017, of the strong U.S. dollar relative to other currencies, particularly the Euro. If European interest rates remain low or decrease and the U.S. dollar strengthens relative to the Euro, the negative effects on our NII likely will continue or increase. The overall level of NII can also be impacted by the size of our deposit base, as further increases in interest rates could lead to reduced deposit levels and also lower overall NII. Further, a reduction in deposit levels could increase the requirements under the regulatory liquidity standards requiring us to invest a greater proportion of our investment portfolio holdings in high quality liquid assets that have lower yields than other investable assets. See also, “Our business activities expose us to interest-rate risk” below.

Our business activities expose us to interest-rate risk.

In our business activities, we assume interest-rate risk by investing short-term deposits received from our clients in our investment portfolio of longer- and intermediate-term assets. Our NII and NIM are affected by among other things, the levels of interest rates in global markets, changes in the relationship between short- and long-term interest rates, the direction and speed of interest-rate changes and the asset and liability spreads relative to the currency and geographic mix of our interest-earning assets and interest-bearing liabilities. These factors are influenced, among other things, by a variety of economic and market forces and expectations, including monetary policy and other activities of central banks, such as the Federal Reserve and ECB, that we do not control. Our ability to anticipate changes in these factors or to hedge the related on- and off- balance sheet exposures, and the cost of any such hedging activity, can significantly influence the success of our asset-and-liability management activities and the resulting level of our NII and NIM. The impact of changes in interest rates and related factors will depend on the relative duration and fixed- or floating- rate nature of our assets and liabilities. Sustained lower interest rates, a flat or inverted yield curve and narrow credit spreads generally have a constraining effect on our NII. In addition, our ability to change deposit rates in response to changes in interest rates and other market and related factors is limited by client relationship considerations. For additional information about the effects on interest rates on our business, refer to “Financial Condition - Market Risk Management - Asset-and-Liability

Management Activities” in Management's Discussion and Analysis included under Item 7 of this Form 10-K.

If we are unable to effectively manage our liquidity, including by continuously attracting deposits and other short-term funding, our consolidated financial condition, including our regulatory capital ratios, our consolidated results of operations and our business prospects, could be adversely affected.

Liquidity management, including on an intra-day basis, is critical to the management of our consolidated statement of condition and to our ability to service our client base. We generally use our liquidity to:

- meet clients' demands for return of their deposits;
- extend credit to our clients in connection with our investor services businesses; and
- fund the pool of long- and intermediate-term assets that are included in the investment securities carried in our consolidated statement of condition.

Because the demand for credit by our clients is difficult to predict and control, and may be at its peak at times of disruption in the securities markets, and because the average maturity of our investment securities portfolio is longer than the contractual maturity of our client deposit base, we need to continuously attract, and are dependent on access to, various sources of short-term funding. During periods of market disruption, the level of client deposits held by us has in recent years tended to increase; however, since such deposits are considered to be transitory, we have historically deposited so-called excess deposits with U.S. and non-U.S. central banks and in other highly liquid but low-yielding instruments. These levels of excess client deposits, as a consequence, have increased our NII but have adversely affected our NIM.

In managing our liquidity, our primary source of short-term funding is client deposits, which are predominantly transaction-based deposits by institutional investors. Our ability to continue to attract these deposits, and other short-term funding sources such as certificates of deposit, is subject to variability based on a number of factors, including volume and volatility in global financial markets, the relative interest rates that we are prepared to pay for these deposits, the perception of safety of these deposits or short-term obligations relative to alternative short-term investments available to our clients, including the capital markets, and the classification of certain deposits for regulatory purposes and related discussions we may have from time to time with clients regarding better balancing our clients' cash management needs with our economic and regulatory objectives.

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The Parent Company is a non-operating holding company and generally maintains only limited cash and other liquid resources at any time primarily to meet anticipated near-term obligations. To effectively manage our liquidity we routinely transfer assets among affiliated entities, subsidiaries and branches. Internal or external factors, such as regulatory requirements and standards, including resolution planning, influence our liquidity management and may limit our ability to effectively transfer liquidity internally which could, among other things, restrict our ability to fund operations, dividends or stock repurchases, require us to seek external and potentially more costly capital and impact our liquidity position.

In addition, while not obligations of State Street, the investment products that we manage for third parties may be exposed to liquidity risks. These products may be funded on a short-term basis, or the clients participating in these products may have a right to the return of cash or assets on limited notice. These business activities include, among others, securities finance collateral pools, money market and other short-term investment funds and liquidity facilities utilized in connection with municipal bond programs. If clients demand a return of their cash or assets, particularly on limited notice, and these investment pools do not have the liquidity to support those demands, we could be forced to sell investment securities held by these asset pools at unfavorable prices, damaging our reputation as an asset manager and potentially exposing us to claims related to our management of the pools.

The availability and cost of credit in short-term markets are highly dependent on the markets' perception of our liquidity and creditworthiness. Our efforts to monitor and manage our liquidity risk, including on an intra-day basis, may not be successful or sufficient to deal with dramatic or unanticipated changes in the global securities markets or other event-driven reductions in liquidity. As a result of such events, among other things, our cost of funds may increase, thereby reducing our NII, or we may need to dispose of a portion of our investment securities portfolio, which, depending on market conditions, could result in a loss from such sales of investment securities being recorded in our consolidated statement of income.

Our business and capital-related activities, including our ability to return capital to shareholders and purchase our capital stock, may be adversely affected by our implementation of regulatory capital and liquidity standards that we must meet or in the event our capital plan or post-stress capital ratios are determined to be insufficient as a result of regulatory capital stress testing.

Basel III and Dodd-Frank Act

We are required to calculate our risk-based capital ratios under both the Basel III advanced approaches and the Basel III standardized approach, and we are subject to the more stringent of the risk-based capital ratios calculated under the advanced approaches and those calculated under the standardized approach in the assessment of our capital adequacy. In implementing certain aspects of these capital regulations, we are making interpretations of the regulatory intent. The Federal Reserve may determine that we are not in compliance with the capital rules and may require us to take actions to come into compliance that could adversely affect our business operations, our regulatory capital structure, our capital ratios or our financial performance, or otherwise restrict our growth plans or strategies. In addition, banking regulators could change the Basel III final rule or their interpretations as they apply to us, including changes to these standards or interpretations made in regulations implementing provisions of the Dodd-Frank Act, which could adversely affect us and our ability to comply with the Basel III final rule.

Along with the Basel III final rule, banking regulators also introduced additional requirements, such as the SLR, LCR and the proposed NSFR.

For example, the specification of the various elements of the NSFR in the final rule could have a material effect on our business activities, including the management and composition of our investment securities portfolio and our ability to extend credit through committed facilities, loans to our clients or our principal securities lending activities. In addition, further capital and liquidity requirements are under consideration by U.S. and international banking regulators. Any of these rules could have a material effect on our capital and liquidity planning and related activities, including the management and composition of our investment securities portfolio and our ability to extend committed contingent credit facilities to our clients. The full effects of these rules, and of other regulatory initiatives related to capital or liquidity, on State Street and State Street Bank are subject to further regulatory guidance, action or rule-making.

Systemic Importance

As a G-SIB, we generally expect to be held to the most stringent provisions under the Basel III final rule. For example, we are subject to the Federal Reserve's final rules on the implementation of capital surcharges for U.S. G-SIBs, and on TLAC, LTD and clean holding company requirements for U.S. G-SIBs which we refer to as the "TLAC final rule". For additional information on these requirements, refer to the “Regulatory Capital Adequacy and Liquidity Standards” section under “Supervision and

Regulation” included under Item 1, Business. of this Form 10-K.
Not all of our competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of our competitors are not subject to the same additional capital requirements.

CCAR

We are required by the Federal Reserve to conduct periodic stress testing of our business operations and to develop an annual capital plan as part of the Federal Reserve's Comprehensive Capital Analysis and Review (CCAR) process. That process, the severity and other characteristics of which may evolve from year-to-year, is used by the Federal Reserve to evaluate our management of capital, the adequacy of our regulatory capital and the requirement for us to maintain capital above our minimum regulatory capital requirements under stressed economic conditions. The results of the CCAR process are difficult to predict due, among other things, to the Federal Reserve's use of proprietary stress models that differ from our internal models. The amounts of the planned capital actions in our capital plan in any year, including stock purchases and dividends, may be substantially reduced from the amounts included in prior capital plans. These reductions may reflect changes in one or more different factors, including but not limited to our business prospects and related capital needs, our capital position, proposed acquisitions or other uses of capital, the models used in our capital planning process, the supervisory models used by the Federal Reserve to stress our balance sheet, the Federal Reserve’s hypothetical economic scenarios for the CCAR process, the Federal Reserve’s CCAR instructions and the Federal Reserve’s supervisory expectations for the capital planning process. The Federal Reserve may object to our capital plan, or we may decide that we need to adjust our capital plan to avoid an objection by the Federal Reserve, potentially requiring us, as applicable, to revise our stress-testing or capital management approaches, resubmit our capital plan or postpone, cancel or alter our planned capital actions. In addition, changes in our business strategy, merger or acquisition activity or uses of capital could result in a change in our capital plan and its associated capital actions, and may require us to resubmit our capital plan to the Federal Reserve for its non-objection. We are also subject to asset quality reviews and stress testing by the ECB and in the future we may be subject to similar reviews and testing by other regulators.

Our implementation of capital and liquidity requirements, including our capital plan, may not be approved or may be objected to by the Federal Reserve, and the Federal Reserve may impose capital requirements in excess of our expectations or require us to maintain levels of liquidity that are higher than we may expect and which may adversely affect our consolidated revenues. In the event that our implementation of capital and liquidity requirements under regulatory initiatives or our current capital structure are determined not to conform with current and future capital requirements, our ability to deploy capital in the operation of our business or our ability to distribute capital to shareholders or to purchase our capital stock may be constrained, and our business may be adversely affected. In addition, we may choose to forgo business opportunities, due to their impact on our capital plan or stress tests, including CCAR. Likewise, in the event that regulators in other jurisdictions in which we have banking subsidiaries determine that our capital or liquidity levels do not conform with current and future regulatory requirements, our ability to deploy capital, our levels of liquidity or our business operations in those jurisdictions may be adversely affected.

For additional information about the above matters, refer to “Business - Supervision and Regulation - Regulatory Capital Adequacy and Liquidity Standards” included under Item 1, Business, and “Financial Condition - Capital” in Management's Discussion and Analysis included under Item 7 of this Form 10-K.

Fee revenue represents a significant majority of our consolidated revenue and is subject to decline, among other things, in the event of a reduction in, or changes to, the level or type of investment activity by our clients.

We rely primarily on fee-based services to derive our revenue. This contrasts with commercial banks that may rely more heavily on interest-based sources of revenue, such as loans. During 2017 total fee revenue represented approximately 80% of our total revenue. Fee revenue generated by our investment servicing and investment management businesses is augmented by trading services, securities finance and processing fees and other revenue. The level of these fees is influenced by several factors, including the mix and volume of our AUCA and our AUM, the value and type of securities positions held (with respect to assets under custody) and the volume of portfolio transactions, and the types of products and services used by our clients. For example, reductions in the level of economic and capital markets activity tend to have a negative effect on our fee revenue, as these often result in reduced asset valuations and transaction volumes. They may also result in investor preference trends towards asset classes and markets deemed more secure,

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such as cash or non-emerging markets, with respect to which our fee rates are often lower.

In addition, our clients include institutional investors, such as mutual funds, collective investment funds, UCITS, hedge funds and other investment pools, corporate and public retirement plans, insurance companies, foundations, endowments and investment managers. Economic, market or other factors that reduce the level or rates of savings in or with those institutions, either through reductions in financial asset valuations or through changes in investor preferences, could materially reduce our fee revenue and have a material adverse effect on our consolidated results of operations.

Our businesses have significant European operations, and disruptions in European economies could have an adverse effect on our consolidated results of operations or financial condition.

While the European economy made some progress towards recovery during 2017, concerns remain with regard to sovereign debt sustainability, interdependencies among financial institutions and sovereigns, the impacts of the British exit or potential other exits from the European Union, the planned unwinding of European Central Bank quantitative easing measures and political and other risks, such as relating to populism, refugee migration or terrorist threats, in one or more European nations. In addition, both divergence between the pace of monetary tightening in the U.S. and Europe and the recent strength of the Euro have led to increased uncertainty around the sustainability of the economic progress made in 2017 in Europe. Given the scope of our European operations, economic or market uncertainty, volatility, illiquidity or disruption resulting from these and related factors could have a material adverse impact on our consolidated results of operations or financial condition.

Geopolitical and economic conditions and developments could adversely affect us, particularly if we face increased uncertainty and unpredictability in managing our businesses.

Global credit and other financial markets can suffer from substantial volatility, illiquidity and disruption, particularly in the wake of geopolitical disruptions and as global monetary authorities begin to withdraw monetary policy easing measures. If such volatility, illiquidity or disruption were to result in an adverse economic environment in the U.S. or internationally or result in a lack of confidence in the financial stability of major developed and emerging markets, such developments could have an adverse affect on our business, as well as the businesses of our clients and our significant counterparties and could also increase the difficulty and unpredictability of aligning our business strategies, our infrastructure

and our operating costs in light of current and future market and economic conditions. These risks could be compounded by tighter monetary conditions, restrictions on free trade and political uncertainty in the U.S. and internationally.

Market disruptions can adversely affect our consolidated results of operations if the value of AUCA or AUM decline, while the costs of providing the related services remain constant or increase. These factors could reduce the profitability of our asset-based fee revenue and could also adversely affect our transaction-based revenue, such as revenues from securities finance and foreign exchange activities, and the volume of transactions that we execute for or with our clients. Further, the degree of volatility in foreign exchange rates can affect our foreign exchange trading revenue. In general, increased currency volatility tends to increase our market risk but also increases our opportunity to generate foreign exchange revenue. Conversely, periods of lower currency volatility tend to decrease our market risk but also decrease our foreign exchange revenue.

In addition, as our business grows globally and a significant percentage of our revenue is earned (and of our expenses paid) in currencies other than U.S. dollars, our exposure to foreign currency volatility could affect our levels of consolidated revenue, our consolidated expenses and our consolidated results of operations, as well as the value of our investment in our non-U.S. operations and our investment portfolio holdings. The extent to which changes in the strength of the U.S. dollar relative to other currencies affect our consolidated results of operations, including the degree of any offset between increases or decreases to both revenue and expenses, will depend upon the nature and scope of our operations and activities in the relevant jurisdictions during the relevant periods, which may vary from period to period.

As our product offerings expand, in part as we seek to take advantage of perceived opportunities arising under various regulatory reforms and resulting market changes, the degree of our exposure to various market and credit risks will evolve, potentially resulting in greater revenue volatility. We also will need to make additional investments to develop the operational infrastructure and to enhance our compliance and risk management capabilities to support these businesses, which may increase the operating expenses of such businesses or, if our control environment fails to keep pace with product expansion, result in increased risk of loss from such businesses.

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We may need to raise additional capital or debt in the future, which may not be available to us or may only be available on unfavorable terms.

We may need to raise additional capital in order to maintain our credit ratings, in response to regulatory changes, including capital rules, or for other purposes, including financing acquisitions and joint ventures. In particular, the Federal Reserve's TLAC final rule, which goes into effect on January 1, 2019, will require State Street to maintain a minimum amount of eligible LTD outstanding, and we may need to issue more long-term debt in order to meet the minimum eligible LTD requirement.

However, our ability to access the capital markets, if needed, on a timely basis or at all will depend on a number of factors, such as the state of the financial markets and securities law requirements and standards. In the event of rising interest rates, disruptions in financial markets, negative perceptions of our business or our financial strength, or other factors that would increase our cost of borrowing, we cannot be sure of our ability to raise additional capital, if needed, on terms acceptable to us. Any diminished ability to raise additional capital, if needed, could adversely affect our business and our ability to implement our business plan, capital plan and strategic goals, including the financing of acquisitions and joint ventures and our efforts to maintain regulatory compliance.

Any downgrades in our credit ratings, or an actual or perceived reduction in our financial strength, could adversely affect our borrowing costs, capital costs and liquidity and cause reputational harm.

Major independent rating agencies publish credit ratings for our debt obligations based on their evaluation of a number of factors, some of which relate to our performance and other corporate developments, including financings, acquisitions and joint ventures, and some of which relate to general industry conditions. We anticipate that the rating agencies will continue to review our ratings regularly based on our consolidated results of operations and developments in our businesses, including regulatory considerations such as resolution planning. One or more of the major independent credit rating agencies have in the past downgraded, and may in the future downgrade, our credit ratings, or have negatively revised their outlook for our credit ratings. The current market and regulatory environment and our exposure to financial institutions and other counterparties, including sovereign entities, increase the risk that we may not maintain our current ratings, and we cannot provide assurance that we will continue to maintain our current credit ratings. Downgrades in our credit ratings may adversely affect our borrowing costs, our capital costs and our ability

to raise capital and, in turn, our liquidity. A failure to maintain an acceptable credit rating may also preclude us from being competitive in various products.

Additionally, our counterparties, as well as our clients, rely on our financial strength and stability and evaluate the risks of doing business with us. If we experience diminished financial strength or stability, actual or perceived, including the effects of market or regulatory developments, our announced or rumored business developments or consolidated results of operations, a decline in our stock price or a reduced credit rating, our counterparties may be less willing to enter into transactions, secured or unsecured, with us; our clients may reduce or place limits on the level of services we provide them or seek other service providers; or our prospective clients may select other service providers, all of which may have adverse effects on our reputation.

The risk that we may be perceived as less creditworthy relative to other market participants is higher in the current market environment, in which the consolidation, and in some instances failure, of financial institutions, including major global financial institutions, have resulted in a smaller number of much larger counterparties and competitors. If our counterparties perceive us to be a less viable counterparty, our ability to enter into financial transactions on terms acceptable to us or our clients, on our or our clients' behalf, will be materially compromised. If our clients reduce their deposits with us or select other service providers for all or a portion of the services we provide to them, our revenues will decrease accordingly.

Operational, Business and Reputational Risks

We face extensive and changing government regulation in the U.S. and in foreign jurisdictions in which we operate, which may increase our costs and expose us to risks related to compliance.

