UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended June 30, 2020

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 or organization)	(I.R.S. Employer Identification No.)
One Lincoln Street	
Boston, Massachusetts 02111	**(617) 786-3000**
(Address of principal executive offices, and Zip Code)	(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $1 par value per share	STT	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	STT.PRD	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 G, without par value per share	STT.PRG	New York Stock Exchange

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 ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐	Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐						

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

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

The number of shares of the registrant's common stock outstanding as of July 22, 2020 was 352,383,250.

STATE STREET CORPORATION
QUARTERLY REPORT ON FORM 10-Q FOR THE QUARTERLY PERIOD ENDED
June 30, 2020

TABLE OF CONTENTS

	Page
PART I. FINANCIAL INFORMATION	
Management's Discussion and Analysis of Financial Condition and Results of Operations	4
General	4
Overview of Financial Results	9
Consolidated Results of Operations	11
Total Revenue	11
Net Interest Income	14
Provision for Credit Losses	18
Expenses	18
Acquisition Costs	19
Restructuring and Repositioning Charges	19
Income Tax Expense	19
Line of Business Information	19
Investment Servicing	20
Investment Management	23
Financial Condition	26
Investment Securities	27
Loans	29
Cross-Border Outstandings	30
Risk Management	31
Credit Risk Management	31
Liquidity Risk Management	31
Operational Risk Management	36
Information Technology Risk Management	36
Market Risk Management	36
Model Risk Management	40
Strategic Risk Management	40
Capital	40
Off-Balance Sheet Arrangements	49
Significant Accounting Estimates	49
Recent Accounting Developments	50
Quantitative and Qualitative Disclosures About Market Risk	50
Controls and Procedures	50
Consolidated Financial Statements	51
Consolidated Statement of Income (unaudited)	51
Consolidated Statement of Comprehensive Income (unaudited)	52
Consolidated Statement of Condition	53
Consolidated Statement of Changes in Shareholders' Equity (unaudited)	54
Consolidated Statement of Cash Flows (unaudited)	55
Note 1. Summary of Significant Accounting Policies	56
Note 2. Fair Value	57

Note 3. Investment Securities 65
Note 4. Loans and Allowance for Credit Losses 70
Note 5. Goodwill and Other Intangible Assets 74
Note 6. Other Assets 75
Note 7. Derivative Financial Instruments 75
Note 8. Offsetting Arrangements 78
Note 9. Commitments and Guarantees 81
Note 10. Contingencies 81
Note 11. Variable Interest Entities 84
Note 12. Shareholders' Equity 84
Note 13. Regulatory Capital 88
Note 14. Net Interest Income 89
Note 15. Expenses 89
Note 16. Earnings Per Common Share 90
Note 17. Line of Business Information 90
Note 18. Revenue From Contracts with customers 91
Note 19. Non-U.S. Activities 92
Review Report of Independent Registered Public Accounting Firm 93

PART II. OTHER INFORMATION
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds 96
Item 5. Other Information 96
Item 6. Exhibits 97
Signatures 98

We use acronyms and other defined terms for certain business terms and abbreviations, as defined in the acronyms list and glossary following the consolidated financial statements in this Form 10-Q.

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 Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 (Form 10-Q), 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 $33.52 trillion of AUC/A and $3.05 trillion of AUM as of June 30, 2020.

As of June 30, 2020, we had consolidated total assets of $280.24 billion, consolidated total deposits of $200.46 billion, consolidated total shareholders' equity of $24.87 billion and 39,068 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.

Additional information about our lines of business is provided in Line of Business Information in this Management's Discussion and Analysis and Note 17 to the consolidated financial statements in this Form 10-Q.

This Management's Discussion and Analysis is part of the Form 10-Q and updates the Management's Discussion and Analysis in our 2019 Annual Report on Form 10-K for the year ended December 31, 2019 previously filed with the SEC (2019 Form 10-K). You should read the financial information contained in this Management's Discussion and Analysis and elsewhere in this Form 10-Q in conjunction with the financial and other information contained in our 2019 Form 10-K. Certain previously reported amounts presented in this Form 10-Q 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;
- impairment of goodwill and other intangible assets;
- contingencies; and
- allowance for credit losses.

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. For additional information about these significant accounting policies refer to pages 115 to 117, “Significant Accounting Estimates” included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K and Significant Accounting Estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations in this Form 10-Q. Upon evaluating our accounting policies in light of our adoption of CECL on January 1, 2020, we included allowance for credit losses as one of our significant accounting policies. Other than including that additional significant policy, we did not change these significant accounting policies in the first six months of 2020.

Certain financial information provided in this Form 10-Q, including in this Management's Discussion and Analysis, is prepared on both a U.S. GAAP, or reported basis, and a non-GAAP basis. We measure and compare certain financial information on a non-GAAP basis, including information 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-Q, including this Management’s Discussion and Analysis, is reconciled to its most directly comparable U.S. GAAP-basis measure.

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

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 LCR, 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-Q.

We use acronyms and other defined terms for certain business terms and abbreviations, as defined in the acronyms list and glossary following the consolidated financial statements in this Form 10-Q.

Forward-Looking Statements

This Form 10-Q, 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 our 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, governmental, 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," "estimate," "seek," "may," "will," "trend," "target," "strategy" and "goal," or similar statements or variations of such terms, are intended to identify 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 U.S. 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 or to which our clients have such exposures as a result of our acting as agent, including as an asset manager or securities lending agent;
- the significant risks and uncertainties for our business, results of operations and financial condition, as well as our regulatory capital and liquidity ratios and other regulatory requirements in the United States and internationally, caused by the COVID-19 pandemic, which will depend on several factors, including the scope and duration of the pandemic, its influence on the economy and financial markets, the effectiveness of our work from home arrangements and staffing levels in operational facilities, challenges associated with our return to office plans such as maintaining a safe office environment and integrating at-home and in-office staff, the impact of market participants on which we rely and actions taken by governmental authorities and other third parties in response to the pandemic and the impact of lower equity market valuations on our service and management fee revenue;
- 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 volatility of servicing fee, management fee, trading fee and securities finance revenues due to, among other factors, the value of equity and fixed-income markets, market interest and FX rates, the volume of client transaction activity, competitive pressures in the investment servicing and asset management industries, and the timing of revenue recognition with respect to software and processing fees revenues;
- 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, volatility and uncertainty of interest rates; the expected discontinuation of Interbank Offered Rates including London Interbank Offered Rate (LIBOR); the valuation of the U.S. dollar relative to

other currencies in which we record revenue or accrue expenses; 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 impairment of such securities and the recognition of a provision for credit losses in our consolidated statement of income;
- our ability to attract and retain 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; our ability to deploy deposits in a profitable manner consistent with our liquidity needs, regulatory requirements and risk profile; and the risks associated with the potential liquidity mismatch between short-term deposit funding and longer term investments;
- the manner and timing with which the Federal Reserve and other U.S. and non-U.S. 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 and implementation of international standards applicable to financial institutions, such as those proposed by the Basel Committee and European legislation (such as Undertakings for Collective Investments in Transferable Securities (UCITS) V, the Money Market Fund Regulation and the Markets in Financial Instruments Directive II/Markets in Financial Instruments Regulation); among other consequences, these regulatory changes impact the levels of regulatory capital, long-term debt 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 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 heightened standards and changes in regulatory expectations for global systemically important financial institutions applicable to, among other things, risk management, liquidity and capital planning, cyber-security, resiliency, resolution planning and compliance programs, as well as 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 repurchases, without which our growth plans, distributions to shareholders, share repurchase programs or other capital or corporate initiatives may be restricted;
- geopolitical risks applicable to our operations and activities in jurisdictions globally, including emerging markets and economies, that have the potential to disrupt or impose costs, delays or damages upon our, our clients', our counterparties' and suppliers' and our infrastructure providers' respective operations, activities and strategic planning and to compromise financial markets and stability;
- 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, without limitation, additional or increased taxes or assessments thereon, capital adequacy requirements, margin requirements and changes that expose us to risks related to our operating model and the adequacy and resiliency of our controls or compliance programs;
- a cyber-security incident, or a failure to protect our systems and our, our clients' and others' information against cyber-attacks, could result in the theft, loss, unauthorized access to, disclosure, use or alteration of information, system failures, or loss of access to information; any such incident or failure could adversely impact our ability to conduct our businesses, damage our reputation and cause losses, potentially materially;
- our ability to expand our use of technology to enhance the efficiency, accuracy and reliability of

our operations and our dependencies on information technology; to replace and consolidate systems, particularly those relying upon older technology, and to adequately incorporate cyber-security, resiliency and business continuity into our operations, information technology infrastructure and systems management; to implement robust management processes into our technology development and maintenance programs; and to control risks related to use of technology, including cyber-crime and inadvertent data disclosures;