Most of our businesses are subject to extensive regulation by multiple regulatory bodies, and many of the clients to which we provide services are themselves subject to a broad range of regulatory requirements. These regulations may affect the scope of, and the manner and terms of delivery of, our services. As a financial institution with substantial international operations, we are subject to extensive regulation and supervisory oversight, both inside and outside of the U.S. This regulation and supervisory oversight affects, among other things, the scope of our activities and client services, our capital and organizational structure, our ability to fund the operations of our subsidiaries, our lending practices, our dividend policy, our common stock purchase actions, the manner in which we market our services, our acquisition activities and our interactions with

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foreign regulatory agencies and officials.
In particular, State Street is registered with the Federal Reserve as a bank holding company pursuant to the Bank Holding Company Act of 1956. The Bank Holding Company Act generally limits the activities in which we and our non-banking subsidiaries may engage to managing or controlling banks and to activities considered to be closely related to banking. As a bank holding company that has elected to be treated as a financial holding company under the Bank Holding Company Act, State Street and some of our non-banking subsidiaries may also engage in a broader range of activities considered to be “financial in nature.” Financial holding company status may be denied if State Street and its banking subsidiaries do not remain well capitalized and well managed or fail to comply with Community Reinvestment Act obligations. Currently, under the Bank Holding Company Act, we may not be able to engage in new activities or acquire shares or control of other businesses.
The U.S. President has issued an executive order that sets forth principles for the reform of the federal financial regulatory framework, and the Republican majority in Congress has also suggested an agenda for financial regulatory reform. It is too early to assess whether there will be any major changes in the regulatory environment or a rebalancing of the post financial crisis framework and what the impact will be on our results of operations or financial condition, including, without limitation, increased expenses or changes in the demand for our services, or on the U.S.-domestic or global economies or financial markets. We expect that our business will remain subject to extensive regulation and supervision. Several other aspects of the regulatory environment in which we operate, and related risks, are discussed below. Additional information is provided under "Supervision and Regulation” included under Item 1, Business, of this Form 10-K.
Resolution Planning
State Street, like other bank holding companies with total consolidated assets of $50 billion or more, periodically submits a plan for rapid and orderly resolution in the event of material financial distress or failure commonly referred to as a resolution plan or a living will to the Federal Reserve and the FDIC under Section 165(d) of the Dodd-Frank Act. Through resolution planning, we seek, in the event of insolvency, to maintain State Street Bank’s role as a key infrastructure provider within the financial system, while minimizing risk to the financial system and maximizing value for the benefit of our stakeholders. Significant management attention and resources are required in an effort to meet regulatory expectations

with respect to resolution planning.
In the event of material financial distress or failure, our preferred resolution strategy is the SPOE Strategy. Our resolution plan, including our implementation of the SPOE strategy with a secured support agreement, involves important risks, including that: (1) the SPOE Strategy and the obligations under the support agreement may result in the recapitalization of State Street Bank and the commencement of bankruptcy proceedings by the Parent Company at an earlier stage of financial stress than might otherwise occur without such mechanisms in place; (2) an expected effect of the SPOE Strategy, together with applicable TLAC regulatory requirements, is that State Street’s losses will be imposed on Parent Company shareholders and the holders of long-term debt and other forms of TLAC securities currently outstanding or issued in the future by the Parent Company, as well as on any other Parent Company creditors, before any of its losses are imposed on the holders of the debt securities of certain of the Parent Company’s operating subsidiaries or any of their depositors or creditors or before U.S. taxpayers are put at risk; (3) there can be no assurance that there would be sufficient recapitalization resources available to ensure that State Street Bank and our other material entities are adequately capitalized following the triggering of the requirements to provide capital and/or liquidity under the support agreement; and (4) there can be no assurance that credit rating agencies, in response to our resolution plan or the support agreement, will not downgrade, place on negative watch or change their outlook on our debt credit ratings, generally or on specific debt securities. Additional information about the SPOE Strategy, including related risks, is provided under "Resolution Planning" included under Item 1, Business, of this Form 10-K.
Systemic Importance
Our qualification in the U.S. as a SIFI, and our designation by the FSB as a G-SIB, to which certain regulatory capital surcharges may apply subjects us to incrementally higher capital and prudential requirements, increased scrutiny of our activities and potential further regulatory requirements or increased regulatory expectations than those applicable

to some of the financial institutions with which we compete as a custodian or asset manager. This qualification and designation also has significantly increased, and may continue to increase, our expenses associated with regulatory compliance, including personnel and systems, as well as implementation and related costs to enhance our programs.
Global and Non-U.S. Regulatory Requirements
The breadth of our business activities, together with the scope of our global operations and varying

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business practices in relevant jurisdictions, increase the complexity and costs of meeting our regulatory compliance obligations, including in areas that are receiving significant regulatory scrutiny. We are, therefore, subject to related risks of non-compliance, including fines, penalties, lawsuits, regulatory sanctions, difficulties in obtaining governmental approvals, limitations on our business activities or reputational harm, any of which may be significant. For example, the global nature of our client base requires us to comply with complex laws and regulations of multiple jurisdictions relating to economic sanctions and money laundering. In addition, we are required to comply not only with the U.S. Foreign Corrupt Practices Act, but also with the applicable anti-corruption laws of other jurisdictions in which we operate. Further, our global operating model requires we comply with outsourcing oversight requirements, including with respect to affiliated entities, and data security standards of multiple jurisdictions. Regulatory scrutiny of compliance with these and other laws and regulations is increasing. State Street faces sometimes inconsistent laws and regulations across the various jurisdictions in which we operate. The evolving regulatory landscape may interfere with our ability to conduct our operations, with our pursuit of a common global operating model or with our ability to compete effectively with other financial institutions operating in those jurisdictions or which may be subject to different regulatory requirements than apply to us. In particular, non-U.S. regulations and initiatives that may be inconsistent or conflict with current or proposed regulations in the U.S. could create increased compliance and other costs that would adversely affect our business, operations or profitability. Geopolitical events such as the U.K.'s planned exit from the European Union also have the potential to increase the complexity and cost of regulatory compliance.

In addition to U.S. regulatory initiatives we are further affected by non-U.S. regulatory initiatives, including, but not limited to, the AIFMD, the BRRD, the EMIR, GDPR, the UCITS directives, the Money Market Funds Regulation, MiFID II and MiFIR and the proposed E.U. risk reduction package. Recent, proposed or potential regulations in the U.S. and E.U. with respect to money market funds, short-term wholesale funding, such as repurchase agreements or securities lending, or other "shadow banking" activities, could also adversely affect not only our own operations but also the operations of the clients to which we provide services. In the E.U., the AIFMD and UCITS V increase the responsibilities and potential liabilities of custodians and depositories to certain of their clients for asset losses. EMIR requires the reporting of all derivatives to a trade repository, the mandatory clearing of certain derivatives trades via a central counterparty

(including the exchange of margin) and risk mitigation techniques for derivatives not cleared via a central counterparty. State Street is likely to become indirectly subject to EMIR's risk mitigation obligations when it transacts with E.U. counterparties. EMIR will continue to impact our business activities, and increase costs, in various ways, some of which may be adverse. Further, the European Commission's proposal to introduce a proposed financial transaction tax or similar proposals elsewhere, if adopted, could materially affect the location and volume of financial transactions or otherwise alter the conduct of financial activities, any of which could have a material adverse effect on our business and on our consolidated results of operations or financial condition.

Consequences of Regulatory Environment and Compliance Risks

Domestic and international regulatory reform could limit our ability to pursue certain business opportunities, increase our regulatory capital requirements, alter the risk profile of certain of our core activities and impose additional costs on us, otherwise adversely affect our business, our consolidated results of operations or financial condition and have other negative consequences, including a reduction of our credit ratings. Different countries may respond to the market and economic environment in different and potentially conflicting manners, which could increase the cost of compliance for us.

The evolving regulatory environment, including changes to existing regulations and the introduction of new regulations, may also contribute to decisions we may make to suspend, reduce or withdraw from existing businesses, activities, markets or initiatives. In addition to potential lost revenue associated with any such suspensions, reductions or withdrawals, any such suspensions, reductions or withdrawals may result in significant restructuring or related costs or exposures.

If we do not comply with governmental regulations, we may be subject to fines, penalties, lawsuits, delays, or difficulties in obtaining regulatory approvals or restrictions on our business activities or harm to our reputation, which may significantly and adversely affect our business operations and, in turn, our consolidated results of operations. The willingness of regulatory authorities to impose meaningful sanctions, and the level of fines and penalties imposed in connection with regulatory violations, have increased substantially since the financial crisis. Regulatory agencies may, at times, limit our ability to disclose their findings, related actions or remedial measures. Similarly, many of our clients are subject to significant regulatory requirements and retain our services in order for us to assist them in complying with those legal

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requirements. Changes in these regulations can significantly affect the services that we are asked to provide, as well as our costs.

Adverse publicity and damage to our reputation arising from the failure or perceived failure to comply with legal, regulatory or contractual requirements could affect our ability to attract and retain clients. If we cause clients to fail to comply with these regulatory requirements, we may be liable to them for losses and expenses that they incur. In recent years, regulatory oversight and enforcement have increased substantially, imposing additional costs and increasing the potential risks associated with our operations. If this regulatory trend continues, it could continue to adversely affect our operations and, in turn, our consolidated results of operations and financial condition.

For additional information, see the risk factor below, “Our businesses may be adversely affected by government enforcement and litigation.”

Our calculations of credit, market and operational risk exposures, total risk-weighted assets and capital ratios for regulatory purposes depend on data inputs, formulae, models, correlations and assumptions that are subject to changes over time, which changes, in addition to our consolidated financial results, could materially impact our risk exposures, our total risk- weighted assets and our capital ratios from period to period.

To calculate our credit, market and operational risk exposures, our total risk-weighted assets and our capital ratios for regulatory purposes, the Basel III final rule involves the use of current and historical data, including our own loss data and similar information from other industry participants, market volatility measures, interest rates and spreads, asset valuations, credit exposures and the creditworthiness of our counterparties. These calculations also involve the use of quantitative formulae, statistical models, historical correlations and significant assumptions. We refer to the data, formulae, models, correlations and assumptions, as well as our related internal processes, as our “advanced systems.” While our advanced systems are generally quantitative in nature, significant components involve the exercise of judgment based, among other factors, on our and the financial services industry's evolving experience. Any of these judgments or other elements of our advanced systems may not, individually or collectively, precisely represent or calculate the scenarios, circumstances, outputs or other results for which they are designed or intended. Collectively, they represent only our estimate of associated risk.

In addition, our advanced systems are subject to update and periodic revalidation in response to changes in our business activities and our historical

experiences, forces and events experienced by the market broadly or by individual financial institutions, changes in regulations and regulatory interpretations and other factors, and are also subject to continuing regulatory review and approval. For example, a significant operational loss experienced by another financial institution, even if we do not experience a related loss, could result in a material change in the output of our advanced systems and a corresponding material change in our risk exposures, our total risk-weighted assets and our capital ratios compared to prior periods. An operational loss that we experience could also result in a material change in our capital requirements for operational risk under the advanced approaches, depending on the severity of the loss event, its characterization among the seven Basel-defined UOMs, and the stability of the distributional approach for a particular UOM, and without direct correlation to the effects of the loss event, or the timing of such effects, on our results of operations. Due to the influence of changes in our advanced systems, whether resulting from changes in data inputs, regulation or regulatory supervision or interpretation, State Street-specific or more general market, or individual financial institution-specific, activities or experiences, or other updates or factors, we expect that our advanced systems and our credit, market and operational risk exposures, our total risk- weighted assets and our capital ratios calculated under the Basel III final rule will change, and may be volatile, over time, and that those latter changes or volatility could be material as calculated and measured from period to period.

We are subject to enhanced external oversight as a result of certain agreements entered into in connection with the resolution of prior regulatory or governmental matters.

In June 2015, we entered into a written agreement with the Federal Reserve and the Massachusetts Division of Banks relating to deficiencies identified in our compliance programs with the requirements of the Bank Secrecy Act, AML regulations and U.S. economic sanctions regulations promulgated by OFAC. As part of this agreement, we have been required to, among other things, implement improvements to our compliance programs and to retain an independent firm to conduct a review of account and transaction activity to evaluate whether any suspicious activity was not previously reported.

Separately, in connection with the resolution of certain proceedings relating to our having charged six clients of our U.K. transition management business during 2010 and 2011 amounts in excess of the contractual terms, in January 2017, we entered into a deferred prosecution agreement with the Department of Justice and the United States Attorney for the District of Massachusetts under which we agreed to

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retain an independent compliance and ethics monitor for a term of three years (subject to extension) who will, among other things, review and monitor the effectiveness of our compliance controls and business ethics and make related recommendations, and in September 2017, we entered into a settlement agreement with the SEC that also requires us to retain an independent ethics and compliance consultant for a one year period. We have retained a monitor who is fulfilling our obligations under both the deferred prosecution agreement and the SEC settlement. Under the deferred prosecution agreement we also have a heightened obligation promptly to report issues involving potential or alleged fraudulent activities to the Department of Justice.

As a result of the enhanced inspections and monitoring activities to which we are subject under these agreements, governmental authorities may identify areas in which we may need to take actions, which may be significant, to enhance our regulatory compliance or risk management practices. Such remedial actions may entail significant cost, management attention, and systems development and such efforts may affect our ability to expand our business until such remedial actions are completed. These actions may be in addition to remedial measures required by the Federal Reserve and other financial regulators following examinations as a result of increased prudential expectations regarding our compliance programs, culture and risk management. Our failure to implement enhanced compliance and risk management procedures in a manner and in a time frame deemed to be responsive by the applicable regulatory authority could adversely impact our relationship with such regulatory authority and could lead to restrictions on our activities or other sanctions. Moreover, the identification of new or additional facts and circumstances suggesting inappropriate or non-compliant conduct, whether identified by the monitor or a regulatory authority, in the course of an inspection, or independently by us could lead to new governmental proceedings or the re-opening of matters that were previously resolved. The presence of the monitor, as well as governmental programs rewarding whistleblowing, may also increase the instances of current or former employees alleging that certain practices are inconsistent with our legal or regulatory obligations.

Our businesses may be adversely affected by government enforcement and litigation.

The businesses in which we operate are highly-regulated and subject to extensive external scrutiny that may be directed generally to participants in the businesses or markets in which we are involved or may be specifically directed at us, including as a result of whistleblower and qui tam claims. In the course of our business, we are frequently subject to various regulatory, governmental and law

enforcement inquiries, investigative demands and subpoenas, and from time to time, our clients, or the government on its own behalf or on behalf of our clients or others, make claims and take legal action relating to, among other things, our performance of our fiduciary, contractual or regulatory responsibilities. Often, the announcement of any such matters, or of any settlement of a claim or action, whether it involves us or others in our industry, may spur the initiation of similar claims by other clients or governmental parties. Regulatory authorities have, and are likely to continue to, initiate cross industry reviews when a material issue is identified at a financial institution. Such inquiries involve costs and management time and may lead to proceedings relating to our own activities.

Regardless of the outcome of any governmental enforcement or litigation matter, responding to such matters is time-consuming and expensive and can divert the attention of senior management. Governmental enforcement and litigation matters can involve claims for disgorgement, demands for substantial monetary damages, the imposition of civil or criminal penalties, and the imposition of remedial sanctions or other required changes in our business practices, any of which could result in increased expenses, loss of client demand for our products or services, or harm to our reputation. The exposure associated with any proceedings that may be threatened, commenced or filed against us could have a material adverse effect on our consolidated results of operations for the period in which we establish a reserve with respect to such potential liability or upon our reputation. In government settlements since the financial crisis, the fines imposed by authorities have increased substantially and may exceed in some cases the profit earned or harm caused by the regulatory or other breach. For example, in connection with the resolution of the U.K. transition management matter, we agreed to pay a fine of £22.9 million (approximately $37.8 million) to the FCA in 2014 and fines of $32.3 million to each of the Department of Justice and the SEC in 2017. As a further example, we paid an aggregate of $575 million in 2016 to resolve a series of investigations and governmental and private claims alleging that our indirect foreign exchange rates prior to 2008 were not adequately disclosed or were otherwise improper.

These matters have also resulted in regulatory focus on the manner in which we charge clients and related disclosures. This focus may lead to increased and prolonged governmental inquiries and client, qui tam and whistleblower claims associated with the amount and disclosure of compensation we receive for our products and services.
Moreover, U.S and certain international governmental authorities have increasingly brought criminal actions against financial institutions, and

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criminal prosecutors have increasingly sought and obtained criminal guilty pleas, deferred prosecution agreements or other criminal sanctions from financial institutions. For example, in 2017 we entered into a deferred prosecution agreement with the U.S. Department of Justice in connection with the resolution of the U.K transition management matter, and such agreement could increase the likelihood that governmental authorities will seek criminal sanctions against us in pending or future legal proceedings. See "We are subject to various legal proceedings relating to the manner in which we have invoiced certain expenses, and the outcome of such proceedings could materially adversely affect our results of operations or harm our business or reputation."

In many cases, we are required or may choose to report inappropriate or non-compliant conduct to the authorities, and our failure or delay to do so may represent an independent regulatory violation or be treated as an indication of non-cooperation with governmental authorities. Even when we promptly report a matter, we may nonetheless experience regulatory fines, liabilities to clients, harm to our reputation or other adverse effects. Moreover, our settlement or other resolution of any matter with any one or more regulators or other applicable party may not forestall other regulators or parties in the same or other jurisdictions from pursuing a claim or other action against us with respect to the same or a similar matter.

For more information about current contingencies relating to legal proceedings, see Note 13 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K. The resolution of certain pending or potential legal or regulatory matters could have a material adverse effect on our consolidated results of operations for the period in which the relevant matter is resolved or an accrual is determined to be required, on our consolidated financial condition or on our reputation.

In view of the inherent difficulty of predicting the outcome of legal and regulatory matters, we cannot provide assurance as to the outcome of any pending or potential matter or, if determined adversely against us, the costs associated with any such matter, particularly where the claimant seeks very large or indeterminate damages or where the matter presents novel legal theories, involves a large number of parties, involves the discretion of governmental authorities in seeking sanctions or negotiated resolution or is at a preliminary stage. We may be unable to accurately estimate our exposure to the risks of legal and regulatory contingencies when we record reserves for probable and estimable loss contingencies. As a result, any reserves we establish may not be sufficient to cover our actual financial

exposure. Similarly, our estimates of the aggregate range of reasonably possible loss for legal and regulatory contingencies are based upon then-available information and are subject to significant judgment and a variety of assumptions and known and unknown uncertainties. The matters underlying the estimated range will change from time to time, and actual results may vary significantly from the estimate at any time.

We are subject to various legal proceedings relating to the manner in which we have invoiced certain expenses, and the outcome of such proceedings could materially adversely affect our results of operations, or harm our business or reputation.

In December 2015, we announced a review of the manner in which we invoiced certain expenses to some of our Investment Servicing clients, primarily in the United States, during an 18-year period going back to 1998, and our determination that we had incorrectly invoiced clients for certain expenses. We informed our clients in December 2015 that we will pay to them the amounts we concluded were incorrectly invoiced to them, plus interest. We currently expect the cumulative total of our payments to customers for these matters to be at least $360 million, in connection with that review, which is ongoing. We are implementing enhancements to our billing processes, see "Our efforts to improve our billing processes and practices are ongoing and are likely to result in the identification of additional billing errors." We are reviewing the conduct of our employees with respect to billing matters and have taken steps to address conduct with respect to such matters that we believe is inconsistent with our standards, including, in some cases, termination of employment. We are also evaluating other billing practices relating to our Investment Servicing clients.

We have received a purported class action demand letter alleging that our invoicing practices were unfair and deceptive under Massachusetts law. A class of customers, or particular customers, may assert that we have not paid to them all amounts incorrectly invoiced, and may seek double or treble damages under Massachusetts law. In addition, in March 2017, a purported class action was commenced against us alleging that our invoicing practices violated duties owed to retirement plan customers under ERISA.

We are also responding to requests for information from, and are cooperating with investigations by, governmental and regulatory authorities on these matters, including the civil and criminal divisions of the DOJ, the SEC, the DOL, the Massachusetts Attorney General, and the New Hampshire Bureau of Securities Regulation, which could result in significant fines or other sanctions, civil and criminal, against us. If these governmental or

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regulatory authorities were to conclude that all or a portion of the billing error merited civil or criminal sanctions, any fine or other penalty could be a significant percentage or a multiple of the portion of the overcharging serving as the basis of such a claim or of the full amount of the overcharging. The governmental and regulatory authorities have significant discretion in civil and criminal matters as to the fines and other penalties they seek to impose. The severity of such fines or other penalties could take into account factors such as the amount and duration of our incorrect invoicing, the government’s or regulator's assessment of the conduct of our employees, as well as prior conduct such as that which resulted in our January 2017 deferred prosecution agreement in connection with U.K. transition management matter and our recent settlement of civil claims regarding our indirect foreign exchange business.

The outcome of any of these proceedings and, in particular, any criminal sanction could materially adversely affect our results of operations and could have significant collateral consequences for our business and reputation.

Our efforts to improve our billing processes and practices are ongoing and are likely to result in the identification of additional billing errors.

In 2015, we determined that we had made errors in billing our asset servicing customers, principally in the United States. In 2016, we began the process of remediating these errors, improving our billing processes and controls in the asset servicing business and other businesses, and testing these improved billing processes and controls. As a result of such review, we may modify, enhance, and, where necessary, replace our existing global billing processes and implement and test controls for the new system. The objectives of this billing transformation process are to obtain greater billing accuracy and consistency across business lines. Our goal is for this billing transformation process to be completed in 2019, but there can be no assurance as to when we will complete this process or that it will allow us to meet the objectives we have set for it. Because of the scale of our business, implementing enhanced billing controls will be expensive and time consuming, may not succeed in identifying and remediating all weaknesses and inefficiencies in our billing processes and cannot be implemented in all our business units concurrently. Accordingly, the costs of the billing transformation process, and the costs to remediate billing errors which may be discovered in that process, would likely be incurred over a period that we are now unable accurately to determine. As we work through this process, we have discovered and may continue to discover areas where we believe our billing processes need improvement, where we believe we have made billing

errors with respect to particular customers and categories of fees and expenses, and where we believe billing arrangements between ourselves and particular customers should be clarified. Such discoveries may lead to increased expense and decreased revenues, the need to remediate prior billing errors, government investigations, or litigation that may materially impact our business, financial results and reputation.

We are subject to variability in our assets under custody and administration and assets under management, and in our financial results, due to the significant size of many of our institutional clients, and are also subject to significant pricing pressure due to the considerable market influence exerted by those clients.

Our clients include institutional investors, such as mutual funds, collective investment funds, UCITS, hedge funds and other investment pools, corporate and public retirement plans, insurance companies, foundations, endowments and investment managers. In both our asset servicing and asset management businesses, we endeavor to attract institutional investors controlling large and diverse pools of assets, as those clients typically have the opportunity to benefit from the full range of our expertise and service offerings. Due to the large pools of assets controlled by these clients, the loss or gain of one client, or even a portion of the assets controlled by one client, could have a significant effect on our AUCA or our AUM, as applicable, in the relevant period. Loss of all or a portion of the servicing of a client's assets can occur for a variety of reasons, including client decision or diversification of service providers or acquisition or restructuring activity affecting a client. For example, as previously reported, as a result of a decision to diversify providers, one of our large clients will move a portion of its assets, largely common trust funds, currently with State Street to another provider. The transition will principally occur in 2018 and beyond and represents approximately $1 trillion in assets with respect to which we will no longer derive revenue post-transition. Our AUM or AUCA are also affected by decisions by institutional owners to favor or disfavor certain investment instruments or categories. Similarly, if one or more clients changes the asset class in which a significant portion of assets are invested (e.g., by shifting investments from emerging markets to the U.S.), those changes could have a significant effect on our results of operations in the relevant period, as our fee rates often change based on the type of asset classes we are servicing or managing. For example, in 2017 several industry-wide trends continued to impact AUCA and AUM asset levels. Those trends included continued client redemptions out of hedge funds, as to which fees are generally higher, as well as strong retail flows from mutual funds into ETFs, as to which fees are generally lower. As our fee revenue is largely reliant on the levels of our AUCA and AUM, these changes in levels of differing asset types could have a corresponding significant effect on our results of operations in the relevant period. Large institutional clients also, by their nature, are often able to exert considerable market influence, and this, combined with strong competitive forces in the markets for our services, has resulted in, and may continue to result in, significant pressure to reduce the fees we charge for our services in both our asset servicing and asset management lines of business. Many of these large clients are also under competitive and regulatory pressures that are driving them to manage the expenses that they and their investment products incur more aggressively, which in turn exacerbates their pressures on our fees.

Our business may be negatively affected by adverse business decisions or our failure to properly implement or execute strategic programs and priorities.

In order to maintain and grow our business, we must make strategic decisions about our current and future business plans, including plans to target cost initiatives and enhance operational processes and efficiencies, plans to improve existing and to develop new service offerings and enhancements, plans to enhance existing and develop new information technology and other systems, migrate from existing systems and other infrastructure and to address staffing needs, plans for entering or exiting business lines or geographic markets and plans for acquiring or disposing of businesses.

In late 2015, we announced Beacon, a multi-year program to create cost efficiencies through changes in our operational processes and to further digitize our processes and interfaces with our clients. We anticipate we will undertake additional strategic initiatives of varying sizes, some of which may be material. Operational process and information technology transformations, such as Beacon and future strategic initiatives we may undertake, entail significant risks. The program, and any future strategic initiatives we implement, may prove to be inadequate to achieve its objectives, may not be responsive to industry, technological or market changes, may result in increased or unanticipated costs, may result in earnings volatility, may take longer than anticipated to implement, may involve elements reliant on the performance of third parties and may not be successfully implemented or meet client expectations. In addition, our efforts to manage expenses may be matched or exceeded by our competitors. Any failure to implement Beacon or any other strategic initiative we may undertake, in whole or in part may, among other things, reduce our competitive position, diminish the cost effectiveness of our systems and processes or provide an insufficient return on our associated investment. In particular, elements of many initiatives include investment in systems integration and new technologies and also the development of new, and the evolution of existing, methods and tools to accelerate the pace of innovation, the introduction of new services and enhancements to the security of our data systems. The transition to new operating processes and technology infrastructure may cause disruptions in our relationships with clients and employees and may present other unanticipated technical or operational hurdles. In addition, the relocation or expansion of servicing activities and other operations to different geographic regions requires that client, regulatory and other third party data use, storage and security challenges, as well as other regulatory compliance other considerations, be resolved. As a result, we may not achieve some or all of the cost savings or other benefits anticipated by the relevant strategic initiative and may experience unanticipated challenges from clients, regulators or other parties or reputational harm. In addition, other systems development initiatives, which are not included in Beacon, may not have access to the same level of resources or management attention and, consequently, may be delayed or unsuccessful. Many of our systems require enhancements to meet the requirements of evolving regulation, to permit us to optimize our use of capital or to reduce the risk of operating error. We may not have the resources to pursue all of these objectives, including Beacon and any other strategic initiatives, simultaneously.

The success of the program and our other strategic plans could also be affected by market disruptions and unanticipated changes in the overall market for financial services and the global economy. We also may not be able to abandon or alter these plans without significant loss, as the implementation of our decisions may involve significant capital outlays, often far in advance of when we expect to generate any related revenues or cost expectations. Accordingly, our business, our consolidated results of operations and our consolidated financial condition may be adversely affected by any failure or delay in our strategic decisions, including the program or elements thereof. For

additional information about the program, see "Expenses" in “Consolidated Results of Operations” included under Item 7, Management’s Discussion and Analysis, of this form 10-K.
Cost shifting to non-U.S. jurisdictions and outsourcing may expose us to increased operational risk and reputational harm and may not result in expected cost savings.
We manage expenses by migrating certain business processes and business support functions to lower-cost geographic locations, such as India,

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Poland and China, and by outsourcing to vendors and joint ventures. We may accomplish this shift by establishing or increasing our level of activity at operations in lower-cost locations, by outsourcing to vendors in various jurisdictions or through joint ventures. This effort exposes us to the risk that we may not maintain service quality, control or effective management and/or business resiliency within these operations during and after transition, These migrations also involve risks that our outsourcing vendors or joint ventures may not comply with their servicing and other contractual obligations to us, including with respect to indemnification and information security, and to the risk that we may not satisfy applicable regulatory responsibilities regarding the management and oversight of third parties and outsourcing providers. Diversification of our geographic footprint also exposes us to the relevant macroeconomic, political, legal and similar risks generally involved in doing business in the jurisdictions in which we establish lower-cost locations or joint ventures or in which our outsourcing vendors locate their operations. The increased elements of risk that arise from certain operating processes being conducted in some jurisdictions could lead to an increase in reputational risk. During periods of transition of operations, greater operational risk and client concern exist with respect to maintaining a high level of service delivery and business resiliency. The extent and pace at which we are able to move functions to lower-cost locations, joint ventures and outsourcing providers may also be affected by political, regulatory and client acceptance issues, including with respect to data use, storage and security. Such relocation or outsourcing of functions also entails costs, such as technology, real estate and restructuring expenses, that may offset or exceed the expected financial benefits of the relocation or outsourcing. In addition, the financial benefits of lower-cost locations and of outsourcings may diminish over time or could be offset in the event that the U.S. or other jurisdictions impose tax and other measures which seek to discourage the use of lower cost jurisdictions.

Our businesses may be negatively affected by adverse publicity or other reputational harm.

Our relationship with many of our clients is predicated on our reputation as a fiduciary and a service provider that adheres to the highest standards of ethics, service quality and regulatory compliance. Adverse publicity, regulatory actions or fines, litigation, operational failures or the failure to meet client expectations or fiduciary or other obligations could materially and adversely affect our reputation, our ability to attract and retain clients or key employees or our sources of funding for the same or other businesses. For example, over the past several years we have experienced adverse publicity with

respect to our indirect foreign exchange trading, and this adverse publicity has contributed to a shift of client volume to other foreign exchange execution methods. Similarly, governmental actions and reputational issues in our transition management business in the U.K. have adversely affected our revenue from that business and, with the related deferred prosecution agreement with the DOJ entered into in early 2017 and SEC settlement, these effects have the potential to continue. The client invoicing matter we announced in December 2015 has the potential to result in similar effects. For additional information about the settlement, see the risk factor "Our businesses may be adversely affected by government enforcement and litigation".

Preserving and enhancing our reputation also depends on maintaining systems, procedures and controls that address known risks and regulatory requirements, as well as our ability to timely identify, understand and mitigate additional risks that arise due to changes in our businesses and the marketplaces in which we operate, the regulatory environment and client expectations.

Our controls and procedures may fail or be circumvented, our risk management policies and procedures may be inadequate, and operational risk could adversely affect our consolidated results of operations.

We may fail to identify and manage risks related to a variety of aspects of our business, including, but not limited to, operational risk, interest-rate risk, foreign exchange risk, trading risk, fiduciary risk, legal and compliance risk, liquidity risk and credit risk. We have adopted various controls, procedures, policies and systems to monitor and manage risk. While we currently believe that our risk management process is effective, we cannot provide assurance that those controls, procedures, policies and systems will always be adequate to identify and manage the internal and external, including service provider, risks in our various businesses. The risk of individuals, either employees or contractors, engaging in conduct harmful or misleading to clients or us, such as consciously circumventing established control mechanisms to exceed trading or investment management limitations, committing fraud or improperly selling products or services to clients, is particularly challenging to manage through a control framework. The financial and reputational impact of control or conduct failures can be significant. Persistent or repeated issues with respect to controls or individual conduct may raise concerns among regulators regarding our culture, governance and control environment. While we seek to contractually limit our financial exposure to operational risk, the degree of protection that we are able to achieve varies, and our potential exposure may be greater than the revenue we anticipate that we will earn from servicing our clients.

In addition, our businesses and the markets in which we operate are continuously evolving. We may fail to identify or fully understand the implications of changes in our businesses or the financial markets and fail to adequately or timely enhance our risk framework to address those changes. If our risk framework is ineffective, either because it fails to keep pace with changes in the financial markets, regulatory or industry requirements, our businesses, our counterparties, clients or service providers or for other reasons, we could incur losses, suffer reputational damage or find ourselves out of compliance with applicable regulatory or contractual mandates or expectations.

Operational risk is inherent in all of our business activities. As a leading provider of services to institutional investors, we provide a broad array of services, including research, investment management, trading services and investment servicing that expose us to operational risk. In addition, these services generate a broad array of complex and specialized servicing, confidentiality and fiduciary requirements, many of which involve the opportunity for human, systems or process errors. We face the risk that the control policies, procedures and systems we have established to comply with our operational requirements will fail, will be inadequate or will become outdated. We also face the potential for loss resulting from inadequate or failed internal processes, employee supervision or monitoring mechanisms, service-provider processes or other systems or controls, which could materially affect our future consolidated results of operations. Given the volume and magnitude of transactions we process on a daily basis, operational losses represent a potentially significant financial risk for our business. Operational errors that result in us remitting funds to a failing or bankrupt entity may be irreversible, and may subject us to losses.

We may also be subject to disruptions from external events that are wholly or partially beyond our control, which could cause delays or disruptions to operational functions, including information processing and financial market settlement functions. In addition, our clients, vendors and counterparties could suffer from such events. Should these events affect us, or the clients, vendors or counterparties with which we conduct business, our consolidated results of operations could be negatively affected. When we record balance sheet accruals for probable and estimable loss contingencies related to operational losses, we may be unable to accurately estimate our potential exposure, and any accruals we establish to cover operational losses may not be sufficient to cover our actual financial exposure, which could have a material adverse effect on our consolidated results of operations.

The quantitative models we use to manage our business may contain errors that result in inadequate risk assessments, inaccurate valuations or poor business decisions, and lapses in disclosure controls and procedures or internal control over financial reporting could occur, any of which could result in material harm.

We use quantitative models to help manage many different aspects of our businesses. As an input to our overall assessment of capital adequacy, we use models to measure the amount of credit risk, market risk, operational risk, interest-rate risk and liquidity risk we face. During the preparation of our consolidated financial statements, we sometimes use models to measure the value of asset and liability positions for which reliable market prices are not available. We also use models to support many different types of business decisions including trading activities, hedging, asset-and-liability management and whether to change business strategy. Weaknesses in the underlying model, inadequate model assumptions, normal model limitations, inappropriate model use, weaknesses in model implementation or poor data quality, could result in unanticipated and adverse consequences, including material loss and material non-compliance with regulatory requirements or expectations. Because of our widespread usage of models, potential weaknesses in our model risk management practices pose an ongoing risk to us.

We also may fail to accurately quantify the magnitude of the risks we face. Our measurement methodologies rely on many assumptions and historical analyses and correlations. These assumptions may be incorrect, and the historical correlations on which we rely may not continue to be relevant. Consequently, the measurements that we make for regulatory purposes may not adequately capture or express the true risk profiles of our businesses. Moreover, as businesses and markets evolve, our measurements may not accurately reflect this evolution. While our risk measures may indicate sufficient capitalization, they may underestimate the level of capital necessary to conduct our businesses. Additionally, our disclosure controls and procedures may not be effective in every circumstance, and, similarly, it is possible we may identify a material weakness or significant deficiency in internal control over financial reporting. Any such lapses or deficiencies may materially and adversely affect our business and consolidated results of operations or consolidated financial condition, restrict our ability to access the capital markets, require us to expend significant resources to correct the lapses or deficiencies, expose us to regulatory or legal proceedings, subject us to fines, penalties or judgments or harm our reputation.

We may incur losses arising from our investments in sponsored investment funds, which could be material to our consolidated results of operations in the periods incurred.

In the normal course of business, we manage various types of sponsored investment funds through SSGA. The services we provide to these sponsored investment funds generate management fee revenue, as well as servicing fees from our other businesses. From time to time, we may invest in the funds, which we refer to as seed capital, in order for the funds to establish a performance history for newly launched strategies. These funds may meet the definition of variable interest entities, as defined by U.S. GAAP, and if we are deemed to be the primary beneficiary of these funds, we may be required to consolidate these funds in our consolidated financial statements under U.S. GAAP. The funds follow specialized investment company accounting rules which prescribe fair value for the underlying investment securities held by the funds.

In the aggregate, we expect any financial losses that we realize over time from these seed investments to be limited to the actual amount invested in the consolidated fund. However, in the event of a fund wind-down, gross gains and losses of the fund may be recognized for financial accounting purposes in different periods during the time the fund is consolidated but not wholly owned. Although we expect the actual economic loss to be limited to the amount invested, our losses in any period for financial accounting purposes could exceed the value of our economic interests in the fund and could exceed the value of our initial seed capital investment.

In instances where we are not deemed to be the primary beneficiary of the sponsored investment fund, we do not include the funds in our consolidated financial statements. Our risk of loss associated with investment in these unconsolidated funds primarily represents our seed capital investment, which could become realized as a result of poor investment performance. However, the amount of loss we may recognize during any period would be limited to the carrying amount of our investment.

Our reputation and business prospects may be damaged if our clients incur substantial losses in investment pools in which we act as agent or are restricted in redeeming their interests in these investment pools.

We manage assets on behalf of clients in several forms, including in collective investment pools, money market funds, securities finance collateral pools, cash collateral and other cash products and short-term investment funds. Our management of collective investment pools on behalf of clients exposes us to reputational risk and operational losses. If our clients incur substantial investment losses in these pools, receive redemptions as in-kind distributions rather than in cash, or experience significant under-performance relative to the market or our competitors' products, our reputation could be significantly harmed, which harm could significantly and adversely affect the prospects of our associated business units. Because we often implement investment and operational decisions and actions over multiple investment pools to achieve scale, we face the risk that losses, even small losses, may have a significant effect in the aggregate.

Within our Investment Management business, we manage investment pools, such as mutual funds and collective investment funds that generally offer our clients the ability to withdraw their investments on short notice, generally daily or monthly. This feature requires that we manage those pools in a manner that takes into account both maximizing the long-term return on the investment pool and retaining sufficient liquidity to meet reasonably anticipated liquidity requirements of our clients. The importance of maintaining liquidity varies by product type, but it is a particularly important feature in money market funds and other products designed to maintain a constant net asset value of $1.00. In the past, we have imposed restrictions on cash redemptions from the agency lending collateral pools, as the per-unit market value of those funds' assets had declined below the constant $1.00 the funds employ to effect purchase and redemption transactions. Both the decline of the funds' net asset value below $1.00 and the imposition of restrictions on redemptions had a significant client, reputational and regulatory impact on us, and the recurrence of such or similar circumstances in the future could adversely impact our consolidated results of operations and financial condition. We have also in the past continued to process purchase and redemption of units of investment products designed to maintain a constant net asset value at $1.00 although the fair market value of the fund’s assets were less than $1.00. If in the future we were to continue to process purchases and redemptions from such products at $1.00 when the fair market value of our collateral pools' assets is less than $1.00, we could be exposed to significant liability.

If higher than normal demands for liquidity from our clients were to occur, managing the liquidity requirements of our collective investment pools could become more difficult. If such liquidity problems were to recur, our relationships with our clients may be adversely affected, and, we could, in certain circumstances, be required to consolidate the investment pools into our consolidated statement of condition; levels of redemption activity could increase; and our consolidated results of operations and business prospects could be adversely affected. In

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addition, if a money market fund that we manage were to have unexpected liquidity demands from investors in the fund that exceeded available liquidity, the fund could be required to sell assets to meet those redemption requirements, and selling the assets held by the fund at a reasonable price, if at all, may then be difficult.

Because of the size of the investment pools that we manage, we may not have the financial ability or regulatory authority to support the liquidity or other demands of our clients. Any decision by us to provide financial support to an investment pool to support our reputation in circumstances where we are not statutorily or contractually obligated to do so could result in the recognition of significant losses, could adversely affect the regulatory view of our capital levels or plans and could, in some cases, require us to consolidate the investment pools into our consolidated statement of condition. Any failure of the pools to meet redemption requests, or under- performance of our pools relative to similar products offered by our competitors, could harm our business and our reputation.

Development of new products and services may impose additional costs on us and may expose us to increased operational and model risk.

Our financial performance depends, in part, on our ability to develop and market new and innovative services and to adopt or develop new technologies that differentiate our products or provide cost efficiencies, while avoiding increased related expenses. This dependency is exacerbated in the current “FinTech” environment, where financial institutions are investing significantly in evaluating new technologies, such as “Blockchain,” and developing potentially industry-changing new products, services and industry standards. The introduction of new products and services can entail significant time and resources, including regulatory approvals. Substantial risks and uncertainties are associated with the introduction of new products and services, including technical, control and model validation requirements, which may need to be developed and implemented, rapid technological change in the industry, our ability to access technical and other information from our clients, the significant and ongoing investments required to bring new products and services to market in a timely manner at competitive prices and the preparation of marketing, sales and other materials that fully and accurately describe the product or service and its underlying risks and are compliant with applicable regulations. Our failure to manage these risks and uncertainties also exposes us to enhanced risk of operational lapses which may result in the recognition of financial statement liabilities. Regulatory and internal control requirements, capital requirements, competitive alternatives, vendor relationships and shifting market

preferences may also determine if such initiatives can be brought to market in a manner that is timely and attractive to our clients. Failure to successfully manage these risks in the development and implementation of new products or services could have a material adverse effect on our business and reputation, as well as on our consolidated results of operations and financial condition.

We depend on information technology, and any failures of or damage to, attack on or unauthorized access to our information technology systems or facilities, or those of third parties with which we do business, including as a result of cyber-attacks, could result in significant limits on our ability to conduct our operations and activities, costs and reputational damage.

Our businesses depend on information technology infrastructure, both internal and external, to, among other things, record and process a large volume of increasingly complex transactions and other data, in many currencies, on a daily basis, across numerous and diverse markets and jurisdictions. In recent years, several financial services firms have suffered successful cyber-attacks launched both domestically and from abroad, resulting in the disruption of services to clients, loss or misappropriation of sensitive or private data and reputational harm. We also have been subjected to cyber-attack, and although we have not to our knowledge suffered a material breach or suspension of our systems, it is possible that we could suffer such a breach or suspension in the future. Cyber-threats are sophisticated and continually evolving. We may not implement effective systems and other measures to effectively prevent or mitigate the full diversity of cyber-threats or improve and adapt such systems and measures as such threats evolve and advance.

Our computer, communications, data processing, networks, backup, business continuity or other operating, information or technology systems and facilities, including those that we outsource to other providers, may fail to operate properly or become disabled, overloaded or damaged as a result of a number of factors, including events that are wholly or partially beyond our control, which could adversely affect our ability to process transactions, provide services or maintain systems availability, maintain compliance and internal controls or otherwise appropriately

conduct our business activities. For example, there could be sudden increases in transaction or data volumes, electrical or telecommunications outages, natural disasters, cyber-attacks or employee or contractor error or malfeasance.
The third parties with which we do business, which facilitate our business activities or with whom we otherwise engage or interact, including financial

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intermediaries and technology infrastructure and service providers, are also susceptible to the foregoing risks (including regarding the third parties with which they are similarly interconnected or on which they otherwise rely), and our or their business operations and activities may therefore be adversely affected, perhaps materially, by failures, terminations, errors or malfeasance by, or attacks or constraints on, one or more financial, technology, infrastructure or government institutions or intermediaries with whom we or they are interconnected or conduct business.