- our ability to identify and address threats to our information technology infrastructure and systems (including those of our third-party service providers); the effectiveness of our and our third party service providers' efforts to manage the resiliency of the systems on which we rely; controls regarding the access to, and integrity of, our and our clients' data; and complexities and costs of protecting the security of such systems and data;
- our ability to control operational and resiliency 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;
- economic or financial market disruptions in the U.S. or internationally, including those which may result from recessions or political instability; for example, the United Kingdom's (U.K.) exit from the European Union or actual or potential changes in trade policy, such as tariffs or bilateral and multilateral trade agreements;
- 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, reputational 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, 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, adverse actions or penalties imposed by governmental authorities and costs associated with remediation of identified deficiencies;
- 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 AUC/A 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 revenue in the event a client re-balances or changes its investment approach, re-directs assets to lower- or higher-fee asset classes or changes the mix of products or services that it receives from us;
- the potential for losses arising from our investments in sponsored investment funds;
- 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; and the possibility that our clients or regulators will assert claims that our fees, with respect to such investment products, are not appropriate;
- 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 us or regarding other industry participants or industry-wide factors, or other reputational harm;
- changes or potential changes to the competitive

environment, due to, among other things, regulatory and technological changes, the effects of industry consolidation and perceptions of us, as a suitable service provider or counterparty;

- our ability to complete acquisitions, joint ventures and divestitures, including, without limitation, our 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, including, without limitation, our acquisition of CRD, 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 integrate CRD's front office software solutions with our middle and back office capabilities to develop our front-to-middle-to-back office State Street Alpha that is competitive, generates revenues in line with our expectations and meets our clients' requirements; the dependency of State Street Alpha on enhancements to our data management and the risks to our servicing model associated with increased exposure to client data;
- 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-Q or disclosed in our other SEC filings.

Forward-looking statements in this Form 10-Q should not be relied on as representing our expectations or assumptions as of any time subsequent to the time this Form 10-Q 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*.

OVERVIEW OF FINANCIAL RESULTS

TABLE 1: OVERVIEW OF FINANCIAL RESULTS

	Three Months Ended June 30,		
(Dollars in millions, except per share amounts)	**2020**	**2019**	**% Change**
Total fee revenue	**$ 2,378**	$ 2,260	5%
Net interest income	**559**	613	(9)
Total revenue	**2,937**	2,873	2
Provision for credit losses[1]	**52**	1	nm
Total expenses	**2,082**	2,154	(3)
Income before income tax expense	**803**	718	12
Income tax expense	**109**	131	(17)
Net income	**$ 694**	$ 587	18
Adjustments to net income:			
Dividends on preferred stock[2]	**$ (32)**	$ (50)	(36)
Net income available to common shareholders	**$ 662**	$ 537	23
Earnings per common share:			
Basic	**$ 1.88**	$ 1.44	31
Diluted	**1.86**	1.42	31
Average common shares outstanding (in thousands):			
Basic	**352,157**	373,773	(6)
Diluted	**356,413**	377,577	(6)
Cash dividends declared per common share	**$ .52**	$ .47	11
Return on average common equity	**12.1%**	10.1%	200 bps
Pre-tax margin	**27.3**	25.0	230

	Six Months Ended June 30,		
(Dollars in millions, except per share amounts)	**2020**	**2019**	**% Change**
Total fee revenue	**$ 4,777**	$ 4,520	6%
Net interest income	**1,223**	1,286	(5)
Total other income	**2**	(1)	nm
Total revenue	**6,002**	5,805	3
Provision for credit losses[1]	**88**	5	nm
Total expenses	**4,337**	4,447	(2)
Income before income tax expense	**1,577**	1,353	17
Income tax expense	**249**	258	(3)
Net income	**$ 1,328**	$ 1,095	21
Adjustments to net income:			
Dividends on preferred stock[2]	**$ (85)**	$ (105)	(19)
Earnings allocated to participating securities[3]	**(1)**	(1)	—
Net income available to common shareholders	**$ 1,242**	$ 989	26
Earnings per common share:			
Basic	**$ 3.52**	$ 2.63	34
Diluted	**3.48**	2.61	33
Average common shares outstanding (in thousands):			
Basic	**352,952**	375,832	(6)
Diluted	**357,028**	379,465	(6)
Cash dividends declared per common share	**$ 1.04**	$ .94	11
Return on average common equity	**11.5%**	9.4%	210 bps
Pre-tax Margin	**26.3**	23.3	300

[1] We adopted ASU 2016-13, Financial Instruments - Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments, on January 1, 2020. Please refer to Note 1 to the consolidated financial statements in this Form 10-Q for additional information.
[2] Additional information about our preferred stock dividends is provided in Note 12 to the consolidated financial statements in this Form 10-Q.
[3] Represents the portion of net income available to common equity allocated to participating securities, composed of unvested and fully vested SERP (Supplemental executive retirement plans) 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.
nm Not meaningful

The following "Financial Results and Highlights" section provides information related to significant events, as well as highlights of our consolidated financial results for the second quarter of 2020 presented in Table 1: Overview of Financial Results. More detailed information about our consolidated financial results, including comparisons of our financial results for the three and six months ended June 30, 2020 to the same periods in 2019, 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 in this Form 10-Q. In this Management's Discussion and Analysis, where we describe the effects of changes in FX rates, those effects are determined by applying applicable weighted average FX rates from the relevant 2019 period to the relevant 2020 period results.

Financial Results and Highlights

- EPS of $1.86 in the second quarter of 2020 increased 31% compared to $1.42 in the same period in 2019.
- The impact of the COVID-19 pandemic, and the actions we took to support our clients, the financial markets and the broader economy, is reflected in our results for the second quarter and first six months of 2020.
  - This includes accommodating higher than usual U.S. client deposits; and
  - an increase in FX trading services revenue in the three and six months ended June 30, 2020 as compared to the same periods in 2019.
  - Operationally, we maintained business continuity, resiliency and operational effectiveness with approximately 90% of our global employees working from home through the end of the quarter.
  - We continued to onboard new clients and managed elevated transaction volumes amidst the COVID-19 pandemic.
  - We actively assisted clients with access to various Federal Reserve programs that support the flow of liquidity and credit. We supported our clients' liquidity needs by processing nearly 50% of the value of commercial paper sold under the Money Market Mutual Fund Liquidity Facility (MMLF) and are custodian and administrator for four Federal Reserve programs: Commercial Paper Funding Facility, Main Street Lending Program, and Primary and Secondary Markets Corporate Credit Facilities.

  - On March 16, 2020, we announced, together with the other U.S. based G-SIBs, that we temporarily suspended our common stock repurchase program, in light of the COVID-19 pandemic. As a result, we had no repurchases of our common stock in the second quarter of 2020. In addition, we will not repurchase any common stock in the third quarter of 2020 under current Federal Reserve requirements.
- The impact of notable items in both the second quarters of 2020 and 2019 includes approximately $12 million of acquisition and restructuring costs, primarily related to CRD.
- In the second quarter of 2020, return on equity of 12.1% increased from 10.1% in the same period in 2019, primarily due to an increase in net income available to common shareholders. Pre-tax margin of 27.3% in the second quarter of 2020 increased from 25.0% in the same period in 2019, primarily due to higher total revenue and lower expenses.
- Operating leverage was 5.5% in the second quarter of 2020. Operating leverage represents the difference between the percentage change in total revenue and the percentage change in total expenses, in each case relative to the prior year period.
- In June 2020, the Federal Reserve released results from the 2020 CCAR submission, which included preliminary SCB requirements for the twelve months starting October 1, 2020. We were notified by the Federal Reserve that our preliminary SCB is 2.5%, implying no change to our regulatory capital requirements at this time. The Federal Reserve will provide each participating CCAR bank organization with its final SCB by August 31, 2020. Due to the economic challenges created by the COVID-19 pandemic, all participating CCAR banks will be required to resubmit their capital plans within 45 days after the Federal Reserve provides updated scenarios. In line with the decision to administer a new stress test, the Federal Reserve is limiting the ability of all CCAR banking organizations to distribute capital during the third quarter of 2020 beyond common dividends at their current levels.