In particular, we, like other financial services firms, will continue to face increasing cyber threats, including computer viruses, malicious code, distributed denial of service attacks, phishing attacks, ransomware, information security breaches or employee or contractor error or malfeasance that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of our, our clients' or other parties' confidential, personal, proprietary or other information or otherwise disrupt, compromise or damage our or our clients' or other parties' business assets, operations and activities. Our status as a global systemically important financial institution likely increases the risk that we are targeted by such cyber- security threats. In addition, some of our service offerings, such as data warehousing, may also increase the risk we are, and the consequences of being, so-targeted. We therefore could experience significant related costs and exposures, including lost or constrained ability to provide our services or maintain systems availability to clients, regulatory inquiries, enforcements, actions and fines, litigation, damage to our reputation or property and enhanced competition.

Due to our dependence on technology and the important role it plays in our business operations, we must persist in improving and updating our information technology infrastructure (1) as some of our systems are approaching the end of their useful life, are redundant or do not share data without reconciliation; and (2) in order to be more efficient, enhance resiliency, meet client expectations and support opportunities of growth. Updating these systems often involves implementation, integration and security risks, including risks that we may not adequately anticipate the market or technological trends or client needs or experience unexpected challenges that could cause financial, reputational and operational harm. However, failing to properly respond to and invest in changes and advancements in technology can limit our ability to attract and retain clients, prevent us from offering similar products and services as those offered by our competitors and inhibit our ability to meet regulatory requirements.

Any theft, loss or other misappropriation or inadvertent disclosure of, or inappropriate access to, the confidential information we possess could have an adverse impact on our business and could subject us to regulatory actions, litigation and other adverse effects.

Our businesses and relationships with clients are dependent on our ability to maintain the confidentiality of our and our clients' trade secrets and confidential information (including client transactional data and personal data about our employees, our clients and our clients' clients). Unauthorized access, or failure of our controls with respect to granting access to our systems, may occur, potentially resulting in theft, loss, or other misappropriation of such information. Any theft, loss, other misappropriation or inadvertent disclosure of confidential information could have a material adverse impact on our competitive position, our relationships with our clients and our reputation and could subject us to regulatory inquiries, enforcement and fines, civil litigation and possible financial liability or costs.

We may not be able to protect our intellectual property, and we are subject to claims of third- party intellectual property rights.

Our potential inability to protect our intellectual property and proprietary technology effectively may allow competitors to duplicate our technology and products and may adversely affect our ability to compete with them. To the extent that we do not protect our intellectual property effectively through patents, maintaining trade secrets or other means, other parties, including former employees, with knowledge of our intellectual property may leave and seek to exploit our intellectual property for their own or others' advantage. In addition, we may infringe on claims of third-party patents, and we may face intellectual property challenges from other parties, including clients or service providers with whom we may engage in the development or implementation of other products, services or solutions. The risk of such infringement is enhanced in the current competitive “Fintech” environment, particularly with respect to our development of new products and services containing significant technology elements and dependencies, any of which could become the subject of an infringement claim. We may not be successful in defending against any such challenges or in obtaining licenses to avoid or resolve any intellectual property disputes. Third-party intellectual rights, valid or not, may also impede our deployment of the full scope of our products and service capabilities in all jurisdictions in which we operate or market our products and services.

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Acquisitions, strategic alliances, joint ventures and divestitures pose risks for our business.
As part of our business strategy, we acquire complementary businesses and technologies, enter into strategic alliances and joint ventures and divest portions of our business. We undertake transactions of varying sizes to, among other reasons, expand our geographic footprint, access new clients, technologies or services, develop closer or more collaborative relationships with our business partners, bolster existing servicing capabilities, efficiently deploy capital or leverage cost savings or other business or financial opportunities. We may not achieve the expected benefits of these transactions, which could result in increased costs, lowered revenues, ineffective deployment of capital, regulatory concerns, exit costs or diminished competitive position or reputation.
Transactions of this nature also involve a number of risks and financial, accounting, tax, regulatory, strategic, managerial, operational, cultural and employment challenges, which could adversely affect our consolidated results of operations and financial condition. For example, the businesses that we acquire or our strategic alliances or joint ventures may under-perform relative to the price paid or the resources committed by us; we may not achieve anticipated revenue growth or cost savings; or we may otherwise be adversely affected by acquisition-related charges. The intellectual property of an acquired business may be an important component of the value that we agree to pay for such a business. However, such acquisitions are subject to the risks that the acquired business may not own the intellectual property that we believe we are acquiring, that the intellectual property is dependent on licenses from third parties, that the acquired business infringes on the intellectual property rights of others, that the technology does not have the acceptance in the marketplace that we anticipated or that the technology requires significant investment to remain competitive. Further, past acquisitions have resulted in the recognition of goodwill and other significant intangible assets in our consolidated statement of condition. For example, we recorded goodwill and intangible assets of $453 million associated with our acquisition of GE Asset Management in 2016. These assets are not eligible for inclusion in regulatory capital under applicable requirements. In addition, we may be required to record impairment in our consolidated statement of income in future periods if we determine that the value of these assets has declined. Through our acquisitions or joint ventures, we may also assume unknown or undisclosed business, operational, tax, regulatory and other liabilities, fail to properly assess known contingent liabilities or assume businesses with internal control deficiencies.

While in most of our transactions we seek to mitigate these risks through, among other things, due diligence and indemnification provisions, these or other risk-mitigating provisions we put in place may not be sufficient to address these liabilities and contingencies. Other major financial services firms have recently paid significant penalties to resolve government investigations into matters conducted in significant part by acquired entities.
Various regulatory approvals or consents, formal or informal, are generally required prior to closing of these transactions, which may include approvals or non-objections from the Federal Reserve and other domestic and non-U.S. regulatory authorities. These regulatory authorities may impose conditions on the completion of the acquisition or require changes to its terms that materially affect the terms of the transaction or our ability to capture some of the opportunities presented by the transaction, or may not approve the transaction. Any such conditions, or any associated regulatory delays, could limit the benefits of the transaction. Acquisitions or joint ventures we announce may not be completed if we do not receive the required regulatory approvals, if regulatory approvals are significantly delayed or if other closing conditions are not satisfied.
The integration of our acquisitions results in risks to our business and other uncertainties.
The integration of acquisitions presents risks that differ from the risks associated with our ongoing operations. Integration activities are complicated and time consuming and can involve significant unforeseen costs. We may not be able to effectively assimilate services, technologies, key personnel or businesses of acquired companies into our business or service offerings as anticipated, alliances may not be successful, and we may not achieve related revenue growth or cost savings. We also face the risk of being unable to retain, or cross-sell our products or services to, the clients of acquired companies or joint ventures and the risk of being unable to cross-sell acquired products or services to our existing clients. Acquisitions of investment servicing businesses entail information technology systems conversions, which involve operational risks. Acquisitions of technology firms can involve extensive information technology integration, with associated risk of defects and product enhancement and development activities, the costs

of which can be difficult to estimate. Clients of businesses that we have acquired may be dissatisfied with the acquisition and choose to limit or terminate their relationship with us, a risk which increases where those clients are competitors. The loss of some of these clients or a significant reduction in the revenues generated from them, for competitive or other reasons, could adversely affect the benefits that we expect to achieve from these acquisitions or cause impairment to goodwill and other intangibles.

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With any acquisition, the integration of the operations and resources of the businesses could result in the loss of key employees, the disruption of our and the acquired company's ongoing businesses or inconsistencies in standards, controls, procedures or policies that could adversely affect our ability to maintain relationships with clients or employees, maintain regulatory compliance or to achieve the anticipated benefits of the acquisition. Integration efforts may also divert management attention and resources.

Competition for our employees is intense, and we may not be able to attract and retain the highly skilled people we need to support our business.

Our success depends, in large part, on our ability to attract and retain key people. Competition for the best people in most activities in which we engage can be intense, and we may not be able to hire people or retain them, particularly in light of challenges associated with evolving compensation restrictions applicable, or which may become applicable, to banks and some asset managers and that potentially are not applicable to other financial services firms in all jurisdictions or to technology firms, generally. The unexpected loss of services of key personnel in business units, control functions, information technology, operations or other areas could have a material adverse impact on our business because of their skills, their knowledge of our markets, operations and clients, their years of industry experience and, in some cases, the difficulty of promptly finding qualified replacement personnel. Similarly, the loss of key employees, either individually or as a group, could adversely affect our clients' perception of our ability to continue to manage certain types of investment management mandates to provide other services to them or to maintain a culture of innovation and proficiency.

We are subject to intense competition in all aspects of our business, which could negatively affect our ability to maintain or increase our profitability.

The markets in which we operate across all facets of our business are both highly competitive and global. These markets are changing as a result of new and evolving laws and regulations applicable to financial services institutions. Regulatory-driven market changes cannot always be anticipated, and may adversely affect the demand for, and profitability of, the products and services that we offer. In addition, new market entrants and competitors may address changes in the markets more rapidly than we do, or may provide clients with a more attractive offering of products and services, adversely affecting our business. Our efforts to develop and market new products, particularly in the “Fintech” sector, may position us in new markets with pre-existing competitors with strong market position. We have also experienced, and anticipate that we will continue to experience, significant pricing pressure in many of our core businesses, particularly our custodial and investment management services. This pricing pressure has and may continue to impact our revenue growth and operational margins and may limit the positive impact of new client demand and growth in AUCA. Many of our businesses compete with other domestic and international banks and financial services companies, such as custody banks, investment advisors, broker/dealers, outsourcing companies and data processing companies. Further consolidation within the financial services industry could also pose challenges to us in the markets we serve, including potentially increased downward pricing pressure across our businesses.

Some of our competitors, including our competitors in core services, have substantially greater capital resources than we do or are not subject to as stringent capital or other regulatory requirements as are we. In some of our businesses, we are service providers to significant competitors. These competitors are in some instances significant clients, and the retention of these clients involves additional risks, such as the avoidance of actual or perceived conflicts of interest and the maintenance of high levels of service quality and intra-company confidentiality. The ability of a competitor to offer comparable or improved products or services at a lower price would likely negatively affect our ability to maintain or increase our profitability. Many of our core services are subject to contracts that have relatively short terms or may be terminated by our client after a short notice period. In addition, pricing pressures as a result of the activities of competitors, client pricing reviews, and rebids, as well as the introduction of new products, may result in a reduction in the prices we can charge for our products and services.

Long-term contracts expose us to pricing and performance risk.

We enter into long-term contracts to provide middle office or investment manager and alternative investment manager operations outsourcing services to clients, including services related but not limited to certain trading activities, cash reporting, settlement and reconciliation activities, collateral management and information technology development. We also may enter into longer-term arrangements with respect to custody, fund administration and depository services. These arrangements generally set forth our fee schedule for the term of the contract and, absent a change in service requirements, do not permit us to re-price the contract for changes in our costs or for market pricing. The long-term contracts for these relationships require, in some cases, considerable up-front investment by us, including technology and

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conversion costs, and carry the risk that pricing for the products and services we provide might not prove adequate to generate expected operating margins over the term of the contracts.

The profitability of these contracts is largely a function of our ability to accurately calculate pricing for our services, efficiently assume our contractual responsibilities in a timely manner, control our costs and maintain the relationship with the client for an adequate period of time to recover our up-front investment. Our estimate of the profitability of these arrangements can be adversely affected by declines in the assets under the clients' management, whether due to general declines in the securities markets or client-specific issues. In addition, the profitability of these arrangements may be based on our ability to cross-sell additional services to these clients, and we may be unable to do so.

Performance risk exists in each contract, given our dependence on successful conversion and implementation onto our own operating platforms of the service activities provided. Our failure to meet specified service levels or implementation timelines may also adversely affect our revenue from such arrangements, or permit early termination of the contracts by the client. If the demand for these types of services were to decline, we could see our revenue decline.

Changes in accounting standards may adversely affect our consolidated financial statements.

New accounting standards, or changes to existing accounting standards, resulting both from initiatives of the FASB as well as changes in the interpretation of existing accounting standards, by the FASB or the SEC or otherwise reflected in U.S. GAAP, potentially could affect our consolidated results of operations, cash flows and financial condition. These changes can materially affect how we record and report our consolidated results of operations, cash flows, financial condition and other financial information. In some cases, we could be required to apply a new or revised standard retroactively, resulting in the revised treatment of certain transactions or activities, and, in some cases, the revision of our consolidated financial statements for prior periods. For additional information regarding change in accounting standards, refer to the “Recent Accounting Developments” section of Note 1 included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

Changes in tax laws, rules or regulations, challenges to our tax positions with respect to historical transactions, and changes in the composition of our pre-tax earnings may increase our effective tax rate and thus adversely affect our consolidated financial statements.

Our businesses can be directly or indirectly affected by new tax legislation, the expiration of existing tax laws or the interpretation of existing tax laws worldwide.

On December 22, 2017, the United States enacted the Tax Cuts and Jobs Act (H.R. 1), effective January 2018. This decreased the U.S. corporate income tax rate from 35% to 21%, repealed the alternative minimum tax and replaced the existing worldwide tax system with a modified territorial system. The modified territorial system eliminates income tax on foreign dividends and introduces new provisions that generate incremental tax on foreign earnings, base erosion payments and limit the benefit of foreign tax credits. There is uncertainty around the application of these provisions, generally and as to their applicability to our business, and guidance from the Internal Revenue Service has been limited to date. Although we have not yet fully determined the impact of these provisions, it is possible these new provisions could diminish the benefit of the lower U.S. corporate income tax rate.

U.S. state governments, including Massachusetts, and jurisdictions around the world continue to review proposals to amend tax laws, rules and regulations applicable to our businesses that could have a negative impact on our capital or after-tax earnings. In the normal course of our business, we are subject to review by U.S. and non-U.S. tax authorities. A review by any such authority could result in an increase in our recorded tax liability. In addition to the aforementioned risks, our effective tax rate is dependent on the nature and geographic composition of our pre-tax earnings and could be negatively affected by changes in these factors.

We may incur losses as a result of unforeseen events, including terrorist attacks, natural disasters, the emergence of a pandemic or acts of embezzlement.

Acts of terrorism, natural disasters or the emergence of a pandemic could significantly affect our business. We have instituted disaster recovery and continuity plans to address risks from terrorism, natural disasters and pandemic; however, anticipating or addressing all potential contingencies is not possible for events of this nature. Acts of terrorism, either targeted or broad in scope, or natural disasters could damage our physical facilities, harm our employees and disrupt our operations. A pandemic, or concern about a possible pandemic, could lead to operational difficulties and impair our ability to manage our business. Acts of terrorism, natural disasters and pandemics could also negatively affect our clients, counterparties and service providers, as well as result in disruptions in general economic activity and the financial markets.

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ITEM 1B. UNRESOLVED STAFF COMMENTS
None.
ITEM 2.PROPERTIES
Our headquarters is located at State Street Financial Center, One Lincoln Street, Boston, Massachusetts, a 36-story leased office building. Various divisions of our two lines of business, as well as support functions, occupy space in this building. We occupy four buildings located in Quincy, Massachusetts, one of which we own and three of which we lease, along with the Channel Center, another leased office building located in Boston, all of which function as our principal operations facilities.
We occupy a total of approximately 8.1 million square feet of office space and related facilities worldwide, of which approximately 7.2 million square feet are leased. The following table provides information on our office space and related facilities:

Principal Properties[1]	City	State/ Country	Owned/ Leased
U.S. and Canada:			
State Street Financial Center	Boston	MA	Leased
Channel Center	Boston	MA	Leased
Summer Street	Boston	MA	Leased
Crown Colony Drive	Quincy	MA	Leased
Heritage Drive	Quincy	MA	Leased
John Adams Building	Quincy	MA	Owned
Josiah Quincy Building	Quincy	MA	Leased
Grafton Data Center	Grafton	MA	Owned
Westborough Data Center	Westborough	MA	Owned
Summer Street	Stamford	CT	Leased
Pennsylvania Avenue	Kansas City	MO	Leased
College Road East	Princeton	NJ	Leased
Avenue of the Americas	New York	NY	Leased
Adelaide Street East	Toronto	Canada	Leased
Europe, Middle East and Africa:			
Churchill Place	London	England	Leased
Herriotstrasse	Frankfurt	Germany	Leased
Brienner Strasse	Munich	Germany	Leased
Sir John Rogerson's Quay	Dublin	Ireland	Leased
Via Ferrante Aporti	Milan	Italy	Leased
Kirchberg	Luxembourg	Luxembourg	Leased
Titanium Tower	Gdansk	Poland	Leased
Bonarka	Krakow	Poland	Leased
CBK	Krakow	Poland	Leased
Ferry Road	Edinburgh	Scotland	Leased
Asia Pacific:			
George Street	Sydney	Australia	Leased
San Dun	Hangzhou	China	Leased
Tian Tang	Hangzhou	China	Leased
Ecoworld 6B	Bangalore	India	Leased
Knowledge City Salarpuria	Hyderabad	India	Leased

[1] We lease other properties in the above regions which consists of 36 locations in the U.S. and Canada, 34 locations in EMEA and 30 locations in APAC.

ITEM 3. LEGAL PROCEEDINGS

The information required by this Item is provided under "Legal and Regulatory Matters" in Note 13 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K, and is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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EXECUTIVE OFFICERS OF THE REGISTRANT

The following table presents certain information with respect to each of our executive officers as of February 26, 2018.

Name	Age	Position
Joseph L. Hooley	60	Chairman and Chief Executive Officer
Eric W. Aboaf	53	Executive Vice President and Chief Financial Officer
Jeffrey N. Carp	61	Executive Vice President, Chief Legal Officer and Secretary
Jeff D. Conway	52	Executive Vice President, Global Head of Operations and Business Transformation
Andrew J. Erickson	48	Executive Vice President, Head of Global Services
Hannah M. Grove	54	Executive Vice President and Chief Marketing Officer
Kathryn M. Horgan	52	Executive Vice President and Chief Human Resources and Citizenship Officer
Karen C. Keenan	55	Executive Vice President and Chief Administrative Officer
Andrew P. Kuritzkes	57	Executive Vice President and Chief Risk Officer
Louis D. Maiuri	53	Executive Vice President, Head of Global Markets and Global Exchange
Elizabeth Nolan	55	Executive Vice President, Chief Executive Officer for Europe, Middle East and Africa
Ronald P. O'Hanley	61	President and Chief Operating Officer
Elizabeth Schaefer	43	Senior Vice President, Deputy Controller and Chief Accounting Officer (interim)
Wai-Kwong Seck	62	Executive Vice President, Chief Executive Officer for Asia Pacific
Antoine Shagoury	47	Executive Vice President and Global Chief Information Officer
George E. Sullivan	57	Executive Vice President, Head of Alternative Investment Solutions
Cyrus Taraporevala	51	President and Chief Executive Officer, State Street Global Advisors

All executive officers are appointed by the Board and hold office at the discretion of the Board. No family relationships exist among any of our directors and executive officers.

On November 7, 2017 State Street Corporation announced that Mr. Hooley will retire as Chief Executive Officer by the end of 2018 and will remain as a director and Chairman of the Board of Directors throughout 2019. Mr. O'Hanley will succeed Mr. Hooley as State Street's Chief Executive Officer, upon Mr. Hooley's retirement.

Mr. Hooley joined State Street in 1986 and currently serves as Chairman and Chief Executive Officer. He was appointed Chief Executive Officer in March 2010 and Chairman of the Board in January 2011. He served as our President and Chief Operating Officer from 2008 through December 2014. From 2002 to 2008, Mr. Hooley served as Executive Vice President and head of Investor Services and, in 2006, was appointed Vice Chairman and Global Head of Investment Servicing and Investment Research and Trading. Mr. Hooley was elected to serve on the Board of Directors effective October 22, 2009.

Mr. Aboaf joined State Street in December 2016 as Executive Vice President and has served as Executive Vice President and Chief Financial Officer since February 2017. Prior to joining State Street, Mr. Aboaf served as chief financial officer of Citizens Financial Group, a financial services and retail banking firm, from April 2015 to December 2016, with responsibility for all finance functions and corporate development. From 2003 to March 2015, he served in

several senior management positions for Citigroup, a global investment banking and financial services corporation, including as global treasurer and as the chief financial officer of the institutional client group, which included the custody business.

Mr. Carp joined State Street in 2006 as Executive Vice President and Chief Legal Officer. Later in 2006, he was also appointed Secretary. From 2004 to 2005, Mr. Carp served as executive vice president and general counsel of Massachusetts Financial Services, an investment management and research company. From 1989 until 2004, Mr. Carp was a senior partner at the law firm of Hale and Dorr LLP, where he was an attorney since 1982. Mr. Carp served as State Street's interim Chief Risk Officer from February 2010 until September 2010.

Mr. Conway joined State Street more than 30 years ago and serves as Executive Vice President and head of State Street's operations and business transformation globally. Prior to his current role, he was Chief Executive Officer for Europe, the Middle East and Africa from March 2015 until December 2017. As part of his transition from that role, he remains responsible for some of our UK-regulated activities. Prior to that role, Mr. Conway held several other management positions within the Company, including leading Global Exchange from April 2013 to March 2015. From 2007 to April 2013, Mr. Conway served as the global head of our Investment Management Services business. Mr. Erickson joined State Street in April 1991 and since November 2017 has served as the

Executive Vice President and head of our Global Services business. Prior to this role and commencing in June 2016, he served as the Executive Vice President and head of Investment Services business in the Americas. Prior to that role, Mr. Erickson was the head of our Global Services business in Asia Pacific from April 2014 to June 2016 and prior to that was Head of North Asia for Global Services from 2010 to April 2014. Mr. Erickson has also held several other positions within State Street during his over 25 years with the Company.

Ms. Grove joined State Street in 1998 and currently serves as Executive Vice President and Chief Marketing Officer, a role she has been in since 2008. Prior to this role, Ms. Grove served as senior vice president for State Street’s Global Marketing division. Prior to joining State Street, Ms. Grove was the marketing director for World Times' Money Matters Institute, a collaboration between the United Nations and the World Bank that sought to foster sustainable development in emerging economies.

Ms. Horgan joined State Street in April 2009 and has served as Executive Vice President and Chief Human Resources and Citizenship Officer since March 2017. Prior to March 2017, she served as Executive Vice President from 2012, and Chief Operating Officer, from 2011, for State Street's Global Human Resources division. Prior to that role, Ms. Horgan served as the senior vice president of human resources for State Street Global Advisors. Prior to joining State Street, Ms. Horgan was the executive vice president of human resources for Old Mutual Asset Management, a global, diversified multi-boutique asset management company, from 2006 to 2009.

Ms. Keenan joined State Street in July 2007 as part of the acquisition of Investors Financial Services (IBT) and since June 2016 has served as Executive Vice President and Chief Administrative Officer, managing cross-organizational initiatives, overseeing data strategy projects, overseeing the Compliance Department and leading key components of regulatory initiatives. Prior to this role, from July 2015 to June 2016, Ms. Keenan led the Global Markets division worldwide, following her role as the head of Global Markets in EMEA from 2012 to 2016. From 2010 to 2012, Ms. Keenan served as the chief strategy officer for Global Markets. While with IBT, she served as chief financial officer during its initial public offering and its early years as a public company.

Mr. Kuritzkes joined State Street in 2010 as Executive Vice President and Chief Risk Officer. Prior to joining State Street, Mr. Kuritzkes was a partner at Oliver, Wyman & Company, an international management consulting firm, and led the firm’s Public Policy practice in North America. He joined Oliver, Wyman & Company in 1988, was a managing director in the firm’s London office from 1993 to 1997, and served as vice chairman of Oliver, Wyman & Company globally from 2000 until the firm’s acquisition by MMC in 2003. From 1986 to 1988, he worked as an economist and lawyer for the Federal Reserve Bank of New York.

Mr. Maiuri joined State Street in October 2013 and has served as Executive Vice President and head of State Street Global Markets since June 2016 and head of State Street Global Exchange since July 2015. From 2013 to July 2015, he led State Street's Securities Finance division. Before joining State Street, Mr. Maiuri served as executive vice president and deputy chief executive officer of asset servicing at BNY Mellon, a global banking and financial services corporation, from May 2009 to October 2013.

Ms. Nolan joined State Street in October 2015 and serves as Chief Executive Officer for Europe, the Middle East and Africa, with regulatory approval pending for U.K. banking activities. Prior to that, she served as Executive Vice President and co-head of State Street Global Services for Europe, the Middle East and Africa from January 2017 to January 2018. Prior to that role, she served as head of European Banking from October 2015 to January 2017. Before joining State Street, from January 2015 to October 2015, Ms. Nolan served as managing director at Deutsche Bank in the global custody and clearing business. Prior to that role, Ms. Nolan spent 12 years at J.P. Morgan in various senior leadership roles, including from 2009 to 2014 as the head of client services and client onboarding globally for markets and investor services.

Mr. O'Hanley joined State Street in April 2015 and has served as President and Chief Operating Officer since November 2017. Prior to this role Mr. O'Hanley served as the Chief Executive Officer and President of State Street Global Advisors, the investment management arm of State Street Corporation and was appointed as Vice Chairman January 1, 2017. Prior to joining State Street, Mr. O'Hanley was president of Asset Management & Corporate Services for Fidelity Investments, a financial and mutual fund services corporation, from 2010 to February 2014. From 1997 to 2010, Mr. O'Hanley served in various positions at Bank of New York Mellon, a global banking and financial services corporation, serving as President and Chief Executive Officer of BNY Asset Management in Boston from 2007 to 2010.

Ms. Schaefer joined State Street in 2014, and since September 2017 has served as Interim Chief Accounting Officer. Ms. Schaefer continues to serve as Senior Vice President and Deputy Controller, a position she has held since July 2016, prior to which she served as Director of SEC Reporting, Accounting Policy & Regulatory Compliance. Prior to joining

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State Street, she served in various roles at American Express Company, a global services company whose principal products and services are charge and credit card products and travel-related services, including, from August 2012 to December 2014, senior roles within the Controllership organization.

Mr. Seck joined State Street in 2011 as Executive Vice President and head of Global Markets and Global Services across Asia Pacific. Prior to joining State Street, Mr. Seck was chief financial officer of the Singapore Exchange for eight years. Previously he held senior-level positions in the Monetary Authority of Singapore, the Government of Singapore Investment Corporation, Lehman Brothers and DBS Bank.

Mr. Shagoury joined State Street in November 2015 as Executive Vice President, Information Technology and Global Chief Information Officer (CIO). Prior to joining State Street, Mr. Shagoury had several senior management positions from 2010 to November 2015 with the London Stock Exchange Group, a British-based stock exchange and financial information company, including the group chief operating officer and chief information officer.

Mr. Sullivan joined State Street in 2007 as part of the IBT acquisition and has served as Executive Vice President and global head of State Street’s Alternative Investment Solutions group. Mr. Sullivan spent 15 years at IBT, where his role was managing director of Global Fund Services.

Mr. Taraporevala joined State Street in April 2016 and since November 2017 has served as president and chief executive officer of SSGA. He joined SSGA as Executive Vice President and Global Head of Product and Marketing. Prior to joining SSGA, Mr. Taraporevala was the head of Retail Management Accounts and Life Insurance & Annuities for Fidelity Investments from 2012 to October 2015. Prior to that, Mr. Taraporevala held senior leadership roles at BNY Mellon Asset Management, including executive director of North American distribution.

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PART II

ITEM 5.MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

MARKET FOR REGISTRANT'S COMMON EQUITY

Our common stock is listed on the New York Stock Exchange under the ticker symbol STT. There were 5,214 shareholders of record as of January 31, 2018. The information required by this item concerning the market prices of, and dividends on, our common stock during the past two years is provided under "Quarterly Summarized Financial Information (Unaudited)" included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K, and is incorporated herein by reference.

In June 2017, our Board approved a common stock purchase program authorizing the purchase by us of up to $1.4 billion of our common stock through

June 30, 2018. As of December 31, 2017, we had approximately $700 million remaining under that program.

The following table presents purchases of our common stock and related information for each of the months in the quarter ended December 31, 2017. All shares of our common stock purchased during the quarter ended December 31, 2017 were purchased under the above-described Board-approved program. Stock purchases may be made using various types of mechanisms, including open market purchases or transactions off market, and may be made under Rule 10b5-1 trading programs. The timing of stock purchases, types of transactions and number of shares purchased will depend on several factors, including market conditions, our capital position, our financial performance and investment opportunities. The common stock purchase program does not have specific price targets and may be suspended at any time.

(Dollars in millions, except per share amounts; shares in thousands)	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares That May Yet be Purchased Under Publicly Announced Program
Period:				
October 1 - October 31, 2017	—	$ —	—	$ 1,050
November 1 - November 30, 2017	1,479	92.52	1,479	913
December 1 - December 31, 2017	2,177	97.88	2,177	700
Total	3,656	$ 95.71	3,656	$ 700

Additional information about our common stock, including Board authorization with respect to purchases by us of our common stock, is provided under "Capital" in "Financial Condition" included under Item 7, Management's Discussion and Analysis, and in Note 15 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K, and is incorporated herein by reference.

RELATED STOCKHOLDER MATTERS

As a bank holding company, our Parent Company is a legal entity separate and distinct from its principal banking subsidiary, State Street Bank, and its non-banking subsidiaries. The right of the Parent Company to participate as a shareholder in any distribution of assets of State Street Bank upon its liquidation, reorganization or otherwise is subject to the prior claims by creditors of State Street Bank, including obligations for federal funds purchased and securities sold under repurchase agreements and deposit liabilities.

Payment of dividends by State Street Bank is subject to the provisions of the Massachusetts banking law, which provide that State Street Bank's Board of Directors may declare, from State Street Bank's "net profits," as defined below, cash dividends annually, semi-annually or quarterly (but not more frequently) and can declare non-cash dividends at any time. Under Massachusetts banking law, for purposes of determining the amount of cash dividends that are payable by State Street Bank, “net profits” is defined as an amount equal to the remainder of all earnings from current operations plus actual recoveries on loans and investments and other assets, after deducting from the total thereof all current operating expenses, actual losses, accrued dividends on preferred stock, if any, and all federal and state taxes.

No dividends may be declared, credited or paid so long as there is any impairment of State Street Bank's capital stock. The approval of the Massachusetts Commissioner of Banks is required if the total of all dividends declared by State Street Bank in any calendar year would exceed the total of its net profits for that year combined with its retained net profits for the preceding two years, less any required transfer to surplus or to a fund for the retirement of any preferred stock.

Under Federal Reserve regulations, the approval of the Federal Reserve would be required for the payment of dividends by State Street Bank if the total amount of all dividends declared by State Street Bank in any calendar year, including any proposed dividend, would exceed the total of its net income for such calendar year as reported in State Street Bank's Consolidated Reports of Condition and Income for a Bank with Domestic and Foreign Offices Only - FFIEC 031, commonly referred to as the “Call Report,” as submitted through the Federal Financial Institutions Examination Council and provided to the Federal Reserve, plus its “retained net income” for the preceding two calendar years. For these purposes, “retained net income,” as of any date of determination, is defined as an amount equal to State Street Bank's net income (as reported in its Call Reports for the calendar year in which retained net income is being determined) less any dividends declared during such year. In determining the amount of dividends that are payable, the total of State Street Bank's net income for the current year and its retained net income for the preceding two calendar years is reduced by any net losses incurred in the current or preceding two-year period and by any required transfers to surplus or to a fund for the retirement of preferred stock.

Prior Federal Reserve approval also must be obtained if a proposed dividend would exceed State Street Bank's “undivided profits” (retained earnings) as reported in its Call Reports. State Street Bank may include in its undivided profits amounts contained in its surplus account, if the amounts reflect transfers of undivided profits made in prior periods and if the Federal Reserve's approval for the transfer back to undivided profits has been obtained.

Under the PCA provisions adopted pursuant to the FDIC Improvement Act of 1991, State Street Bank may not pay a dividend when it is deemed, under the PCA framework, to be under-capitalized, or when the payment of the dividend would cause State Street Bank to be under-capitalized. If State Street Bank is under-capitalized for purposes of the PCA framework, it must cease paying dividends for so long as it is deemed to be under-capitalized. Once earnings have begun to improve and an adequate capital position has been restored, dividend payments may resume in accordance with federal and state statutory limitations and guidelines.

In 2017, our Parent Company declared aggregate quarterly common stock dividends to its shareholders of $1.60 per share, totaling approximately $596 million. In 2016, our Parent Company declared aggregate quarterly common stock dividends to its shareholders of $1.44 per share, totaling approximately $559 million. Currently, any payment of future common stock dividends by our Parent Company to its shareholders is subject to the review of our capital plan by the Federal Reserve in connection with its CCAR process. Information about dividends declared by our Parent Company and dividends from our subsidiary banks is provided under "Capital" in “Financial Condition” included under Item 7, Management's Discussion and Analysis, and in Note 15 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K, and is incorporated herein by reference. Future dividend payments of State Street Bank and our non-banking subsidiaries cannot be determined at this time. In addition, refer to “Capital Planning, Stress Tests and Dividends” in "Supervision and Regulation" included under Item 1, Business, of this Form 10-K and the risk factor titled “Our business and capital-related activities, including our ability to return capital to shareholders and purchase our capital stock, may be adversely affected by our implementation of the revised regulatory capital and liquidity standards that we must meet under the Basel III final rule, the Dodd-Frank Act and other regulatory initiatives, or in the event our capital plan or post-stress capital ratios are determined to be insufficient as a result of regulatory capital stress testing” included under Item 1A, Risk Factors, of this Form 10-K.

Information about our equity compensation plans is included under Item 12, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, and in Note 18 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K, and is incorporated herein by reference.

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SHAREHOLDER RETURN PERFORMANCE PRESENTATION
The graph presented below compares the cumulative total shareholder return on State Street's common stock to the cumulative total return of the S&P 500 Index, the S&P Financial Index and the KBW Bank Index over a five-year period. The cumulative total shareholder return assumes the investment of $100 in State Street common stock and in each index on December 31, 2012. It also assumes reinvestment of common stock dividends.

The S&P Financial Index is a publicly available, capitalization-weighted index, comprised of 67 of the Standard & Poor’s 500 companies, representing 27 diversified financial services companies, 23 insurance companies, and 17 banking companies. The KBW Bank Index is a modified cap-weighted index consisting of 24 exchange-listed stocks, representing national money center banks and leading regional institutions.

	2012	2013	2014	2015	2016	2017
State Street Corporation	$100	$159	$172	$148	$178	$227
S&P 500 Index	100	132	151	153	171	208
S&P Financial Index	100	136	156	154	189	230
KBW Bank Index	100	138	151	151	195	231

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ITEM 6.SELECTED FINANCIAL DATA

(Dollars in millions, except per share amounts or where otherwise noted)					
YEARS ENDED DECEMBER 31:	2017	2016	2015	2014	2013
Total fee revenue	$8,905	$8,116	$8,278	$8,010	$7,570
Net interest income	2,304	2,084	2,088	2,260	2,303
Gains (losses) related to investment securities, net	(39)	7	(6)	4	(9)
Total revenue	11,170	10,207	10,360	10,274	9,864
Provision for loan losses	2	10	12	10	6
Total expenses	8,269	8,077	8,050	7,827	7,192
Income before income tax expense	2,899	2,120	2,298	2,437	2,666
Income tax expense (benefit)	722	(22)	318	415	616
Net income from non-controlling interest	—	1	—	—	—
Net income	$2,177	$2,143	$1,980	$2,022	$2,050
Adjustments to net income[(1)]	(184)	(175)	(132)	(64)	(34)
Net income available to common shareholders	$1,993	$1,968	$1,848	$1,958	$2,016
PER COMMON SHARE:					
Earnings per common share:					
Basic	$5.32	$5.03	$4.53	$4.62	$4.52
Diluted	5.24	4.97	4.47	4.53	4.43
Cash dividends declared	1.60	1.44	1.32	1.16	1.04
Closing market price (at year end)	$97.61	$77.72	$66.36	$78.50	$73.39
AS OF DECEMBER 31:					
Investment securities	$97,579	$97,167	$100,022	$112,636	$116,914
Average total interest-earning assets	191,235	199,184	220,456	209,054	178,101
Total assets	238,425	242,698	245,155	274,089	243,262
Deposits	184,896	187,163	191,627	209,040	182,268
Long-term debt	11,620	11,430	11,497	10,012	9,670
Total shareholders' equity	22,317	21,219	21,103	21,328	20,248
Assets under custody and administration (in billions)	33,119	28,771	27,508	28,188	27,427
Assets under management (in billions)	2,782	2,468	2,245	2,448	2,345
Number of employees	36,643	33,783	32,356	29,970	29,430
RATIOS:					
Return on average common shareholders' equity	10.6 %	10.5 %	9.8 %	9.8 %	10.2 %
Return on average assets	0.99	0.93	0.79	0.85	0.99
Common dividend payout	29.89	28.46	28.99	25.03	22.89
Average common equity to average total assets	8.6	8.2	7.6	8.4	9.6
Net interest margin, fully taxable-equivalent basis	1.29	1.13	1.03	1.16	1.37
Common equity tier 1 ratio[(2)]	12.3	11.7	12.5	12.4	15.3
Tier 1 capital ratio[(2)]	15.5	14.8	15.3	14.5	17.1
Total capital ratio[(2)]	16.5	16.0	17.4	16.4	19.5
Tier 1 leverage ratio[(2)]	7.3	6.5	6.9	6.3	6.8
Supplementary leverage ratio[(3)]	6.5	5.9	6.2	5.6	NA

(1) Amounts represent preferred stock dividends and the allocation of earnings to participating securities using the two-class method.
(2) Ratios for 2014 through 2017 were calculated in conformity with the advanced approaches provisions of the Basel III final rule. Ratios for 2013 were calculated in conformity with the provisions of Basel I. Ratios for 2014 through

2017 are not directly comparable to ratios for prior years. Refer to Note 16 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.
(3) The supplementary leverage ratio was calculated using the transitional tier 1 capital as calculated under the supplementary leverage ratio provisions of the Basel III final rule as of the date indicated.
NA: Not applicable.

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STATE STREET CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION
AND RESULTS OF OPERATIONS

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We use acronyms and other defined terms for certain business terms and abbreviations, as defined on the acronyms list and glossary included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

GENERAL

As of December 31, 2017, we had consolidated total assets of $238.43 billion, consolidated total deposits of $184.90 billion, consolidated total shareholders' equity of $22.32 billion and 36,643 employees. We operate in more than 100 geographic markets worldwide, including in the U.S., Canada, Europe, the Middle East and Asia.

Our operations are organized into two lines of business, Investment Servicing and Investment Management, which are defined based on products and services provided.

Investment Servicing provides services for institutional clients, including mutual funds, collective investment funds and other investment pools, corporate and public retirement plans, insurance companies, investment managers, foundations and endowments worldwide. Products include custody; product and participant level accounting; daily pricing and administration; master trust and master custody; depotbank services (a fund oversight role created by regulation); record-keeping; cash management; foreign exchange, brokerage and other trading services; securities finance; our enhanced custody product, which integrates principal securities lending and custody; deposit and short-term investment facilities; loans and lease financing; investment manager and alternative investment manager operations outsourcing; performance, risk and compliance analytics; and financial data management to support institutional investors.

Investment Management, through SSGA, provides a broad array of investment management, investment research and investment advisory services to corporations, public funds and other sophisticated investors. SSGA offers passive and active asset management strategies across equity, fixed-income, alternative, multi-asset solutions (including OCIO) and cash asset classes. Products are distributed directly and through intermediaries using a variety of investment vehicles, including ETFs, such as the SPDR® ETF brand.

For financial and other information about our lines of business, refer to “Line of Business Information” in this Management's Discussion and Analysis and Note 24 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

This Management's Discussion and Analysis should be read in conjunction with the consolidated financial statements and accompanying notes to consolidated financial statements included under Item

8, Financial Statements and Supplementary Data, of this Form 10-K. Certain previously reported amounts presented in this Form 10-K have been reclassified to conform to current-period presentation.

We prepare our consolidated financial statements in conformity with U.S. GAAP. The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions in its application of certain accounting policies that materially affect the reported amounts of assets, liabilities, equity, revenue and expenses.

The significant accounting policies that require us to make judgments, estimates and assumptions that are difficult, subjective or complex about matters that are uncertain and may change in subsequent periods include:

- accounting for fair value measurements;
- other-than-temporary impairment of investment securities;
- impairment of goodwill and other intangible assets; and
- contingencies.

These significant accounting policies require the most subjective or complex judgments, and underlying estimates and assumptions could be subject to revision as new information becomes available. Additional information about these significant accounting policies is included under “Significant Accounting Estimates” in this Management's Discussion and Analysis.

Certain financial information provided in this Form 10-K, including in this Management's Discussion and Analysis, is prepared on both a U.S. GAAP, or reported basis, and a non-GAAP basis, including certain non-GAAP measures used in the calculation of identified regulatory ratios. We measure and compare certain financial information on a non-GAAP basis, including information (such as capital ratios calculated under regulatory standards scheduled to be effective in the future) that management uses in evaluating our business and activities.

Non-GAAP financial information should be considered in addition to, and not as a substitute for or superior to, financial information prepared in conformity with U.S. GAAP. Any non-GAAP financial information presented in this Form 10-K, including this Management's Discussion and Analysis, is reconciled to its most directly comparable currently applicable regulatory ratio or U.S. GAAP-basis measure.

We further believe that our presentation of fully taxable-equivalent NII, a non-GAAP measure, which reports non-taxable revenue, such as interest income associated with tax-exempt investment securities, on a fully taxable-equivalent basis, facilitates an investor's understanding and analysis of our underlying financial performance and trends.