Revenue

- Total revenue and fee revenue increased 2% and 5%, respectively, in the second quarter of 2020 compared to the same period in 2019, primarily driven by increases in servicing fees, foreign exchange trading services and software and processing fees, partially offset by lower management fees and securities finance revenues and, in the case of total revenue, by a decline in NII.
- Servicing fee revenue increased 2% in the second quarter of 2020 compared to the same period in 2019, primarily due to higher client activity and net new business, partially offset by moderating pricing headwinds.
- Management fee revenue decreased 4% in the second quarter of 2020 compared to the same period in 2019, primarily due to institutional net outflows, partially offset by net inflows from cash and ETFs, particularly in SPDR® Portfolio and Sector ETFs.
- Foreign exchange trading services increased 26% in the second quarter of 2020 compared to the same period in 2019, primarily reflecting significantly elevated FX volume and volatility.
- Securities finance revenue decreased 27% in the second quarter of 2020 compared to the same period in 2019, primarily due to decreases in enhanced custody balances due to client deleveraging and lower agency lending revenues due to a mix shift to fixed income assets and lower spreads.
- Software and processing fees revenue increased 46% in the second quarter of 2020 compared to the same period in 2019, primarily due to revenue associated with a significant CRD wealth client implementation and several client renewals, as well as market-related adjustments.
- CRD contributed approximately $138 million and $61 million in total revenue and total expenses, respectively, in the second quarter of 2020, compared to $87 million and $46 million, respectively, in the same period in 2019. In addition, CRD-related expenses include $16 million and $17 million in amortization of other intangible assets in the second quarters of 2020 and 2019, respectively. CRD revenue with affiliated entities, which is eliminated in our consolidated financial statements, was $7 million and $4 million for the second quarters of 2020 and 2019, respectively.
- NII decreased 9% in the second quarter of 2020 compared to the same period in 2019, primarily due to the impact of lower market rates, partially offset by higher deposit balances and our support for our clients' liquidity needs through the MMLF program.

Provision for Credit Losses

- In the second quarter of 2020, we recorded a provision for credit losses related to loans and

financial assets held at amortized cost, including investment securities held-to-maturity and off-balance sheet commitments of $52 million based on the CECL methodology, adopted January 1, 2020. This reflects portfolio credit migration within our loan portfolio, as well as a downward revision in management's economic outlook as of quarter-end reflecting the impact of COVID-19.

- The second quarter provision compares to a $1 million provision for credit losses in the same period in 2019 (which was under the previous incurred loss model).

Expenses

- Total expenses decreased 3% in the second quarter of 2020 compared to the same period in 2019, primarily reflecting on-going expense management initiatives.

AUC/A and AUM

- AUC/A increased 2% as of June 30, 2020 compared to June 30, 2019, primarily due to higher period-end market levels and client flows, partially offset by a previously announced client transition. In the second quarter of 2020, newly announced asset servicing mandates totaled approximately $162 billion. Servicing assets remaining to be installed in future periods totaled approximately $1.04 trillion as of June 30, 2020.
- AUM increased 5% as of June 30, 2020 compared to June 30, 2019, primarily due to net inflows from cash and ETFs and higher period-end equity market levels, partially offset by institutional outflows.

Capital

- In the second quarter of 2020, we returned a total of approximately $183 million to our shareholders in the form of common stock dividends.
  - We declared aggregate common stock dividends of $0.52 per share, totaling $183 million in the second quarter of 2020, compared to $0.47 per share, totaling $175 million in the same period in 2019, representing an increase of approximately 11% on a per share basis.
  - We had no repurchases of our common stock in the second quarter of 2020 under current Federal Reserve's requirements. In the second quarter of 2019, we acquired 4.6 million shares of common stock at an average per share cost of $65.25 and an aggregate cost of approximately $300 million.
- Our binding CET1 capital ratio was 12.3% as of June 30, 2020 compared to 11.7% as of December 31, 2019, driven by higher retained earnings and a reduction in RWA, with significant headroom above the applicable regulatory requirement. Our Tier 1 leverage ratio decreased to 6.1% as of June 30, 2020, compared to 6.9% as of December 31, 2019, primarily due to increased leverage assets in the second quarter of 2020. Our standardized approach capital ratios were binding as of June 30, 2020.

CONSOLIDATED RESULTS OF OPERATIONS

This section discusses our consolidated results of operations for the three and six months ended June 30, 2020 compared to the same periods in 2019, and should be read in conjunction with the consolidated financial statements and accompanying condensed notes to the consolidated financial statements in this Form 10-Q.

Total Revenue

TABLE 2: TOTAL REVENUE

	Three Months Ended June 30,		
(Dollars in millions)	**2020**	**2019**	**% Change**
Fee revenue:			
Servicing fees	**$ 1,272**	$ 1,252	2 %
Management fees	**425**	441	(4)
Foreign exchange trading services	**344**	273	26
Securities finance	**92**	126	(27)
Software and processing fees	**245**	168	46
Total fee revenue	**2,378**	2,260	5
Net interest income:			
Interest income	**674**	1,007	(33)
Interest expense	**115**	394	(71)
Net interest income	**559**	613	(9)
Total revenue	**$ 2,937**	$ 2,873	2

	Six Months Ended June 30,		
(Dollars in millions)	**2020**	**2019**	**% Change**
Fee revenue:			
Servicing fees	**$ 2,559**	$ 2,503	2 %
Management fees	**874**	861	2
Foreign exchange trading services	**803**	553	45
Securities finance	**184**	244	(25)
Software and processing fees	**357**	359	(1)
Total fee revenue	**4,777**	4,520	6
Net interest income:			
Interest income	**1,542**	2,034	(24)
Interest expense	**319**	748	(57)
Net interest income	**1,223**	1,286	(5)
Other income:			
Gains (losses) from sales of available-for-sale securities, net	**2**	—	nm
Other income	**—**	(1)	nm
Total other income	**2** —	(1) —	nm
Total revenue	**$ 6,002**	$ 5,805	3

[nm] Not meaningful

Fee Revenue

Table 2: Total Revenue, provides the breakout of fee revenue in the three and six months ended June 30, 2020 and 2019. Servicing and management fees collectively made up approximately 71% and 72% of total fee revenue in the three and six months ended June 30, 2020, respectively, compared to 75% and 74% in the same periods in 2019, respectively.

Servicing Fee Revenue

Generally, our servicing fee revenues are affected by several factors including changes in market valuations, client activity and asset flows, net new business and the manner in which we price our services. We provide a range of services to our clients, including core custody services, accounting, reporting and administration and middle office services, and the nature and mix of services provided affects our servicing fees. The basis for fees will differ across regions and clients. On average and over time, approximately 55% of our servicing fee revenues have been variable due to changes in asset valuations including changes in daily average valuations of AUC/A; another 15% of our servicing fees are impacted by the volume of activity in the funds we serve; and the remaining 30% of our servicing fees tend not to be variable in nature nor impacted by market fluctuations or values.

Changes in Market Valuations

Our servicing fee revenue is impacted by both our levels and the geographic and product mix of our AUC/A. Increases or decreases in market valuations have a corresponding impact on the level of our AUC/A and servicing fee revenues, though the degree of impact will vary depending on asset types and classes and geography of assets held within our clients' portfolios.

Over the five years ended December 31, 2019, we estimate that worldwide market valuations impacted our servicing fee revenues by approximately (2)% to 5% annually. See Table 3: Daily Averages, Month-End Averages and Quarter-End Equity 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 and of client portfolios can therefore differ from the performance of the indices presented. In addition, our asset classifications may differ from those industry classifications presented.

We estimate, using relevant information as of June 30, 2020 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 fees are calculated, would result in a corresponding change in our total servicing fee revenues, on average and over time, of approximately 3%; and
- A 10% increase or decrease in worldwide fixed income valuations, on a weighted average basis, over the relevant periods for which our servicing fees are calculated, would result in a corresponding change in our total servicing fee revenues, on average and over time, of approximately 1%.

TABLE 3: DAILY AVERAGES, MONTH-END AVERAGES AND QUARTER-END EQUITY INDICES[1]

	Daily Averages of Indices			Month-End Averages of Indices			Quarter-End Indices		
	Three Months Ended June 30,			Three Months Ended June 30,			As of June 30,		
	2020	2019	% Change	2020	2019	% Change	2020	2019	% Change
S&P 500®	**2,932**	2,882	2 %	**3,019**	2,880	5 %	**3,100**	2,942	5 %
MSCI EAFE®	**1,681**	1,888	(11)	**1,721**	1,887	(9)	**1,781**	1,922	(7)
MSCI® Emerging Markets	**930**	1,045	(11)	**950**	1,044	(9)	**995**	1,055	(6)

	Daily Averages of Indices			Month-End Averages of Indices		
	Six Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
S&P 500®	**2,993**	2,803	7 %	**2,970**	2,827	5 %
MSCI EAFE®	**1,774**	1,861	(5)	**1,754**	1,874	(6)
MSCI® Emerging Markets	**980**	1,039	(6)	**961**	1,049	(8)

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

TABLE 4: QUARTER-END DEBT INDICES[1]

	As of June 30,		
	2020	2019	% Change
Barclays Capital U.S. Aggregate Bond Index®	**2,362**	2,172	9%
Barclays Capital Global Aggregate Bond Index®	**527**	506	4

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

Client Activity and Asset Flows

Client activity and asset flows are impacted by the number of transactions we execute on behalf of our clients, including FX settlements, equity and derivative trades, and wire transfer activity, as well as actions by our clients to change the asset class in which their assets are invested. Our servicing fee revenues are impacted by a number of factors, including transaction volumes, asset levels and asset classes in which funds are invested, as well as industry trends associated with these client-related activities.