This Management's Discussion and Analysis contains statements that are considered "forward-looking statements" within the meaning of U.S. securities laws. Forward-looking statements include statements about our goals and expectations regarding our business, financial and capital condition, results of operations, strategies, financial portfolio performance, dividend and stock purchase programs, expected outcomes of legal proceedings, market growth, acquisitions, joint ventures and divestitures and new technologies, services and opportunities, as well as industry, regulatory, economic and market trends, initiatives and developments, the business environment and other matters that do not relate strictly to historical facts. These forward-looking statements involve certain risks and uncertainties which could cause actual results to differ materially. We undertake no obligation to revise the forward-looking statements contained in this Management's Discussion and Analysis to reflect events after the time we file this Form 10-K with the SEC. Additional information about forward-looking statements and related risks and uncertainties is provided in "Risk Factors" under Item 1A of this Form 10-K.

We provide additional disclosures required by applicable bank regulatory standards, including supplemental qualitative and quantitative information with respect to regulatory capital (including market risk associated with our trading activities) and the liquidity coverage ratio, summary results of semi-annual State Street-run stress tests which we conduct under the Dodd-Frank Act, and resolution plan disclosures required under the Dodd-Frank Act. These additional disclosures are accessible on the “Investor Relations” section of our corporate website at www.statestreet.com.

We have included our website address in this report as an inactive textual reference only. Information on our website is not incorporated by reference into this Form 10-K.

We use acronyms and other defined terms for certain business terms and abbreviations, as defined on the acronyms list and glossary included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

OVERVIEW OF FINANCIAL RESULTS

TABLE 1: OVERVIEW OF FINANCIAL RESULTS

	Years Ended December 31,		
(Dollars in millions, except per share amounts)	2017	2016	2015
Total fee revenue	$8,905	$8,116	$8,278
Net interest income	2,304	2,084	2,088
Gains (losses) related to investment securities, net	(39)	7	(6)
Total revenue	11,170	10,207	10,360
Provision for loan losses	2	10	12
Total expenses	8,269	8,077	8,050
Income before income tax expense	2,899	2,120	2,298
Income tax expense (benefit)	722	(22)	318
Net income from non-controlling interest	—	1	—
Net income	$2,177	$2,143	$1,980
Adjustments to net income:			
Dividends on preferred stock[1]	$(182)	$(173)	$(130)
Earnings allocated to participating securities[2]	(2)	(2)	(2)
Net income available to common shareholders	$1,993	$1,968	$1,848
Earnings per common share:			
Basic	$5.32	$5.03	$4.53
Diluted	5.24	4.97	4.47
Average common shares outstanding (in thousands):			
Basic	374,793	391,485	407,856
Diluted	380,213	396,090	413,638
Cash dividends declared per common share	$1.60	$1.44	$1.32
Return on average common equity	10.6 %	10.5 %	9.8 %

(1) Additional information about our preferred stock dividends is provided in Note 15 to the consolidated financial statements in this Form 10-K.
(2) Represents the portion of net income available to common equity allocated to participating securities, composed of unvested and fully vested SERP shares and fully vested deferred director stock awards, which are equity-based awards that contain non-forfeitable rights to dividends, and are considered to participate with the common stock in undistributed earnings.

The following “Financial Results and Highlights” section provides information related to significant events, as well as highlights of our consolidated financial results for the year ended December 31, 2017 presented in Table 1: Overview of Financial Results. More detailed information about our consolidated financial results, including comparisons of our financial results for the year ended December 31, 2017 to those for the year ended December 31, 2016, is provided under “Consolidated Results of Operations,” "Line of Business Information" and "Capital" which follows these sections, as well as in our consolidated financial statements included in this Form 10-K. In this Management’s Discussion and Analysis, where we describe the effects of changes in foreign exchange rates, those effects are determined by applying applicable weighted average foreign exchange rates from the relevant 2016 period to the relevant 2017 period results.

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Financial Results and Highlights

- EPS of $5.24 in 2017 increased 5% compared to $4.97 in 2016.
Both 2017 and 2016 include the impact of notable items. The 2017 results include a one-time estimated net impact of $270 million associated with the Tax Cuts and Jobs Act (TCJA). This impact consisted of a one-time estimated tax expense of approximately $250 million and a one-time reduction of approximately $20 million in revenue.
Actual effects of the TCJA may differ from these estimates, among other things, due to additional tax and regulatory guidance and changes in our assumptions and interpretations.
The 2016 results include an acceleration of compensation expense of $249 million ($161 million after-tax) and tax benefits of $211 million resulting from a reduction in accrued tax expense attributable to retained foreign earnings and tax benefits from capital actions involving our overseas affiliates.
- 2017 ROE of 10.6% increased from 10.5% in 2016.
- Pre-tax margin of 26.0% in 2017 increased from 20.8% in 2016.

Revenue

- Total revenue and fee revenue increased 9% and 10%, respectively, in 2017 compared to 2016, primarily driven by strength in servicing fees, management fees, processing and other fees, and the impact of the weaker U.S. dollar, partially offset by lower trading services revenue.
- Servicing fee revenue increased 6% in 2017 compared to 2016, primarily due to market appreciation and net new business, partially offset by continued hedge fund outflows and the impact of the businesses we exited in 2017.
- Management fee revenue increased 25% in 2017 compared to 2016, primarily due to the GEAM business acquired in 2016, continued strength in global equity markets, and ETF flows.
- NII increased 11% in 2017 compared to 2016, driven by higher market interest rates in the U.S. and loan portfolio growth, partially offset by a smaller balance sheet.

Expenses

- Total expenses increased 2% in 2017 compared to 2016, primarily due to higher restructuring charges, information systems and communications costs, and compensation and employee benefit costs, partially offset by approximately $150 million of Beacon savings. Total Beacon program-to-date savings were approximately $325 million through December 31, 2017.
- In 2017, we recorded restructuring charges of $245 million related to Beacon. We expect Beacon target savings of $550 million to be realized by mid-2019, 18 months ahead of schedule.

AUCA/AUM

- AUCA increased 15% in 2017 compared to 2016, primarily due to strength in equity markets, flows, and new business. In 2017, we secured new asset servicing mandates of approximately $445 billion. Our AUCA pipeline of asset servicing mandates remaining to be installed in future periods totaled approximately $350 billion as of December 31, 2017.
- AUM increased 13% in 2017 compared to 2016, primarily driven by strength in equity markets, weaker U.S. dollar, and positive ETF flows.

Capital

- We declared aggregate common stock dividends of $1.60 per share, totaling approximately $596 million in 2017, compared to $1.44 per share, totaling $559 million in 2016, representing an increase of approximately 11% on a per share basis.
- In 2017, we acquired 16.8 million shares of common stock at an average per-share cost of $86.37 and an aggregate cost of approximately $1,450 million under common stock purchase programs approved by our Board.
- CET1 capital ratio under the Basel III standardized approach increased to 11.9% as of December 31, 2017, compared to 11.6% as of December 31, 2016.
- Tier 1 leverage ratio increased to 7.3% as of December 31, 2017, compared to 6.5% as of December 31, 2016.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

CONSOLIDATED RESULTS OF OPERATIONS

This section discusses our consolidated results of operations for 2017 compared to 2016, as well as 2016 compared to 2015, and should be read in conjunction with the consolidated financial statements and accompanying notes to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

Total Revenue

TABLE 2: TOTAL REVENUE

(Dollars in millions)	Years Ended December 31, 2017	2016	2015	% Change 2017 vs. 2016	% Change 2016 vs. 2015
Fee revenue:					
Servicing fees	$5,365	$5,073	$5,153	6 %	(2)%
Management fees	1,616	1,292	1,174	25	10
Trading services:					
Foreign exchange trading	641	654	690	(2)	(5)
Brokerage and other trading services	430	445	456	(3)	(2)
Total trading services	1,071	1,099	1,146	(3)	(4)
Securities finance	606	562	496	8	13
Processing fees and other	247	90	309	174	(71)
Total fee revenue	8,905	8,116	8,278	10	(2)
Net interest income:					
Interest income	2,908	2,512	2,488	16	1
Interest expense	604	428	400	41	7
Net interest income	2,304	2,084	2,088	11	—
Gains (losses) related to investment securities, net	(39)	7	(6)	nm	nm
Total revenue	$11,170	$10,207	$10,360	9	(1)

nm Not meaningful

Fee Revenue

Table 2: Total Revenue, provides the breakout of fee revenue for the years ended December 31, 2017, 2016 and 2015. Servicing and management fees collectively made up approximately 78% of total fee revenue in both 2017 and 2016 compared to approximately 76% in 2015. The level of these fees is influenced by several factors, including the mix and volume of our AUCA and our AUM, the value and type of securities positions held (with respect to assets under custody), the volume of portfolio transactions, and the types of products and services used by our clients, and is generally affected by changes in worldwide equity and fixed-income security valuations and trends in market asset class preferences.

Generally, servicing fees are affected by changes in daily average valuations of AUCA. Additional factors, such as the relative mix of assets serviced, the level of transaction volumes, changes in service level, the nature of services provided, balance credits, client minimum balances, pricing concessions, the geographical location in which services are provided and other factors, may have a significant effect on our servicing fee revenue.

Management fees generally are affected by changes in month-end valuations of AUM. Management fees for certain components of managed assets, such as ETFs, are affected by daily average valuations of AUM. Management fee revenue is more sensitive to market valuations than servicing fee revenue, as a higher proportion of the underlying services provided, and the associated management fees earned, are dependent on equity and fixed-income security

valuations. Additional factors, such as the relative mix of assets managed, may have a significant effect on our management fee revenue. While certain management fees are directly determined by the values of AUM and the investment strategies employed, management fees may reflect other factors, including performance fee arrangements, as well as our relationship pricing for clients using multiple services.
Asset-based management fees for actively managed products are generally charged at a higher percentage of AUM than for passive products. Actively managed products may also include performance fee arrangements which are recorded when the fee is earned, based on predetermined benchmarks associated with the applicable fund’s performance.
In light of the above, we estimate, using relevant information as of December 31, 2017 and assuming that all other factors remain constant, that:

- A 10% increase or decrease in worldwide equity valuations, on a weighted average basis, over the relevant periods for which our servicing and management fees are calculated, would result in a corresponding change in our total servicing and management fee revenues of approximately 3%; and
- A 10% increase or decrease in worldwide fixed income markets, on a weighted average basis, over the relevant periods for which our servicing and management fees are calculated, would result in a corresponding change in our total servicing and management fee revenues of approximately 1%.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION
AND RESULTS OF OPERATIONS

See Table 3: Daily, Month-End and Year-End Equity Indices and Table 4: Year-End Debt Indices, for selected indices. While the specific indices presented are indicative of general market trends, the asset types and classes relevant to individual client portfolios can and do differ, and the performance of associated relevant indices can therefore differ from the performance of the indices presented.
Daily averages, month-end averages, and year-

end indices demonstrate worldwide changes in equity and debt markets that affect our servicing and management fee revenue. Year-end indices affect the values of AUCA and AUM as of those dates.
Further discussion of fee revenue is provided under Line of Business Information in this Management's Discussion and Analysis in this Form 10-K.

TABLE 3: DAILY, MONTH-END AND YEAR-END EQUITY INDICES(1)

	Daily Averages of Indices			Averages of Month-End Indices			Year-End Indices		
	Years Ended December 31,			Years Ended December 31,			Years Ended December 31,		
	2017	2016	% Change	2017	2016	% Change	2017	2016	% Change
S&P 500®	2,449	2,095	17 %	2,465	2,106	17 %	2,674	2,239	19 %
MSCI EAFE®	1,886	1,645	15	1,900	1,652	15	2,051	1,684	22
MSCI® Emerging Markets	1,028	835	23	1,036	842	23	1,158	862	34
HFRI Asset Weighted Composite®	NA	NA	NA	1,352	1,264	7	1,389	1,305	6

(1) The index names listed in the table are service marks of their respective owners.
NA Not applicable

TABLE 4: YEAR-END DEBT INDICES(1)

	As of December 31,		
	2017	2016	% Change
Barclays Capital U.S. Aggregate Bond Index®	2,046	1,976	4 %
Barclays Capital Global Aggregate Bond Index®	485	451	8

(1) The index names listed in the table are service marks of their respective owners.

Net Interest Income

See Table 2: Total Revenue, for the breakout of interest income and interest expense for the years ended December 31, 2017, 2016 and 2015. NII was $2,304 million for 2017 compared to $2,084 million and $2,088 million for 2016 and 2015, respectively.
NII is defined as interest income earned on interest-earning assets less interest expense incurred on interest-bearing liabilities. Interest-earning assets, which principally consist of investment securities, interest-bearing deposits with banks, repurchase agreements, loans and leases and other liquid assets, are financed primarily by client deposits, short-term borrowings and long-term debt.

NIM represents the relationship between annualized fully taxable-equivalent NII and average total interest-earning assets for the period. It is calculated by dividing fully taxable-equivalent NII by average interest-earning assets. Revenue that is exempt from income taxes, mainly that earned from certain investment securities (state and political subdivisions), is adjusted to a fully taxable-equivalent basis using the U.S. federal and state statutory income tax rates.

TABLE 5: AVERAGE BALANCES AND INTEREST RATES - FULLY TAXABLE-EQUIVALENT BASIS

	Years Ended December 31,								
	2017			2016			2015		
(Dollars in millions; fully taxable-equivalent basis)	Average Balance	Interest Revenue/ Expense	Rate	Average Balance	Interest Revenue/ Expense	Rate	Average Balance	Interest Revenue/ Expense	Rate
Interest-bearing deposits with banks	$47,514	$180	.38 %	$53,091	$126	.24 %	$69,753	$208	.30 %
Securities purchased under resale agreements[1]	2,131	264	12.38	2,558	146	5.70	3,233	62	1.92
Trading account assets	1,011	(1)	(.12)	921	—	—	1,194	1	.08
Investment securities	95,779	1,891	1.97	100,738	1,962	1.95	105,611	2,069	1.96
Loans and leases	21,916	519	2.37	19,013	384	2.02	17,948	311	1.73
Other interest-earning assets	22,884	222	.97	22,863	61	.27	22,717	10	.04
Average total interest-earning assets	$191,235	$3,075	1.61	$199,184	$2,679	1.34	$220,456	$2,661	1.21
Interest-bearing deposits:									
U.S.	$30,623	$96	.31 %	$30,107	$132	.44 %	$30,819	$51	.16 %
Non-U.S.[2]	91,937	67	.07	95,551	(47)	(.05)	102,491	46	.05
Total interest-bearing deposits[2]	122,560	163	.13	125,658	85	.07	133,310	97	.07
Securities sold under repurchase agreements	3,683	2	.05	4,113	1	.02	8,875	1	.01
Federal funds purchased	—	—	—	31	—	—	21	—	—
Other short-term borrowings	1,313	10	.80	1,666	7	.40	3,826	6	.15
Long-term debt	11,595	308	2.66	11,401	260	2.29	10,301	250	2.43
Other interest-bearing liabilities	4,607	121	2.63	5,394	75	1.39	6,471	46	.71
Average total interest-bearing liabilities	$143,758	$604	.42	$148,263	$428	.29	$162,804	$400	.25
Interest-rate spread			1.19 %			1.05 %			.96 %
Net interest income—fully taxable-equivalent basis		$2,471			$2,251			$2,261	
Net interest margin—fully taxable-equivalent basis			1.29 %			1.13 %			1.03 %
Tax-equivalent adjustment		(167)			(167)			(173)	
Net interest income—GAAP basis		$2,304			$2,084			$2,088	

(1) Reflects the impact of balance sheet netting under enforceable netting agreements of approximately $31 billion, $30 billion and $30 billion for the years ended December 31, 2017, 2016 and 2015, respectively. Excluding the impact of netting, the average interest rates would be approximately 0.79%, 0.43% and 0.19% for the years ended December 31, 2017, 2016 and 2015, respectively.

(2) Average rate includes the impact of FX swap expense of approximately $141 million, $27 million and $44 million for the years ended December 31, 2017, 2016 and 2015, respectively. Average rates for total interest-bearing deposits

excluding the impact of FX swap expense were 0.02%, 0.04% and 0.04% for the years ended December 31, 2017, 2016 and 2015, respectively.
See Table 5: Average Balances and Interest Rates - Fully Taxable-Equivalent Basis, for the breakout of NII on a fully taxable-equivalent basis for the years ended December 31, 2017, 2016 and 2015. NII on a fully taxable-equivalent basis increased in 2017 compared to 2016, as benefits due to higher U.S. market interest rates, disciplined liability pricing and loan portfolio growth, partially offset by a smaller balance sheet. Average balances in 2017 reflect management actions to reduce the usage of wholesale certificates of deposit (CDs) on our balance sheet. Average interest-bearing and noninterest-bearing deposits were approximately $6.71 billion lower in 2017 compared to 2016, primarily due to a $9.64 billion reduction in wholesale CDs, partially offset by an increase in client deposits.
We recorded aggregate discount accretion in interest income of approximately $19 million in 2017, respectively, related to the assets we consolidated onto our balance sheet in 2009 from our asset-backed commercial paper conduits. Assuming that we hold the former conduit securities remaining in our investment portfolio until they mature or are sold, we expect to generate aggregate discount accretion in

future periods of approximately $123 million over their remaining terms.
The timing and ultimate recognition of any applicable discount accretion depends, in part, on factors that are outside of our control, including anticipated prepayment speeds and credit quality. The impact of these factors is uncertain and can be significantly influenced by general economic and financial market conditions. The timing and recognition of any applicable discount accretion can also be influenced by or ongoing management of the risks and other characteristics associated with our investment securities portfolio, including sales of securities which would otherwise generate interest revenue through accretion.
Changes in the components of interest-earning assets and interest-bearing liabilities are discussed in more detail below. Additional information about the components of interest income and interest expense is provided in Note 17 to the consolidated financial statements included in this Form 10-K.
Average total interest-earning assets were $7.95 billion lower in 2017 compared to 2016, primarily driven by lower levels of wholesale CDs and

corresponding reductions in interest-bearing deposits with banks and investment securities.

Interest-bearing deposits with banks averaged $47.51 billion in 2017 compared to $53.09 billion in 2016. These deposits primarily reflect our maintenance of cash balances at the Federal Reserve, the ECB and other non-U.S. central banks.

Securities purchased under resale agreements averaged $2.13 billion in 2017 compared to $2.56 billion in 2016, which reflects the impact of balance sheet netting under enforceable netting agreements of approximately $31 billion and $30 billion for 2017 and 2016, respectively. We maintain an agreement with a clearing organization that enables us to net all securities sold under repurchase agreements against those purchased under resale agreements with counterparties that are also members of the clearing organization.

Investment securities averaged $95.78 billion in 2017 compared to $100.74 billion in 2016. The decrease in average investment securities was driven by a reduction in U.S. Treasury securities and continued investment in loans and leases.

Loans and leases averaged $21.92 billion in 2017 compared to $19.01 billion in 2016. The increase in average loans and leases resulted from growth in loans to municipalities, hedge fund collateralized lending, mutual fund lending, and continued investment in senior secured loans. Loans and leases also includes U.S. and non-U.S. overdrafts, which provide liquidity to clients in support of investment activities. Average U.S. and non-U.S. overdrafts remained relatively stable in 2017 at $2.26 billion and $1.46 billion, respectively, from $2.28 billion and $1.36 billion in 2016.

Average other interest-earning assets remained relatively stable with $22.88 billion in 2017 and $22.86 billion in 2016. Our average other interest-earning assets, largely associated with our enhanced custody business, comprised approximately 12% of our average total assets in 2017 and 2016. The enhanced custody business is our securities financing business where we act as principal with respect to our custody clients and generate securities finance revenue. The NII earned on these transactions is generally lower than the interest earned on other alternative investments.

Aggregate average U.S. and non-U.S. interest-bearing deposits decreased to $122.56 billion in 2017 from $125.66 billion in 2016. The lower levels in 2017 compared to the prior year period were a result of higher U.S. and non-U.S. interest bearing client deposit levels during the year, offset by management actions to reduce wholesale CDs. In 2017, a full year average of $3.62 billion of non-U.S. interest-bearing deposits was transferred to U.S. interest bearing deposits. Future deposit levels will be influenced by the underlying asset servicing business, client deposit behavior, and market conditions, including the general levels of U.S. and non-U.S. interest rates.

Average other short-term borrowings declined to $1.31 billion in 2017 from $1.67 billion in 2016, as bonds matured in the tax-exempt investment program.

Average long-term debt was $11.60 billion in 2017, compared to $11.40 billion in 2016. These amounts reflect issuances of senior debt, partially offset by maturities, during the respective periods.

Average other interest-bearing liabilities were $4.61 billion in 2017 compared to $5.39 billion in 2016. Other interest-bearing liabilities primarily reflect our level of cash collateral received from clients in connection with our enhanced custody business, which is presented on a net basis where we have enforceable netting agreements.

Several factors could affect future levels of NII and NIM, including the volume and mix of client liabilities; actions of various central banks; changes in the level of U.S. and non-U.S. interest rates and the slope of various yield curves around the world; revised or proposed regulatory capital or liquidity standards, or interpretations of those standards; the amount of discount accretion generated by the former conduit securities that remain in our investment securities portfolio; the yields earned on securities purchased compared to the yields earned on securities sold or matured; changes in the type and amount of credit or other loans we extend; and changes in our enhanced custody business.

Based on market conditions and other factors, including regulatory standards, we continue to reinvest the majority of the proceeds from pay-downs and maturities of investment securities in highly-rated securities, such as U.S. Treasury and agency securities, municipal securities, federal agency MBS and U.S. and non-U.S. mortgage- and ABS. The pace at which we continue to reinvest and the types of investment securities purchased will depend on the impact of market conditions, the implementation of regulatory standards, including interpretation of those standards and other factors over time. We expect these factors and the levels of global interest rates to influence what effect our reinvestment program will have on future levels of our NII and NIM.

Provision for Loan Losses

We recorded a provision for loan losses of $2 million in 2017 compared to $10 million in 2016 and $12 million in 2015. The provisions in these periods were recorded in connection with our exposure to non-investment grade borrowers composed of senior secured loans, which we purchased in connection with our participation in loan syndications in the non-

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investment grade lending market. Additional information about these senior secured loans is provided under "Loans and Leases" in "Financial Condition" in this Management's Discussion and Analysis and in Note 4 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

Expenses

Table 6: Expenses, provides the breakout of expenses for the years ended December 31, 2017, 2016 and 2015.

TABLE 6: EXPENSES

(Dollars in millions)	Years Ended December 31, 2017	2016	2015	% Change 2017 vs. 2016	% Change 2016 vs. 2015
Compensation and employee benefits	$4,394	$4,353	$4,061	1 %	7 %
Information systems and communications	1,167	1,105	1,022	6	8
Transaction processing services	838	800	793	5	1
Occupancy	461	440	444	5	(1)
Acquisition costs	21	69	20	(70)	245
Restructuring charges, net	245	140	5	75	nm
Other:					
Professional services	340	379	490	(10)	(23)
Amortization of other intangible assets	214	207	197	3	5
Regulatory fees and assessments	106	82	115	29	(29)
Other	483	502	824	(4)	(39)
Total other	1,143	1,170	1,626	(2)	(28)
Total expenses	$8,269	$8,077	$7,971	2	1
Number of employees at year-end	36,643	33,783	32,356	8	4

nm Not meaningful

Compensation and employee benefits expenses increased 1% in 2017 compared to 2016, primarily due to increased costs to support new business, annual merit and performance based incentive compensation increases, partially offset by Beacon savings. In December 2016, we recorded a pre-tax charge of $249 million ($161 million after tax) associated with an amendment of the terms of outstanding, previously issued, deferred cash-settled incentive compensation awards for certain employees to remove continued service requirements, thereby accelerating the future expense that would have been recognized over the remaining term of the awards had the continued service requirement not been removed.

Compensation and employee benefits expenses increased 7% in 2016 compared to 2015. The increase was primarily due to the aforementioned acceleration of compensation expenses and the impact of the GEAM business acquired in 2016.

Headcount increased 8% in 2017 compared to 2016. The growth in headcount was primarily within low cost locations. These increases were driven by strategic initiatives and new business, including the impact of large client lift outs, as well as regulatory initiatives and contractor conversions to full-time employees and partially offset by other reductions from Beacon.

Information systems and communications expenses increased 6% in 2017 compared to 2016. The increases were primarily related to technology infrastructure costs and investments supporting Beacon.

Information systems and communications expenses increased 8% in 2016 compared to 2015. The increase was primarily related to investments supporting new business and Beacon, and the impact of the GEAM business acquired in 2016.

Other expenses decreased 2% in 2017 compared to 2016, primarily due to lower professional services costs.

Other expenses decreased 28% in 2016 compared to 2015. The decrease was primarily due to lower litigation-related expenses and higher expenses in 2015 associated with the previously disclosed expense billing matter.

As a systemically important financial institution, we are subject to enhanced supervision and prudential standards. Our status as a G-SIB has also resulted in heightened prudential and conduct expectations of our U.S. and international regulators with respect to our capital and liquidity management and our compliance and risk oversight programs. These heightened expectations have increased our regulatory compliance costs, including personnel and systems, as well as significant additional implementation and related costs to enhance our regulatory compliance programs. We anticipate that these evolving regulatory compliance requirements and expectations will continue to affect our expenses.

Acquisition Costs

We recorded acquisition costs of $21 million, $69 million and $20 million in 2017, 2016 and 2015, respectively. In 2017, all such costs related to our acquisition of the GEAM business on July 1, 2016.

Restructuring Charges

In connection with Beacon, we announced in 2016 that we expected:

(i) to incur aggregate pre-tax restructuring charges of approximately $300 million to $400 million beginning in 2016 through December 31, 2020 including approximately $250 million to $300 million in severance and benefits costs associated with targeted staff reductions (a substantial portion of which would result in future cash expenditures) and

approximately $50 million to $100 million in information technology application rationalization and real estate actions; and
(ii) to achieve estimated annual pre-tax net run-rate expense savings of $550 million by the end of 2020, relative to 2015, all else equal, for full effect in 2021. Actual expenses may increase or decrease in the future due to other factors.
In 2017, we recorded restructuring charges of $245 million, compared to $142 million in 2016, related to Beacon. In aggregate, we have recorded restructuring charges of $387 million related to Beacon, including $280 million in severance costs and $107 million in information technology application rationalization and real estate action.
In 2017, we achieved approximately $150 million in year-over-year expense savings related to Beacon and expect target savings of $550 million to be realized by mid-2019.
The following table presents aggregate restructuring activity for the periods indicated.

TABLE 7: RESTRUCTURING CHARGES

(In millions)	Employee Related Costs	Real Estate Actions	Asset and Other Write-offs	Total
Accrual Balance at December 31, 2014	$ 39	$ 23	$ 7	$69
Accruals for Business Operations and IT	(5)	(3)	13	5
Payments and other adjustments	(25)	(9)	(17)	(51)
Accrual Balance at December 31, 2015	$ 9	$ 11	$ 3	$23
Accruals for Business Operations and IT	(2)	—	—	(2)
Accruals for Beacon	94	18	30	142
Payments and other adjustments	(64)	(12)	(31)	(107)
Accrual Balance at December 31, 2016	$ 37	$ 17	$ 2	$56
Accruals for Beacon	186	32	27	245
Payments and Other Adjustments	(57)	(17)	(26)	(100)
Accrual Balance at December 31, 2017	$ 166	$ 32	$ 3	$201

Income Tax Expense

Income tax expense (benefit) was $722 million in 2017, $(22) million in 2016 and $318 million in 2015. Our 2017 effective tax rate was 24.9%, compared to (1.0)% in 2016 and 13.8% in 2015. The 2017 income tax expense includes a one-time estimated tax expense of $250 million for the provisional impact of the enactment of the TCJA. Actual effects of the TCJA may differ from these estimates, among other things, due to additional tax and regulatory guidance and changes in our assumptions and interpretations. The 2016 benefit included a reduction in accrued tax expense attributable to retained foreign earnings and tax benefits from capital actions involving our overseas affiliates.

Additional information regarding income tax expense, including unrecognized tax benefits, and tax contingencies are provided in Notes 13 and 22 to the consolidated financial statements under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

LINE OF BUSINESS INFORMATION

Our operations are organized into two lines of business: Investment Servicing and Investment Management, which are defined based on products and services provided. The results of operations for these lines of business are not necessarily comparable with those of other companies, including companies in the financial services industry.
Investment Servicing provides services for institutional clients, including mutual funds, collective investment funds and other investment pools, corporate and public retirement plans, insurance companies, investment managers, foundations and endowments worldwide. Products include custody; product- and participant-level accounting; daily pricing and administration; master trust and master custody; record-keeping; cash management; foreign exchange, brokerage and other trading services; securities finance; our enhanced custody product, which integrates principal securities lending and custody; deposit and short-term investment facilities; loans and lease financing; investment manager and alternative investment manager operations outsourcing; and performance, risk and compliance analytics

to support institutional investors.
Investment Management, through SSGA, provides a broad array of investment management, investment research and investment advisory services to corporations, public funds and other sophisticated investors. SSGA offers passive and active asset management strategies across equity, fixed-income, alternative, multi-asset solutions (including OCIO) and cash asset classes. Products are distributed directly and through intermediaries using a variety of investment vehicles, including ETFs, such as the SPDR® ETF brand.
For information about our two lines of business, as well as the revenues, expenses and capital allocation methodologies associated with them, refer to Note 24 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in this Form 10-K.

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Investment Servicing

TABLE 8: INVESTMENT SERVICING LINE OF BUSINESS RESULTS

(Dollars in millions, except where otherwise noted)	Years Ended December 31, 2017	2016	2015	% Change 2017 vs. 2016	% Change 2016 vs. 2015
Servicing fees	$5,365	$5,073	$5,153	6 %	(2)%
Trading services	999	1,038	1,091	(4)	(5)
Securities finance	606	562	496	8	13
Processing fees and other	240	119	342	102	(65)
Total fee revenue	7,210	6,792	7,082	6	(4)
Net interest income	2,309	2,081	2,086	11	—
Gains (losses) related to investment securities, net	(39)	7	(6)	nm	nm
Total revenue	9,480	8,880	9,162	7	(3)
Provision for loan losses	2	10	12	(80)	(17)
Total expenses	6,717	6,660	6,990	1	(5)
Income before income tax expense	$2,761	$2,210	$2,160	25	2
Pre-tax margin	29 %	25 %	24 %		
Average assets (in billions)	$214.0	$225.3	$246.6		

nm Not meaningful

Servicing Fees

Servicing fees increased 6% in 2017 compared to 2016, primarily due to continued market appreciation and net new business, partially offset by continued hedge fund outflows and the impact of the businesses we exited in 2017. Servicing fees in 2016 included a revenue reduction of $48 million related to reimbursements to our clients related to the manner in which we invoiced certain expenses to our clients.

Servicing fees decreased 2% in 2016 compared to 2015, primarily due to lower international market levels.

Servicing fees generated outside the U.S. were approximately 45% of total servicing fees in 2017 compared to approximately 42% in both 2016 and 2015.

TABLE 9: ASSETS UNDER CUSTODY AND ADMINISTRATION BY PRODUCT

(In billions)	As of December 31, 2017	2016	2015	2014	2013	2016-2017 Annual Growth Rate	2013-2017 Compound Annual Growth Rate
Mutual funds	$7,603	$6,841	$6,768	$6,992	$6,811	11 %	3 %
Collective funds	9,707	7,501	7,088	6,949	6,428	29	11
Pension products	6,704	5,584	5,510	5,746	5,851	20	3
Insurance and other products	9,105	8,845	8,142	8,501	8,337	3	2
Total	$33,119	$28,771	$27,508	$28,188	$27,427	15	5

TABLE 10: ASSETS UNDER CUSTODY AND ADMINISTRATION BY ASSET CLASS

(In billions)	As of December 31, 2017	2016	2015	2014	2013	2016-2017 Annual	2013-2017 Compound

						Growth Rate	Annual Growth Rate
Equities	$19,214	$16,189	$14,888	$15,876	$15,050	19 %	6 %
Fixed-income	10,070	9,231	9,264	8,739	9,072	9	3
Short-term and other investments	3,835	3,351	3,356	3,573	3,305	14	4
Total	$33,119	$28,771	$27,508	$28,188	$27,427	15	5

TABLE 11: ASSETS UNDER CUSTODY AND ADMINISTRATION BY GEOGRAPHY[1]

	As of December 31,				
(In billions)	2017	2016	2015	2014	2013
North America	$24,418	$21,544	$20,842	$21,217	$20,764
Europe/Middle East/Africa	7,028	5,734	5,387	5,633	5,511
Asia/Pacific	1,673	1,493	1,279	1,338	1,152
Total	$33,119	$28,771	$27,508	$28,188	$27,427

[1] Geographic mix is based on the location in which the assets are serviced.

The increase in total AUCA as of December 31, 2017 compared to December 31, 2016 primarily resulted from higher global equity markets. Asset levels as of December 31, 2017 do not reflect the approximately $350 billion of new business in assets

to be installed, which was awarded to us in 2017 and prior periods but not installed prior to December 31, 2017, including approximately $445 billion of new asset servicing mandates awarded to us in 2017. This new business will be reflected in AUCA in future periods after installation and will generate servicing fee revenue in subsequent periods. The $350 billion of new business assets to be serviced does not include new business which has been contracted, but for which the client has not yet provided permission to publicly disclose and is not yet installed. Also not included is the loss of business which occurs from time to time or changes in AUCA, usually from changes in market values of customer assets, subscriptions or redemptions from our customer investment products.

With respect to these new assets, we will provide various services, including, accounting, bank loan servicing, compliance reporting and monitoring, custody, depository banking services, foreign exchange, fund administration, hedge fund servicing, middle-office outsourcing, performance and analytics, private equity administration, real estate administration, securities finance, transfer agency, and wealth management services.

As a result of a decision to diversify providers, one of our large clients will move a portion of its assets, largely common trust funds, currently with State Street to another service provider. We expect to remain a significant service provider to this client. The transition will principally occur in 2018 and beyond and represents approximately $1 trillion in assets with respect to which we will no longer derive revenue post-transition.

Trading Services

Trading services revenue is composed of revenue generated by FX trading, as well as revenue generated by brokerage and other trading services as noted in Table 2: Total Revenue.

Foreign Exchange Trading Revenue

We primarily earn FX trading revenue by acting as a principal market-maker through both "direct sales and trading" and "indirect foreign exchange trading."

- Direct sales and trading: Represent FX transactions at negotiated rates with clients and investment managers that contact our trading desk directly. These principal market-making activities include transactions for funds serviced by third party custodians or prime brokers, as well as those funds under custody at State Street.
- Indirect FX trading: Represent FX transactions with clients or their investment managers routed to our FX desk through our asset-servicing operation; in which all cases, we are the funds' custodian. We execute indirect FX trades as a principal at rates disclosed to our clients.

Our FX trading revenue is influenced by multiple factors, including: the volume and type of client FX transactions and related spreads; currency volatility, reflecting market conditions; and our management of exchange rate, interest rate and other market risks associated with our foreign exchange activities. The relative impact of these factors on our total FX trading revenues often differs from period to period. For example, assuming all other factors remain constant, increases or decreases in volumes or bid-offer spreads across product mix tend to result in increases or decreases, as the case may be, in client-related FX revenue.

Our clients that utilize indirect FX trading can, in addition to executing their FX transactions through dealers not affiliated with us, transition from indirect FX trading to either direct sales and trading execution, including our "Street FX" service, or to one of our electronic trading platforms. Street FX, in which we continue to act as a principal market-maker, enables our clients to define their FX execution strategy and automate the FX trade execution process, both for funds under custody with us as well as those under custody at another bank.

Brokerage and Other Trading Services

We also offer a range of brokerage and other trading products tailored specifically to meet the needs of the global pension community, including transition management and commission recapture. These products and services are generally offered by us as agent of the institutional investor. Revenue earned from these services is recorded in other trading, transition management and brokerage revenue within brokerage and other trading services revenue.

Total brokerage and other trading services revenue primarily consists of "electronic FX services" and "other trading, transition management and brokerage revenue."

- Electronic FX services: Our clients may choose to execute FX transactions through one of our electronic trading platforms. These transactions generate revenue through a "click" fee.
-

Other trading, transition management and brokerage revenue: As our clients look to State Street to enhance and preserve portfolio values, they may choose to utilize our Transition or Currency Management capabilities or transact with our Equity Trade execution group. These transactions generate revenue via commissions charged for trades transacted during the management of these portfolios.

In recent years, our transition management revenue was adversely affected by compliance issues in our U.K. business during 2010 and 2011, including settlements with the FCA in 2014 and the DOJ and

SEC in 2017, including a deferred prosecution agreement. The reputational and regulatory impact of those compliance issues continues and may adversely affect our results in future periods.

Securities Finance

Our securities finance business consists of three components:

(1) an agency lending program for SSGA-managed investment funds with a broad range of investment objectives, which we refer to as the SSGA lending funds;

(2) an agency lending program for third-party investment managers and asset owners, which we refer to as the agency lending funds; and

(3) security lending transactions which we enter into as principal, which we refer to as our enhanced custody business.

Securities finance revenue earned from our agency lending activities, which is composed of our split of both the spreads related to cash collateral and the fees related to non-cash collateral, is principally a function of the volume of securities on loan, the interest-rate spreads and fees earned on the underlying collateral, and our share of the fee split.

As principal, our enhanced custody business borrows securities from the lending client or other market participants and then lends such securities to the subsequent borrower, either a State Street client or a broker/dealer. We act as principal when the lending client is unable to, or elects not to, transact directly with the market and execute the transaction and furnish the securities. In our role as principal, we provide support to the transaction through our credit rating. While we source a significant proportion of the securities furnished by us in our role as principal from third parties, we have the ability to source securities through assets under custody and administration from clients who have designated State Street as an eligible borrower.

Securities finance revenue as presented in Table 8: Investment Servicing Line of Business Results, increased 8% in 2017 compared to 2016, primarily as a result of higher revenue in our enhanced custody business.

Market influences may continue to affect client demand for securities finance, and as a result our revenue from, and the profitability of, our securities lending activities in future periods. In addition, the constantly evolving regulatory environment, including revised or proposed capital and liquidity standards, and interpretations of those standards, may influence modifications to the way in which we deliver our agency lending or enhanced custody businesses, the volume of our securities lending activity and related revenue and profitability in future periods.

Processing Fees and Other

Processing fees and other revenue includes diverse types of fees and revenue, including fees from our structured products business, fees from software licensing and maintenance, equity income from our joint venture investments, gains and losses on sales of other assets, derivative financial instruments to support our clients' needs and to manage our interest-rate and currency risk, and amortization of our tax-advantaged investments.

Processing fees and other revenue, presented in Table 8: Investment Servicing Line of Business Results, increased 102% in 2017 compared to 2016. The increase is primarily due to a pre-tax gain of $30 million on the dispositions of our joint venture interests in IFDS U.K. and BFDS in the first quarter of 2017 and the sale of an equity trading platform business in the third quarter of 2017, partially offset by a pre-tax gain of approximately $53 million related to the sale of WM/Reuters in 2016.

Processing fees and other revenue decreased 65% in 2016 compared to 2015. The decrease was primarily due to a gain from the sale of commercial real estate and a gain from the final paydown of a commercial real estate loan in 2015, partially offset by a pre-tax gain on the sale of WM/Reuters in 2016.

Expenses

Total expenses for Investment Servicing increased 1% in 2017 compared to 2016, primarily due to costs to support new business, higher annual merit and performance based incentive compensation, including higher seasonal deferred incentive compensation expense for retirement eligible employees and payroll taxes in the first quarter of 2017 compared to the first quarter of 2016. These increases were partially offset by Beacon savings and a one-time acceleration of compensation expense of approximately $42 million in the fourth quarter of 2016.

Additional information about expenses is provided under "Expenses" in "Consolidated Results of Operations" included in this Management's Discussion and Analysis of this Form 10-K.

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Investment Management
TABLE 12: INVESTMENT MANAGEMENT LINE OF BUSINESS RESULTS

(Dollars in millions)	Years Ended December 31, 2017	2016	2015	% Change 2017 vs. 2016	% Change 2016 vs. 2015
Management fees	$1,616	$1,292	$1,174	25 %	10 %
Trading services[1]	72	61	55	18	11
Processing fees and other	7	(29)	(33)	(124)	(12)
Total fee revenue	1,695	1,324	1,196	28	11
Net interest income	(5)	3	2	nm	50
Total revenue	1,690	1,327	1,198	27	11
Total expenses	1,286	1,218	962	6	27
Income before income tax expense	$404	$109	$236	271	(54)
Pre-tax margin	24 %	8 %	20 %		
Average assets (in billions)	$5.4	$4.4	$3.9		

[1] Includes revenues associated with the SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF, for which we act as the marketing agent.
nm Not meaningful

Management Fees
Through SSGA, we provide a broad range of investment management strategies, specialized investment management advisory services, OCIO and other financial services for corporations, public funds, and other sophisticated investors. SSGA

offers an array of investment management strategies, including passive and active, such as enhanced indexing, using quantitative and fundamental methods for both U.S. and global equity and fixed income securities. SSGA also offers ETFs, such as the SPDR® ETF brand. While certain management fees are directly determined by the values of AUM and the investment strategies employed, management fees reflect other factors as well, including our relationship pricing for clients who use multiple services, and the benchmarks specified in the respective management agreements related to performance fees.