Our clients may change the asset classes in which their assets are invested, based on their market outlook, risk acceptance tolerance or other considerations. Over the five years ended December 31, 2019, we estimate that client activity and asset flows, together, impacted our servicing fee revenues by approximately (1)% to 2% annually. See Table 5: Industry Asset Flows for selected asset flow information. While the asset flows presented are indicative of general market trends, the asset types and classes relevant to individual client portfolios can and do differ, and our flows may differ from those market trends. In addition, our asset classifications may differ from those industry classifications presented.

TABLE 5: INDUSTRY ASSET FLOWS

	Three Months Ended June 30,	
(In billions)	**2020**	**2019**
North America - ICI Market Data[1][2][3]		
Long-Term Funds[4]	**$ (31.1)**	$ (38.2)
Money Market	**258.4**	137.0
Exchange-Traded Fund	**143.9**	65.4
Total ICI Flows	**$ 371.2**	$ 164.2
Europe - Broadridge Market Data[1][5][6]		
Long-Term Funds[4]	**$ 80.5**	$ 27.5
Money Market	**92.4**	1.6
Total Broadridge Flows	**$ 172.9**	$ 29.1

[1] Industry data is provided for illustrative purposes only. It is not intended to reflect our activity or its clients' activity and is indicative of only segments of the entire industry.

[2] Source: Investment Company Institute. ICI data includes long-term funds, ETFs and money market funds, as well as funds not registered under the Investment Company Act of 1940. Mutual fund data represents estimates of net new cash flow, which is new sales minus redemptions combined with net exchanges, while ETF data represents net issuance, which is gross issuance less gross redemptions. Data for mutual funds that invest primarily in other mutual funds and ETFs that invest primarily in other ETFs were excluded from the series. ICI classifies mutual funds and ETFs based on language in the fund prospectus.

[3] The second quarter of 2020 data includes ICI actuals for April and May 2020 and ICI estimates for June 2020.

[4] The long-term fund flows reported by ICI are composed of North America Market flows mainly in Equities, Hybrids and Fixed-Income Asset Classes. The long-term fund flows reported by Broadridge are composed of the European, Middle-Eastern, and African market flows mainly in Equities, Fixed-Income and Multi Asset Classes.

[5] Source: © Copyright 2020, Broadridge Financial Solutions, Inc. Funds of funds have been excluded from Broadridge data (to avoid double counting). Therefore, a market total is the sum of all the investment categories excluding the three funds of funds categories (in-house, ex-house and hedge). Broadridge data includes funds for long-term funds and money market funds. ETFs are included in Broadridge's database on mutual funds, but this excludes exchange-traded commodity products that are not mutual funds.

[6] The second quarter of 2020 data is on a rolling three month basis for March 2020 through May 2020 for Europe, Middle East and Africa (Copyright 2020 Broadridge Financial Solutions, Inc.).

Pricing

The industry in which we operate has historically faced pricing pressure, and our servicing fee revenues are also affected by such pressures today. Consequently, no assumption should be drawn as to future revenue run rate from announced servicing wins, as the amount of revenue associated with AUC/A can vary materially. On average, over the five years ended December 31, 2019, we estimate that pricing pressure with respect to existing clients has impacted our servicing fees by approximately (2)% annually, with the impact ranging from (1)% to (4)% in any given year. Pricing concessions can be a part of a contract renegotiation with a client including terms that may benefit us, such as extending the terms of our relationship with the client, expanding the scope of services that we provide or reducing our dependency on manual processes through the standardization of the services we provide. The timing of the impact of additional revenue generated by anticipated additional services, and the amount of revenue generated, may differ from the impact of pricing concessions on existing services due to the necessary time required to onboard those new services, the nature of those services and client investment practices. These same market pressures also impact the fees we negotiate when we win business from new clients.

Net New Business

Over the five years ended December 31, 2019, net new business, which includes business both won and lost, has affected our servicing fee revenues by approximately 2% on average with a range of 0% to 3% annually.

New business impacting servicing fees can include: custody; product and participant level accounting; daily valuation and administration; record-keeping; cash management; and other services. Revenues associated with new servicing mandates may vary based on the breadth of services provided, the time required to install the assets, and the types of assets installed.

Management Fee Revenue

Management fees generally are affected by our level of AUM, which we report based on month-end valuations. Management fees for certain components of managed assets, such as ETFs, mutual funds and UCITS, 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. In addition, in a prolonged low-interest-rate environment, such as we are currently experiencing, we have waived and may in the future waive certain fees for our clients for money market products.

Asset-based management fees for passively managed products, to which our AUM is currently primarily weighted, are generally charged at a lower fee of AUM than for actively managed 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 account's performance.

In light of the above, we estimate, using relevant information as of June 30, 2020 and assuming that all other factors remain constant, including the impact of business won and lost and client flows, that:

- A 10% increase or decrease in worldwide equity valuations, on a weighted average basis, over the relevant periods for which our management fees are calculated, would result in a corresponding change in our total management fee revenues, on average and over time, of approximately 5%; and
- A 10% increase or decrease in worldwide fixed-income valuations, on a weighted average basis, over the relevant periods for which our management fees are calculated, would result in a corresponding change in our total management fee revenues, on average and over time, of approximately 4%.

Daily averages, month-end averages and quarter-end indices demonstrate worldwide changes in equity and debt markets that affect our management fee revenue. Quarter-end indices affect the values of AUM as of those dates. See Table 3: Daily Averages, Month-End Averages and Quarter-End Equity Indices for selected indices.

Additional information about fee revenue is provided under "Line of Business Information" included in this Management's Discussion and Analysis.

Net Interest Income

See Table 2: Total Revenue, for the breakout of interest income and interest expense for the three and six months ended June 30, 2020 compared to the same periods in 2019.

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, resale agreements, loans and other liquid assets, are financed primarily by client deposits, short-term borrowings and long-term debt.

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

NII on a FTE basis decreased in both the three and six months ended June 30, 2020 compared to the same periods in 2019, primarily due to lower U.S. market rates, partially offset by higher U.S. average client deposit balances and investment portfolio (including MMLF) and loan growth.

Investment securities net premium amortization, which is included in interest income, was $109 million and $217 million in the three and six months ended June 30, 2020, respectively, compared to $113 million and $202 million in the same periods in 2019, respectively, primarily related to higher MBS premium amortization offset by discount accretion on MMLF HTM securities.

Interest income related to debt securities is recognized in our consolidated statement of income using the effective interest method, or on a basis approximating a level rate of return over the contractual or estimated life of the security. The rate of return considers any non-refundable fees or costs, as well as purchase premiums or discounts, resulting in amortization or accretion, accordingly. The amortization of premiums and accretion of discounts are adjusted for prepayments when they occur, such that the level rate of return remains constant throughout the contractual life of the security.

The following table presents the investment securities amortizable purchase premium net of discount accretion for the periods indicated:

TABLE 6: INVESTMENT SECURITIES NET PREMIUM AMORTIZATION

	Three Months Ended June 30,	
(Dollars in millions)	**2020**	**2019**
Unamortized premiums, net of discounts at period end	**$ 1,666**	$ 1,539
Net premium amortization[1]	**109**	113
Investment securities duration (years)[2]	**2.4**	2.6

[1] Net of discount accretion on MMLF HTM securities.

[2] Excluding investment securities purchased under the MMLF program, the investment securities portfolio duration is 2.8 years.

Money Market Mutual Fund Liquidity Facility

In March 2020, in response to the economic impact of COVID-19, the Federal Reserve established the MMLF program in order to enhance the liquidity and functioning of crucial money markets. Through the establishment of the MMLF program, the Federal Reserve Bank of Boston makes loans available to eligible financial institutions secured by high-quality assets purchased by the financial institution from money market mutual funds. The MMLF program is authorized through September 30, 2020 and is to cease operations thereafter unless an extension is made. We are supporting our clients' liquidity needs through this program, following its adoption on March 18, 2020. As a result of the asset purchases (including negotiable CDs, municipals and asset-backed commercial paper), our participation in the facility grew to $19.0 billion on average in the second quarter of 2020, and earned $12 million of NII. The purchases are match funded through Federal Reserve borrowings and the assets are posted as collateral. The borrowing is non-recourse, meaning that the Federal Reserve has taken on the credit risk of the assets purchased. The purchased securities are classified as held-to-maturity and have a maturity of less than 12 months. MMLF related assets do not impact our risk-based and leverage capital ratios.

See Table 7: Average Balances and Interest Rates - Fully Taxable-Equivalent Basis, for the breakout of NII on a FTE basis for the three and six months ended June 30, 2020 compared to the same periods in 2019.

TABLE 7: AVERAGE BALANCES AND INTEREST RATES - FULLY TAXABLE-EQUIVALENT BASIS[1]

	Three Months Ended June 30,					
	2020			2019		
(Dollars in millions; fully taxable-equivalent basis)	Average Balance	Interest Revenue/Expense	Rate	Average Balance	Interest Revenue/Expense	Rate
Interest-bearing deposits with banks	$ 86,744	$ 4	.01 %	$ 48,074	$ 109	.91%
Securities purchased under resale agreements[2]	3,342	24	2.95	1,975	90	18.30
Trading account assets	877	—	—	892	—	—
Investment securities:						
Investment securities available-for-sale	57,462	189	1.31	49,769	256	2.06
Investment securities held-to-maturity	40,127	231	2.32	40,161	246	2.44
Investment securities held-to-maturity purchased under money market liquidity facility	19,037	70	1.49	—	—	—
Total investment securities	116,626	490	1.69	89,930	502	2.23
Loans	27,369	157	2.30	23,824	197	3.33
Other interest-earning assets	9,831	4	.13	15,104	114	3.02
Average total interest-earning assets	$ 244,789	$ 679	1.12	$ 179,799	$ 1,012	2.26
Interest-bearing deposits:						
U.S.	$ 91,097	$ 7	.03 %	$ 66,502	$ 150	.91%
Non-U.S.[3]	66,977	(61)	(.36)	61,303	59	.39
Total interest-bearing deposits[3][4]	158,074	(54)	(.13)	127,805	209	.66
Securities sold under repurchase agreements	3,394	1	.03	1,488	8	2.19
Short-term borrowings under money market liquidity facility	19,036	58	1.23	—	—	—
Other short-term borrowings	3,073	5	.66	2,041	6	1.22
Long-term debt	15,574	95	2.45	11,228	107	3.78
Other interest-bearing liabilities	3,461	10	1.07	3,979	64	6.47
Average total interest-bearing liabilities	$ 202,612	$ 115	.23	$ 146,541	$ 394	1.08
Interest rate spread			.89 %			1.18%
Net interest income, fully taxable-equivalent basis		$ 564			$ 618	
Net interest margin, fully taxable-equivalent basis			.93 %			1.38%
Tax-equivalent adjustment		(5)			(5)	
Net interest income, GAAP-basis		$ 559			$ 613	

	Six Months Ended June 30,					
	2020			2019		
(Dollars in millions; fully taxable-equivalent basis)	Average Balance	Interest Revenue/Expense	Average Rate	Average Balance	Interest Revenue/Expense	Average Rate
Interest-bearing deposits with banks	$ 76,931	$ 85	.22 %	$ 48,462	$ 228	.95%
Securities purchased under resale agreements[2]	2,574	89	6.96	2,373	188	15.99
Trading account assets	896	—	—	879	—	—
Investment securities:						
Investment securities available-for-sale	55,852	404	1.45	48,395	501	2.07
Investment securities held-to-maturity	40,700	503	2.47	40,711	508	2.49
Investment securities held to maturity purchased under money market liquidity facility	10,541	78	1.49	—	—	—
Total Investment securities	107,093	985	1.84	89,106	1,009	2.27
Loans	27,919	342	2.46	23,442	396	3.41
Other interest-earning assets	10,298	50	0.95	15,195	223	2.96
Average total interest-earning assets	$ 225,711	$ 1,551	1.38	$ 179,457	$ 2,044	2.30
Interest-bearing deposits:						
U.S.	$ 85,672	$ 107	.25 %	$ 65,522	$ 282	.87%
Non-U.S.[3]	65,658	(93)	(.28)	60,543	98	.33
Total interest-bearing deposits[3][4]	151,330	14	.02	126,065	380	.61
Securities sold under repurchase agreements	2,584	3	.21	1,630	20	2.44
Short-term borrowings under money market liquidity facility	10,612	64	1.22	—	—	—
Other short-term borrowings	3,017	15	0.98	1,601	10	1.27
Long-term debt	14,431	183	2.53	11,092	213	3.83
Other interest-bearing liabilities	3,446	40	2.31	4,309	125	5.85
Average total interest-bearing liabilities	$ 185,420	$ 319	.34	$ 144,697	$ 748	1.04
Interest rate spread			1.04 %			1.26%
Net interest income, fully taxable-equivalent basis		$ 1,232			$ 1,296	
Net interest margin, fully taxable-equivalent basis			1.10 %			1.46%
Tax-equivalent adjustment		(9)			(10)	
Net interest income, GAAP basis		$ 1,223			$ 1,286	

[1] Rates earned/paid on interest-earning assets and interest-bearing liabilities include the impact of hedge activities associated with our asset and liability management activities where applicable.
[2] Reflects the impact of balance sheet netting under enforceable netting agreements of approximately $103.15 billion and $113.56 billion in the three and six months ended June 30, 2020, respectively, compared to $74.80 billion and $67.04 billion in the same periods in 2019, respectively. Excluding the impact of netting, the average interest rates would be approximately 0.09% and 0.15% in the three and six months ended June 30, 2020, respectively, compared to 0.47% and 0.55% in the same periods in 2019, respectively.
[3] Average rate includes the impact of FX swap costs of approximately $(17) million and $(19) million in the three and six months ended June 30, 2020, respectively, compared to $59 million and $98 million in the same periods in 2019, respectively. Average rates for total interest-bearing deposits excluding the impact of FX swap costs were (0.09)% and 0.04% in the three and six months ended June 30, 2020, respectively, compared to approximately 0.47% and 0.45% in the same periods in 2019, respectively.
[4] Total deposits averaged $197.07 billion and $188.61 billion in the three and six months ended June 30, 2020, respectively, compared to $156.57 billion and $155.96 billion in the same periods in 2019, respectively.

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 14 to the consolidated financial statements in this Form 10-Q.

Average total interest-earning assets were $244.79 billion and $225.71 billion in the three and six months ended June 30, 2020, respectively, compared to $179.80 billion and $179.46 billion in the same periods in 2019, respectively. The increase is primarily driven by higher average total deposits and our participation in the MMLF program.

Interest-bearing deposits with banks averaged $86.74 billion and $76.93 billion in the three and six months ended June 30, 2020, respectively, compared to $48.07 billion and $48.46 billion in the same periods in 2019, respectively. These deposits primarily reflect our maintenance of cash balances at the Federal Reserve, the European Central Bank (ECB) and other non-U.S. central banks. The higher levels of average cash balances with central banks reflect higher levels of client deposits.

Securities purchased under resale agreements averaged $3.34 billion and $2.57 billion in the three and six months ended June 30, 2020, respectively, compared to $1.98 billion and $2.37 billion in the same periods in 2019, respectively. The impact of balance sheet netting increased to $103.15 billion and $113.56 billion on average in the three and six months ended June 30, 2020, respectively, compared to $74.80 billion and $67.04 billion in the same periods in 2019, respectively. We maintain an agreement with Fixed Income Clearing Corporation (FICC), 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. The increase in average balance sheet netting, in the three and six months ended June 30, 2020 compared to the same periods in 2019, is primarily due to the expansion of our FICC program and new client activity.

We have been a netting and sponsoring member within FICC since 2005. FICC expanded the service in 2017, and since then, we have increased our participation. We enter into repurchase and resale transactions in eligible securities with sponsored clients and with other FICC members and, pursuant to FICC Government Securities Division rules, submit, novate and net the transactions. We may sponsor clients to clear their eligible repurchase transactions with FICC, backed by our guarantee to FICC of the prompt and full payment and performance of our sponsored member clients' respective obligations. We obtain a security interest from our sponsored clients in the high quality securities collateral that they receive, which is designed to mitigate our potential exposure to FICC.