Management fees increased 25% in 2017 compared to 2016, primarily due to the full year of acquired GEAM business compared to a half year in 2016, higher global equity markets and higher revenue yielding ETF inflows. Management fees increased 10% in 2016 compared to 2015, primarily due to the acquired GEAM business in the second half of 2016.

Management fees generated outside the U.S. were approximately 28% of total management fees in 2017, compared to 32% and 35% in 2016 and 2015, respectively. The percentage of management fees generated outside the U.S. in 2017 decreased from 2016 primarily due to the acquired GEAM business.

TABLE 13: ASSETS UNDER MANAGMENT BY ASSET CLASS AND INVESTMENT APPROACH

(In billions)	As of December 31, 2017	2016	2015	2014	2013	2016-2017 Annual Growth Rate	2013-2017 Compound Annual Growth Rate
Equity:							

Active	$95	$73	$32	$39	$42	30 %	23 %
Passive	1,650	1,401	1,294	1,436	1,334	18	5
Total Equity	1,745	1,474	1,326	1,475	1,376	18	6
Fixed-Income:							
Active	77	70	18	17	16	10	48
Passive	337	308	294	302	311	9	2
Total Fixed-Income	414	378	312	319	327	10	6
Cash[1]	330	333	368	399	385	(1)	(4)
Multi-Asset-Class Solutions:							
Active	18	19	17	30	23	(5)	(6)
Passive	129	107	86	97	110	21	4
Total Multi-Asset-Class Solutions	147	126	103	127	133	17	3
Alternative Investments[2]:							
Active	23	28	17	17	14	(18)	13
Passive	123	129	119	111	110	(5)	3
Total Alternative Investments	146	157	136	128	124	(7)	4
Total	$2,782	$2,468	$2,245	$2,448	$2,345	13	4

(1) Includes both floating- and constant-net-asset-value portfolios held in commingled structures or separate accounts.
(2) Includes real estate investment trusts, currency and commodities, including SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF. State Street is not the investment manager for the SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF, but acts as the marketing agent.

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TABLE 14: EXCHANGE - TRADED FUNDS BY ASSET CLASS[1]

(In billions)	As of December 31, 2017	2016	2015	2014	2013	2016-2017 Annual Growth Rate	2013-2017 Compound Annual Growth Rate
Alternative Investments[2]	$48	$42	$34	$38	$39	14 %	5 %
Cash	2	2	3	1	1	—	19
Equity	531	426	350	388	325	25	13
Fixed-income	63	51	41	39	34	24	17
Total Exchange-Traded Funds	$644	$521	$428	$466	$399	24	13

(1) ETFs are a component of AUM presented in the preceding table.
(2) Includes real estate investment trusts, currency and commodities, including SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF. State Street is not the investment manager for the SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF, but acts as the marketing agent.

TABLE 15: GEOGRAPHIC MIX OF ASSETS UNDER MANAGEMENT[1]

(In billions)	As of December 31, 2017	2016	2015	2014	2013
North America	$1,931	$1,691	$1,452	$1,568	$1,456
Europe/Middle East/Africa	521	482	489	559	560
Asia/Pacific	330	295	304	321	329
Total	$2,782	$2,468	$2,245	$2,448	$2,345

(1) Geographic mix is based on client location or fund management location.

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TABLE 16: ACTIVITY IN ASSETS UNDER MANAGEMENT BY PRODUCT CATEGORY

(In billions)	Equity	Fixed-Income	Cash[1]	Multi-Asset-Class Solutions	Alternative Investments[2]	Total
Balance as of December 31, 2014	$1,475	$ 319	$ 399	$ 127	$ 128	$2,448
Long-term institutional inflows[1]	277	62	—	51	33	423
Long-term institutional outflows[1]	(363)	(70)	—	(59)	(31)	(523)
Long-term institutional flows, net	(86)	(8)	—	(8)	2	(100)
ETF flows, net	(29)	5	1	—	(1)	(24)
Cash fund flows, net	—	—	(27)	—	—	(27)
Total flows, net	(115)	(3)	(26)	(8)	1	(151)
Market appreciation	(13)	3	—	(12)	16	(6)
Foreign exchange impact	(21)	(7)	(5)	(4)	(9)	(46)
Total market/foreign exchange impact	(34)	(4)	(5)	(16)	7	(52)
Balance as of December 31, 2015	$1,326	$ 312	$ 368	$ 103	$ 136	$2,245
Long-term institutional inflows[3]	244	90	—	48	13	395
Long-term institutional outflows[3]	(301)	(96)	—	(34)	(21)	(452)
Long-term institutional flows, net	(57)	(6)	—	14	(8)	(57)
ETF flows, net	37	9	—	—	6	52
Cash fund flows, net	—	—	(37)	—	—	(37)
Total flows, net	(20)	3	(37)	14	(2)	(42)
Market appreciation	140	10	—	9	14	173
Foreign exchange impact	(10)	(3)	(2)	(3)	(2)	(20)
Total market/foreign exchange impact	130	7	(2)	6	12	153
Acquisitions and transfers[4]	38	56	4	3	11	112
Balance as of December 31, 2016	$1,474	$ 378	$ 333	$ 126	$ 157	$2,468
Long-term institutional inflows[3]	270	94	—	56	20	440
Long-term institutional outflows[3]	(344)	(92)	—	(52)	(41)	(529)
Long-term institutional flows, net	(74)	2	—	4	(21)	(89)
ETF flows, net	26	10	—	—	1	37
Cash fund flows, net	—	—	(8)	—	—	(8)
Total flows, net	(48)	12	(8)	4	(20)	(60)
Market appreciation	293	15	1	12	3	324
Foreign exchange impact	26	9	3	5	6	49
Total market/foreign exchange impact	319	24	4	17	9	373
Balance as of December 31, 2017	$1,745	$ 414	$ 329	$ 147	$ 146	$2,782

(1) Includes both floating- and constant-net-asset-value portfolios held in commingled structures or separate accounts.
(2) Includes real estate investment trusts, currency and commodities, including SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF. State Street is not the investment manager for the SPDR® Gold Shares ETF and SPDR® Long Dollar Gold Trust ETF, but acts as the marketing agent.
(3) Amounts represent long-term portfolios, excluding ETFs.
(4) Includes AUM acquired as part of the acquisition of the GEAM business on July 1, 2016.

The preceding table does not include approximately $20 billion of new asset management business which was awarded but not installed as of December 31, 2017. New business will be reflected in AUM in future periods after installation, and will generate management fee revenue in subsequent periods. Total AUM as of December 31, 2017 included managed assets lost but not liquidated. Lost business occurs from time to time and it is difficult to predict the timing of client behavior in transitioning these assets as the timing can vary significantly.

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Expenses
Total expenses for Investment Management increased 6% in 2017 compared to 2016 primarily due to the full year of the acquired GEAM business compared to a half year in 2016, higher annual merit and performance based incentive compensation, including higher seasonal deferred incentive compensation expense for retirement eligible employees and payroll taxes in the first quarter of 2017 compared to the first quarter of 2016, and higher costs to support new business. These increases were partially offset by a one-time acceleration of compensation expense of approximately $81 million in the fourth quarter of 2016 and Beacon savings.
Additional information about expenses is provided under "Expenses" in “Consolidated Results of Operations” included in this Management's Discussion and Analysis of this Form 10-K.
FINANCIAL CONDITION
The structure of our consolidated statement of condition is primarily driven by the liabilities generated by our Investment Servicing and Investment Management lines of business. Our clients' needs and our operating objectives determine balance sheet volume, mix, and currency denomination. As our clients execute their worldwide cash management and investment activities, they utilize deposits and short-term investments that constitute the majority of our liabilities. These liabilities are generally in the form of interest-bearing transaction account deposits, which are denominated in a variety of currencies; non-interest-bearing demand deposits; and repurchase agreements, which generally serve as short-term investment alternatives for our clients.
Deposits and other liabilities resulting from client initiated transactions are invested in assets that generally have contractual maturities significantly longer than our liabilities; however, we evaluate the operational nature of our deposits and seek to maintain appropriate short-term liquidity of those liabilities that are not operational in nature and maintain longer-termed assets for our operational deposits. Our assets consist primarily of securities held in our AFS or HTM portfolios and short-duration financial instruments, such as interest-bearing deposits with banks and securities purchased under resale agreements. The actual mix of assets is determined by the characteristics of the client liabilities and our desire to maintain a well-diversified portfolio of high-quality assets.

TABLE 17: AVERAGE STATEMENT OF CONDITION[1]

	Years Ended December 31,		
	2017	2016	2015
(In millions)	Average Balance	Average Balance	Average Balance
Assets:			
Interest-bearing deposits with banks	$47,514	$53,091	$69,753
Securities purchased under resale agreements	2,131	2,558	3,233
Trading account assets	1,011	921	1,194
Investment securities	95,779	100,738	105,611
Loans and leases	21,916	19,013	17,948
Other interest-earning assets	22,884	22,863	22,717
Average total interest-earning assets	191,235	199,184	220,456
Cash and due from banks	3,097	3,157	2,460
Other non-interest-earning assets	25,118	27,386	27,516
Average total assets	$219,450	$229,727	$250,432
Liabilities and shareholders’ equity:			
Interest-bearing deposits:			
U.S.	$30,623	$30,107	$30,819
Non-U.S.	91,937	95,551	102,491
Total interest-bearing deposits	122,560	125,658	133,310

Securities sold under repurchase agreements	3,683	4,113	8,875
Federal funds purchased	—	31	21
Other short-term borrowings	1,313	1,666	3,826
Long-term debt	11,595	11,401	10,301
Other interest-bearing liabilities	4,607	5,394	6,471
Average total interest-bearing liabilities	143,758	148,263	162,804
Non-interest-bearing deposits	41,248	44,827	51,675
Other non-interest-bearing liabilities	12,379	14,742	14,626
Preferred shareholders’ equity	3,197	3,060	2,418
Common shareholders’ equity	18,868	18,835	18,909
Average total liabilities and shareholders’ equity	$219,450	$229,727	$250,432

(1) Additional information about our average statement of condition, primarily our interest-earning assets and interest-bearing liabilities, is provided in "Net Interest Income" in this Management's Discussion and Analysis included in this Form 10-K.

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Investment Securities

TABLE 18: CARRYING VALUES OF INVESTMENT SECURITIES

	As of December 31,	
(In millions)	2017	2016
Available-for-sale:		
U.S. Treasury and federal agencies:		
Direct obligations	$223	$4,263
Mortgage-backed securities	10,872	13,257
Total U.S. Treasury and federal agencies	11,095	17,520
Asset-backed securities:		
Student loans[1]	3,358	5,596
Credit cards	1,542	1,351
Sub-prime	—	272
Other	1,447	905
Total asset-backed securities	6,347	8,124
Non-U.S. debt securities:		
Mortgage-backed securities	6,695	6,535
Asset-backed securities	2,947	2,516
Government securities	10,721	5,836
Other	6,108	5,613
Total non-U.S. debt securities	26,471	20,500
State and political subdivisions	9,151	10,322
Collateralized mortgage obligations	1,054	2,593
Other U.S. debt securities	2,560	2,469
U.S. equity securities	46	42
Non-U.S. equity securities	—	3
U.S. money-market mutual funds	397	409
Non-U.S. money-market mutual funds	—	16
Total	$57,121	$61,998
Held-to-maturity[2]:		
U.S. Treasury and federal agencies:		
Direct obligations	$17,028	$17,527
Mortgage-backed securities	16,651	10,334
Total U.S. Treasury and federal agencies	33,679	27,861
Asset-backed securities:		
Student loans[1]	3,047	2,883
Credit cards	798	897
Other	1	35
Total asset-backed securities	3,846	3,815
Non-U.S. debt securities:		
Mortgage-backed securities	939	1,150
Asset-backed securities	263	531
Government securities	474	286
Other	48	113

Total non-U.S. debt securities	1,724	2,080
Collateralized mortgage obligations	1,209	1,413
Total	$40,458	$35,169

(1) Primarily composed of securities guaranteed by the federal government with respect to at least 97% of defaulted principal and accrued interest on the underlying loans.
(2) Includes securities at amortized cost or fair value on the date of transfer from AFS.

Additional information about our investment securities portfolio is provided in Note 3 to the consolidated financial statements included in this Form 10-K.

We manage our investment securities portfolio to align with the interest-rate and duration characteristics of our client liabilities that we consider to be operational deposits and in the context of the overall structure of our consolidated statement of condition, in consideration of the global interest-rate environment. We consider a well-diversified, high-credit quality investment securities portfolio to be an important element in the management of our consolidated statement of condition.

Average duration of our investment securities portfolio increased to 2.7 years as of December 31, 2017, compared to 2.5 years as of December 31, 2016. The increase is primarily driven by the deployment of non-U.S. cash into foreign securities.

In 2017, we sold $12.2 billion of AFS, primarily Agency MBS and U.S. Treasury securities in our investment portfolio, to position for the then-existing interest rate environment resulting in a pre-tax loss of $39 million.

In 2017, $496 million of Agency MBS previously classified as AFS were transferred to HTM, and in 2016, $4.9 billion of Agency MBS and Student Loan ABS previously classified as AFS were transferred to HTM. Both transfers reflect our intent to hold these securities until their maturity. These securities were transferred at fair value, which included a net unrealized loss of $2.8 million and a net unrealized gain of $87 million as of December 31, 2017 and 2016, respectively, within accumulated other comprehensive loss which will be accreted into interest income over the remaining life of the transferred security (ranging from approximately 10 to 42 years).

Approximately 90% of the carrying value of the portfolio was rated "AAA" or "AA" as of December 31, 2017 and 91% as of December 31, 2016.

TABLE 19: INVESTMENT PORTFOLIO BY EXTERNAL CREDIT RATING

	December 31, 2017		December 31, 2016	
AAA[1]	74	%	78	%
AA	16		13	
A	6		5	
BBB	4		3	
Below BBB	—		1	
	100	%	100	%

(1) Includes U.S. Treasury and federal agency securities that are split-rated, "AAA" by Moody's Investors Service and "AA+" by Standard & Poor's.

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As of December 31, 2017, the investment portfolio was diversified with respect to asset class composition. The following table presents the composition of these asset classes.

TABLE 20: INVESTMENT PORTFOLIO BY ASSET CLASS

	December 31, 2017		December 31, 2016	
US Treasuries	17	%	23	%
US Agency MBS	26		23	
ABS	22		23	
Foreign Sovereign	12		6	
Other Credit	23		25	
	100	%	100	%

Non-U.S. Debt Securities

Approximately 29% of the aggregate carrying value of our investment securities portfolio was non-U.S. debt securities as of December 31, 2017, compared to approximately 23% as of December 31, 2016.

TABLE 21: NON-U.S. DEBT SECURITIES

(In millions)	As of December 31, 2017	2016
Available-for-sale:		
United Kingdom	$5,721	$5,093
Australia	4,717	4,272
Canada	3,066	2,989
France	2,500	1,013
Italy	1,645	676
Spain	1,413	266
Japan	1,319	1,388
Belgium	1,193	360
Netherlands	1,175	1,283
Ireland	787	85
Hong Kong	666	664
Sweden	538	188
Germany	529	713
Norway	514	508
Finland	299	223
Austria	234	57
South Korea	19	634
Other[1]	136	88
Total	$26,471	$20,500
Held-to-maturity:		
United Kingdom	$410	$504
Netherlands	372	473
Singapore	353	180
Australia	235	374
Germany	127	329
Spain	104	98

Other[2]	123	122
Total	$1,724	$2,080

[1] Included approximately $37 million and $22 million as of December 31, 2017 and December 31, 2016, respectively, related to Portugal, which was related to MBS and auto loans.
[2] Included approximately $75 million and $80 million as of December 31, 2017 and December 31, 2016, respectively, related to Italy, Portugal and Norway, all of which were related to MBS and auto loans.

Approximately 80% and 88% of the aggregate carrying value of these non-U.S. debt securities was rated “AAA” or “AA” as of December 31, 2017 and December 31, 2016, respectively. The majority of these securities comprised senior positions within the security structures; these positions have a level of protection provided through subordination and other forms of credit protection. As of December 31, 2017 and December 31, 2016, approximately 61% and 65%, respectively, of the aggregate carrying value of these non-U.S. debt securities was floating-rate, and accordingly, we consider these securities to have minimal interest-rate risk.
As of December 31, 2017, our non-U.S. debt securities had an average market-to-book ratio of 100.4%, and an aggregate pre-tax net unrealized gain of approximately $114 million, composed of gross unrealized gains of $180 million and gross unrealized losses of $66 million. These unrealized amounts included;

- a pre-tax net unrealized gain of $35 million, composed of gross unrealized gains of $95 million and gross unrealized losses of $60 million, associated with non-U.S. debt securities available-for-sale and;
- a pre-tax net unrealized gain of $79 million, composed of gross unrealized gains of $85 million and gross unrealized losses of $6 million, associated with non-U.S. debt securities held-to-maturity.

As of December 31, 2017, the underlying collateral for non-U.S. MBS and ABS primarily included Australian, Dutch, Italian and U.K. prime mortgages and German auto loans. The securities listed under “Canada” were composed of Canadian government securities and corporate debt and covered bonds. The securities listed under “France” were composed of auto loans, prime mortgages, and corporate debt and covered bonds. The securities listed under “Japan” were substantially composed of Japanese government securities and corporate debt.

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Municipal Obligations
We carried approximately $9.15 billion of municipal securities classified as state and political subdivisions in our investment securities portfolio as of December 31, 2017 as shown in Table 18: Carrying Values of Investment Securities, all of which were classified as AFS. As of the same date, we also provided approximately $9.32 billion of credit and liquidity facilities to municipal issuers.
TABLE 22: STATE AND MUNICIPAL OBLIGORS[1]

(Dollars in millions)	Total Municipal Securities	Credit and Liquidity Facilities[2]	Total	% of Total Municipal Exposure	
As of December 31, 2017					
State of Issuer:					
Texas	$ 1,713	$ 1,622	$3,335	18	%
California	415	2,237	2,652	14	
New York	742	1,288	2,030	11	
Massachusetts	859	991	1,850	10	
Washington	623	366	989	5	
Total	$ 4,352	$ 6,504	$10,856		
As of December 31, 2016					
State of Issuer:					
Texas	$ 1,781	$ 1,685	$3,466	18	%
California	523	2,298	2,821	14	
New York	740	1,293	2,033	10	
Massachusetts	916	1,071	1,987	10	
Washington	708	234	942	5	
Maryland	488	411	899	5	
Total	$ 5,156	$ 6,992	$12,148		

(1) Represented 5% or more of our aggregate municipal credit exposure of approximately $18.47 billion and $19.57 billion across our businesses as of December 31, 2017 and December 31, 2016, respectively.
(2) Includes municipal loans which are also presented within Table 24.

Our aggregate municipal securities exposure presented in Table 22: State and Municipal Obligors, was concentrated primarily with highly-rated counterparties, with approximately 92% of the obligors rated "AAA" or "AA" as of December 31, 2017. As of that date, approximately 49% and 51% of our aggregate municipal securities exposure was associated with general obligation and revenue bonds, respectively. The portfolios are also diversified geographically, with the states that represent our largest exposures widely dispersed across the U.S.
Additional information with respect to our assessment of OTTI of our municipal securities is provided in Note 3 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, of this Form 10-K.

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TABLE 23: CONTRACTUAL MATURITIES AND YIELDS

As of December 31, 2017	Under 1 Year		1 to 5 Years		6 to 10 Years		Over 10 Years	
(Dollars in millions)	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
Available-for-sale[(1)]:								
U.S. Treasury and federal agencies:								
Direct obligations	$—	—%	$12	1.85%	$6	3.75%	$205	3.30%
Mortgage-backed securities	96	2.99	762	3.39	3,123	3.06	6,891	3.26
Total U.S. treasury and federal agencies	96		774		3,129		7,096	
Asset-backed securities:								
Student loans	289	2.12	1,044	2.10	685	2.10	1,340	2.53
Credit cards	—	—	1,290	1.68	252	2.24	—	—
Other	—	—	350	2.09	956	1.68	141	2.08
Total asset-backed securities	289		2,684		1,893		1,481	
Non-U.S. debt securities:								
Mortgage-backed securities	55	1.51	4,502	0.99	602	2.11	1,040	2.42
Asset-backed securities	205	0.38						