Average investment securities, excluding MMLF HTM securities, increased to $97.59 billion and $96.55 billion in the three and six months ended June 30, 2020, respectively, from $89.93 billion and $89.11 billion in the same periods in 2019, respectively, primarily driven by higher MBS balances.

Loans averaged $27.37 billion and $27.92 billion in the three and six months ended June 30, 2020, respectively, compared to $23.82 billion and $23.44 billion in the same periods in 2019, respectively. Average core loans, which exclude overdrafts and highlight our efforts to grow our lending portfolio, averaged $22.55 billion and $22.36 billion in the three and six months ended June 30, 2020, compared to $19.97 billion and $19.55 billion in the same periods in 2019.

Average other interest-earning assets, largely associated with our enhanced custody business, decreased to $9.83 billion and $10.30 billion in the three and six months ended June 30, 2020 from $15.10 billion and $15.20 billion in the same periods in 2019, respectively, primarily driven by a reduction in the level of cash collateral posted related to client deleveraging. Enhanced custody 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 total interest-bearing deposits increased to $158.07 billion and $151.33 billion in the three and six months ended June 30, 2020, respectively, from $127.81 billion and $126.07 billion in the same periods in 2019, respectively. Interest bearing deposits totaled $158.33 billion as of June 30, 2020 compared to $147.84 billion as of December 31, 2019. Average U.S. interest-bearing deposits increased as a result of the market uncertainty due to the COVID-19 pandemic, the level of global interest rates and new deposit gathering initiatives. We expect deposits to remain elevated in the current low interest rate environment. Future deposit levels will be influenced by the underlying asset servicing business, client deposit behavior and market conditions, including the levels of U.S. and non-U.S. interest rates.

Average other short-term borrowings, typically associated with our tax-exempt investment program, increased to $3.07 billion and $3.02 billion in the three and six months ended June 30, 2020, respectively, from $2.04 billion and $1.60 billion in the same periods in 2019, respectively.

Average long-term debt was $15.57 billion and $14.43 billion in the three and six months ended June 30, 2020, respectively, compared to $11.23 billion and $11.09 billion in the same periods in 2019, respectively.

These amounts reflect issuances, redemptions and maturities of senior debt during the respective periods.

Average other interest-bearing liabilities were $3.46 billion and $3.45 billion in the three and six months ended June 30, 2020, respectively, compared to $3.98 billion and $4.31 billion in the same periods in 2019, respectively. 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 deposits and funding sources; central bank actions; balance sheet management activities; changes in the level and slope of U.S. and non-U.S. interest rates; revised or proposed regulatory capital or liquidity standards, or interpretations of those standards; the yields earned on securities purchased compared to the yields earned on securities sold or matured and changes in the type and amount of credit or other loans we extend.

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 U.S. and non-U.S. securities, such as federal agency MBS, sovereign debt securities and U.S. Treasury and agency securities. The pace at which we 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 impact our reinvestment program and future levels of NII and NIM.

Provision for Credit Losses

In January 2020, we adopted ASU 2016-13, *Financial Instruments - Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments,* which replaces the incurred loss methodology with an expected loss methodology that is referred to as CECL methodology. The impact of transitioning to ASC 326 on the consolidated financial statements was an increase in the allowance for credit losses and a decrease in retained earnings of $3 million as of January 1, 2020. In the second quarter of 2020, we recorded a provision for credit losses related to loans and financial assets held at amortized cost, including investment securities held-to-maturity and off-balance sheet commitments of $52 million based on the CECL methodology, reflecting the impact of COVID-19 driven changes in our economic outlook as of quarter-end as well as negative portfolio credit migration. This compares to a $1 million provision for credit losses in the same period in 2019 (which was under the previous incurred loss model). Additional information is provided under “Loans” in "Financial Condition" in this Management's Discussion and Analysis and in Note 4 to the consolidated financial statements in this Form 10-Q.

Expenses

Table 8: Expenses, provides the breakout of expenses for the three and six months ended June 30, 2020, compared to the same periods in 2019.

TABLE 8: EXPENSES

	Three Months Ended June 30,		
(Dollars in millions)	**2020**	**2019**	**% change**
Compensation and employee benefits	**$ 1,051**	$ 1,084	(3)%
Information systems and communications	**376**	365	3
Transaction processing services	**233**	245	(5)
Occupancy	**109**	115	(5)
Acquisition costs	**12**	10	20
Restructuring charges, net	**—**	2	(100)
Amortization of other intangible assets	**58**	59	(2)
Other:			
Professional services	**91**	85	7
Other	**152**	189	(20)
Total other	**243**	274	(11)
Total expenses	**$ 2,082**	$ 2,154	(3)
Number of employees at quarter-end	**39,068**	39,483	(1)

	Six Months Ended June 30,		
(Dollars in millions)	**2020**	**2019**	**% change**
Compensation and employee benefits	**$ 2,259**	$ 2,313	(2)%
Information systems and communications	**761**	727	5
Transaction processing services	**487**	487	—
Occupancy	**218**	231	(6)
Acquisition costs	**23**	23	—
Restructuring charges, net	**—**	(2)	(100)
Amortization of other intangible assets	**116**	119	(3)
Other:			
Professional services	**172**	165	4
Other	**301**	384	(22)
Total other	**473**	549	(14)
Total expenses	**$ 4,337**	$ 4,447	(2)

Compensation and employee benefits expenses decreased 3% and 2% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily due to lower salaries and headcount, partially offset by higher incentive compensation expenses.

Total headcount decreased by approximately 1% as of June 30, 2020 compared to June 30, 2019, primarily driven by productivity savings, including a reduction in headcount in higher cost locations.

Information systems and communications expenses increased 3% and 5% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019. The increase was primarily related to software costs and technology infrastructure enhancements, partially offset by vendor savings.

Transaction processing services expenses decreased 5% in the three months ended June 30, 2020 compared to the same period in 2019, primarily reflecting lower market data costs and sub-custody savings. Transaction processing services expenses were flat in the six months ended June 30, 2020, compared to the same period in 2019, primarily reflecting lower vendor costs and transaction volume, partially offset by higher broker fees due to higher FX volumes.

Occupancy expenses decreased 5% and 6% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily due to the advancement of our global optimization footprint strategy.

Amortization of other intangible assets decreased 2% and 3% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019.

Other expenses decreased 11% and 14% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily driven by lower marketing spend and travel costs, partially offset by higher professional fees.

In April 2020, we announced that we were deferring most planned headcount reductions through the end of 2020, in light of the COVID-19 pandemic. We expect our planned actions will take place following that period.

Acquisition Costs

We recorded approximately $12 million and $23 million of acquisition costs in the three and six months ended June 30, 2020, respectively, compared to $10 million and $23 million in the same periods in 2019, respectively, related to our acquisition of CRD. As we integrate CRD into our business, we expect to incur a total of approximately $200 million of acquisition costs, including merger and integration costs, through 2021, out of which $133 million has been incurred as of June 30, 2020, since the acquisition.

Restructuring and Repositioning Charges

The following table presents aggregate activity for repositioning charges and activity related to previous Beacon restructuring charges for the periods indicated:

TABLE 9: RESTRUCTURING AND REPOSITIONING CHARGES

(In millions)	Employee Related Costs	Real Estate Actions	Asset and Other Write-offs	Total
Accrual Balance at December 31, 2018	$ 303	$ 37	$ 1	$ 341
Accruals for Beacon	(4)	—	—	(4)
Payments and Other Adjustments	(53)	(25)	—	(78)
Accrual balance at March 31, 2019	$ 246	$ 12	$ 1	$ 259
Accruals for Beacon	2	—	—	2
Payments and Other Adjustments	(51)	(1)	—	(52)
Accrual balance at June 30, 2019	$ 197	$ 11	$ 1	$ 209
Accrual balance at December 31, 2019	$ 190	$ 7	$ 1	$ 198
Payments and other adjustments	(33)	(1)	—	(34)
Accrual balance at March 31, 2020	$ 157	$ 6	$ 1	$ 164
Payments and other adjustments	**(25)**	**(1)**	**—**	**(26)**
Accrual balance at June 30, 2020	**$ 132**	**$ 5**	**$ 1**	**$ 138**

Income Tax Expense

Income tax expense was $109 million and $249 million in the three and six months ended June 30, 2020, respectively, compared to $131 million and $258 million in the same periods in 2019, respectively. Our effective tax rate was 13.6% and 15.8% in the three and six months ended June 30, 2020, respectively, compared to 18.1% and 19.0% in the same periods in 2019, respectively. The effective tax rate in the second quarter of 2020 includes a decrease in a valuation allowance related to foreign tax credits.

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, through State Street Global Services, State Street Global Markets, State Street Global Exchange and CRD, 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 non-U.S. regulation); record-keeping; cash management; foreign exchange, brokerage and other trading services; securities finance and enhanced custody products; 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. Our CRD business also falls within our Investment Servicing line of business and includes products and services, such as: portfolio modeling and construction; trade order management; investment risk and compliance; and wealth management solutions.

Investment Management, through State Street Global Advisors, provides a broad range of investment management strategies and products for our clients. Our investment management strategies and products span the risk/reward spectrum, including core and enhanced indexing, multi-asset strategies, active quantitative and fundamental active capabilities and alternative investment strategies. Our AUM is currently primarily weighted to indexed strategies. In addition, we provide a breadth of services and solutions, including environmental, social and governance investing, defined benefit and defined contribution and Global Fiduciary Solutions (formerly Outsourced Chief Investment Officer). State Street Global Advisors is also a provider of ETFs, including the SPDR® ETF brand. While management fees are primarily determined by the values of AUM and the investment strategies employed, management fees reflect other factors as well, including the benchmarks specified in the respective management agreements related to performance fees.

For information about our two lines of business, as well as the revenues, expenses and capital allocation methodologies associated with them, refer to Note 17 to the consolidated financial statements in this Form 10-Q.

Investment Servicing

TABLE 10: INVESTMENT SERVICING LINE OF BUSINESS RESULTS

	Three Months Ended June 30,		
(Dollars in millions, except where otherwise noted)	**2020**	**2019**	**% Change**
Servicing fees	**$ 1,272**	$ 1,252	2 %
Foreign exchange trading services	**312**	240	30
Securities finance	**88**	122	(28)
Software and processing fees	**229**	163	40
Total fee revenue	**1,901**	1,777	7
Net interest income	**571**	623	(8)
Total revenue	**2,472**	2,400	3
Provision for credit losses	**52**	1	nm
Total expenses	**1,717**	1,765	(3)
Income before income tax expense	**$ 703**	$ 634	11
Pre-tax margin	**28%**	26%	

	Six Months Ended June 30,		
(Dollars in millions, except where otherwise noted)	**2020**	**2019**	**% Change**
Servicing fees	**$ 2,559**	$ 2,503	2 %
Foreign exchange trading services	**746**	486	53
Securities finance	**177**	239	(26)
Software and processing fees	**366**	343	7
Total fee revenue	**3,848**	3,571	8
Net interest income	**1,234**	1,302	(5)
Total other income	**2**	(1)	nm
Total revenue	**5,084**	4,872	4
Provision for credit losses	**88**	5	nm
Total expenses	**3,576**	3,629	(1)
Income before income tax expense	**$ 1,420**	$ 1,238	15
Pre-tax margin	**28%**	25%	

[nm] Not meaningful

Servicing Fees

Servicing fees, as presented in Table 10: Investment Servicing Line of Business Results, increased 2% in both the three and six months ended June 30, 2020, compared to the same periods in 2019, primarily due to higher client activity and net new business, partially offset by moderating pricing headwinds. FX rates negatively impacted servicing fees by 1% in both the three and six months ended June 30, 2020, compared to 1% and 2% in the same periods in 2019, respectively.

Servicing fees generated outside the U.S. were approximately 47% and 46% of total servicing fees in the three and six months ended June 30, 2020, respectively, compared to approximately 47% for both of the same periods in 2019.

TABLE 11: ASSETS UNDER CUSTODY AND/OR ADMINISTRATION BY PRODUCT

(In billions)	June 30, 2020	December 31, 2019	June 30, 2019
Collective funds	$ 9,111	$ 9,796	$ 9,272
Mutual funds	9,155	9,221	8,645
Insurance and other products	8,555	8,417	8,295
Pension products	6,694	6,924	6,542
Total	**$ 33,515**	$ 34,358	$ 32,754

TABLE 12: ASSETS UNDER CUSTODY AND/OR ADMINISTRATION BY ASSET CLASS

(In billions)	June 30, 2020	December 31, 2019	June 30, 2019
Equities	$ 18,190	$ 19,301	$ 18,504
Fixed-income	11,342	10,766	10,089
Short-term and other investments	3,983	4,291	4,161
Total	**$ 33,515**	$ 34,358	$ 32,754

TABLE 13: ASSETS UNDER CUSTODY AND/OR ADMINISTRATION BY GEOGRAPHY[1]

(In billions)	June 30, 2020	December 31, 2019	June 30, 2019
Americas	$ 24,375	$ 25,018	$ 23,989
Europe/Middle East/Africa	7,155	7,325	6,937
Asia/Pacific	1,985	2,015	1,828
Total	**$ 33,515**	$ 34,358	$ 32,754

[1] Geographic mix is generally based on the domicile of the entity servicing the funds and is not necessarily representative of the underlying asset mix.

Asset servicing mandates newly announced in the second quarter of 2020 totaled approximately $162 billion. Servicing assets remaining to be installed in future periods totaled approximately $1.04 trillion as of June 30, 2020, which will be reflected in AUC/A in future periods after installation and will generate servicing fee revenue in subsequent periods. The full revenue impact of such mandates will be realized over several quarters as the assets are installed and additional services are added over that period.

New asset servicing mandates may be subject to completion of definitive agreements, approval of applicable boards and shareholders and customary regulatory approvals. New asset servicing mandates and servicing assets remaining to be installed in future periods exclude certain new business which has been contracted, but for which the client has not yet provided permission to publicly disclose and the expected installation date extends beyond one quarter. These excluded assets, which from time to time may be significant, will be included in new asset servicing mandates and reflected in servicing assets remaining to be installed in the period in which the client provides its permission. Servicing mandates and servicing assets remaining to be installed in future periods are presented on a gross basis and therefore also do not include the impact of clients who have notified us during the period of their intent to terminate or reduce their relationship with us, which may from time to time be significant.

With respect to these new servicing mandates, once installed we may provide various services, including accounting, bank loan servicing, compliance reporting and monitoring, custody, depository banking services, FX, 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. Revenues associated with new servicing mandates may vary based on the breadth of services provided and the timing of installation, and the types of assets.

For additional information about the impact of worldwide equity and fixed-income valuations on our fee revenue, as well as other key drivers of our servicing fee revenue, refer to "Fee Revenue" in "Consolidated Results of Operations" included in this Management's Discussion and Analysis.

Foreign Exchange Trading Services

Foreign exchange trading services revenue, as presented in Table 10: Investment Servicing Line of Business Results, increased 30% and 53% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily due to significantly elevated FX volume and heightened FX volatility during the COVID-19 pandemic. Foreign exchange trading services is composed of revenue generated by FX trading and revenue generated by brokerage and other trading services, which made up 63% and 37%, respectively, of foreign exchange trading services revenue in the second quarter of 2020 and 69% and 31%, respectively, of foreign exchange trading services revenue in the six months ended June 30, 2020.

We primarily earn FX trading revenue by acting as a principal market-maker through both "direct sales and trading" and "indirect FX 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 with us.
- *Indirect FX trading*: Represents FX transactions with clients, for which we are the funds' custodian, or their investment managers, routed to our FX desk through our asset-servicing operation. 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 FX 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.

We also earn foreign exchange trading services revenue through "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 us 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, which are not limited to foreign exchange, generate revenue via commissions charged for trades transacted during the management of these portfolios.

Securities Finance

Our securities finance business consists of three components:

(1) an agency lending program for State Street Global Advisors managed investment funds with a broad range of investment objectives, which we refer to as the State Street Global Advisors 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 our 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 from clients who have designated us as an eligible borrower.

Securities finance revenue, as presented in Table 10: Investment Servicing Line of Business Results, decreased 28% and 26% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily due to decreases in enhanced custody balances due to client deleveraging and lower agency lending revenues due to a mix shift to fixed income assets and lower spreads. 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, interpretations of those standards, and our own balance sheet management activities, 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.

Software and Processing Fees

Software and processing fees revenue includes diverse types of fees and revenue, including fees from software licensing and maintenance, fees from our structured products business and other revenue including equity income from our joint venture investments, gains and losses on sales of other assets, market-related adjustments and income associated with certain tax-advantaged investments.

Software and processing fees revenue, presented in Table 10: Investment Servicing Line of Business Results, increased 40% and 7% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily due to higher CRD revenues and market-related adjustments.

We acquired CRD on October 1, 2018. Revenue related to the front office solutions provided by CRD is primarily driven by the sale of term software licenses and software as service arrangements, including professional services such as consulting and implementation services, software support and maintenance. Approximately 50%-70% of revenue associated with a sale of software to be installed on-premise is recognized at a point in time when the customer benefits from obtaining access to and use of the software license, with the percentage varying based on the length of the contract and other contractual terms. The remainder of revenue for on-premise installations is recognized over the length of the contract as maintenance and other services are provided. Upon renewal of an on-premise software contract, the same pattern of revenue recognition is followed with 50%-70% recognized upon renewal and the balance recognized over the term of the contract. Revenue for a Software as a Service (SaaS) related arrangement, where the customer does not take possession of the software, is recognized over the term of the contract as services are provided. Upon renewal of a SaaS arrangement, revenue continues to be recognized as services are provided under the new contract. As a result of these differences in how portions of CRD revenue are accounted for, CRD revenue may vary more than other business units quarter to quarter.

CRD contributed approximately $138 million and $233 million in total revenue in the three and six months ended June 30, 2020, respectively, compared to $87 million and $183 million in the same periods in 2019, respectively. The increase in revenue in both the three and six months periods is driven by a significant CRD wealth client implementation and multiple client renewals.

CRD revenue with affiliated entities, which is eliminated in our consolidated financial statements, was $7 million and $12 million in the three and six months ended June 30, 2020, respectively, compared to $4 million and $7 million in the same periods in 2019, respectively.

Expenses

Total expenses for Investment Servicing decreased 3% and 1% in the three and six months ended June 30, 2020, respectively, compared to the same periods in 2019, primarily due to resource discipline initiatives and vendor savings, partially offset by technology infrastructure and operational investments.

CRD contributed approximately $61 million and $119 million in total expenses in the three and six months ended June 30, 2020, respectively, compared to $46 million and $87 million in the same periods in 2019, respectively. In addition, CRD-related expenses include $16 million and $33 million in amortization of other intangible assets in the three and six months ended June 30, 2020, respectively, compared to $17 million and $32 million in the same periods in 2019, respectively.

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

Investment Management

TABLE 14: INVESTMENT MANAGEMENT LINE OF BUSINESS RESULTS

(Dollars in millions, except where otherwise noted)	Three Months Ended June 30, 2020	2019	% Change
Management fees	$ 425	$ 441	(4)%
Foreign exchange trading services[1]	32	33	(3)
Securities finance	4	4	nm
Software and processing fees[2]	16	5	nm
Total fee revenue	477	483	(1)
Net interest income	(12)	(10)	nm
Total revenue	465	473	(2)
Total expenses	353	377	(6)
Income before income tax expense	$ 112	$ 96	17
Pre-tax margin	24%	20%	

(Dollars in millions, except where otherwise noted)	Six Months Ended June 30, 2020	2019	% Change
Management fees	$ 874	$ 861	2 %
Foreign exchange trading services[1]	57	67	(15)
Securities finance	7	5	nm
Software and processing fees[2]	(9)	16	nm
Total fee revenue	929	949	(2)
Net interest income	(11)	(16)	nm
Total revenue	918	933	(2)
Total expenses	738	783	(6)
Income before income tax expense	$ 180	$ 150	20
Pre-tax margin	20%	16%	

[1] Includes revenues related to certain ETFs associated with State Street Global Advisors for which we act as the distribution and marketing agent.
[2] Includes other revenue items that are primarily driven by equity market movements.
nm Not meaningful

Management Fees

Management fees decreased 4% in the second quarter of 2020, compared to the same period in 2019, primarily due to institutional net outflows, partially offset by net inflows from cash and ETFs, particularly in SPDR® Portfolio and Sector ETFs. Management fees increased 2% in the six months ended June 30, 2020 compared to the same period in 2019, primarily due to higher average equity market levels, cash and ETF net new business, partially offset by institutional outflows and mix changes away from higher fee institutional products.

Management fees generated outside the U.S. were approximately 26% and 27% of total management fees in the three and six months ended June 30, 2020, respectively, compared to approximately 27% in both the same periods in 2019.

TABLE 15: ASSETS UNDER MANAGEMENT BY ASSET CLASS AND INVESTMENT APPROACH

(In billions)	June 30, 2020	December 31, 2019	June 30, 2019
Equity:			
Active	$ 75	$ 88	$ 86
Passive	1,770	1,903	1,757
Total equity	1,845	1,991	1,843
Fixed-income:			
Active	91	89	93
Passive	385	379	357
Total fixed-income	476	468	450
Cash[1]	390	324	319
Multi-asset-class solutions:			
Active	23	24	23
Passive	135	133	132
Total multi-asset-class solutions	158	157	155
Alternative investments[2]:			
Active	19	21	21
Passive	166	155	130
Total alternative investments	185	176	151
Total	$ 3,054	$ 3,116	$ 2,918

[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 and SPDR® Gold MiniSharesSM Trust. We are not the investment manager for the SPDR® Gold Shares and SPDR® MiniSharesSM Trust, but act as the marketing agent.

TABLE 16: EXCHANGE-TRADED FUNDS BY ASSET CLASS[1]

(In billions)	June 30, 2020	December 31, 2019	June 30, 2019
Alternative Investments[2]	$ 77	$ 56	$ 48
Cash	16	9	9
Equity	571	618	548
Fixed-Income	90	85	77
Total Exchange-Traded Funds	$ 754	$ 768	$ 682

[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 and SPDR® Gold MiniSharesSM Trust. We are not the investment manager for the SPDR® Gold Shares and SPDR® MiniSharesSM Trust, but act as the marketing agent.

TABLE 17: GEOGRAPHIC MIX OF ASSETS UNDER MANAGEMENT[1]

(In billions)	June 30, 2020	December 31, 2019	June 30, 2019
North America	$ 2,104	$ 2,115	$ 1,965
Europe/Middle East/Africa	462	493	471
Asia/Pacific	488	508	482
Total	$ 3,054	$ 3,116	$ 2,918

[1] Geographic mix is based on client location or fund management location.

TABLE 18: 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, 2018	$ 1,544	$ 422	$ 287	$ 132	$ 126	$ 2,511
Long-term institutional flows, net[3]	26	(7)	—	3	16	38
Exchange-traded fund flows, net	13	15	—	—	6	34
Cash fund flows, net	—	—	31	—	—	31
Total flows, net	39	8	31	3	22	103
Market appreciation (depreciation)	404	38	6	22	28	498
Foreign exchange impact	4	—	—	—	—	4
Total market/foreign exchange impact	408	38	6	22	28	502
Balance as of December 31, 2019	$ 1,991	$ 468	$ 324	$ 157	$ 176	$ 3,116
Long-term institutional flows, net[3]	**2**	**(20)**	**(1)**	**2**	**(4)**	**(21)**
Exchange-traded fund flows, net	**(5)**	**6**	**7**	**—**	**15**	**23**
Cash fund flows, net	**—**	**—**	**60**	**—**	**—**	**60**
Total flows, net	**(3)**	**(14)**	**66**	**2**	**11**	**62**
Market appreciation (depreciation)	**(136)**	**23**	**1**	**(1)**	**1**	**(112)**
Foreign exchange impact	**(7)**	**(1)**	**(1)**	**—**	**(3)**	**(12)**
Total market/foreign exchange impact	**(143)**	**22**	**—**	**(1)**	**(2)**	**(124)**
Balance as of June 30, 2020	**$ 1,845**	**$ 476**	**$ 390**	**$ 158**	**$ 185**	**$ 3,054**

[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 and SPDR® Gold MiniSharesSM Trust. We are not the investment manager for the SPDR® Gold Shares and SPDR® MiniSharesSM Trust, but act as the marketing agent.
[3] Amounts represent long-term portfolios, excluding ETFs.

TABLE 19: ACTIVITY IN ASSETS UNDER MANAGEMENT BY PRODUCT CATEGORY

	Three Months Ended June 30,		Six Months Ended June 30,	
(In billions)	**2020**	**2019**	**2020**	**2019**
Beginning balance	**$ 2,689**	$ 2,805	**$ 3,116**	$ 2,511
Net asset flows:				
Long-term institutional	**(31)**	16	**(21)**	68
ETF	**26**	1	**23**	(2)
Cash fund	**28**	3	**60**	27
Total flows, net	**23**	20	**62**	93
Market appreciation (depreciation)	**324**	86	**(112)**	309
Foreign exchange impact	**18**	7	**(12)**	5
Total market/foreign exchange impact	**342**	93	**(124)**	314
Ending balance	**$ 3,054**	$ 2,918	**$ 3,054**	$ 2,918

Expenses

Total expenses for Investment Management decreased 6% in both the three and six months ended June 30, 2020, compared to the same periods in 2019, primarily due to savings from resource discipline initiatives and process re-engineering benefits.

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

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 influenced by the characteristics of the client liabilities and our desire to maintain a well-diversified portfolio of high-quality assets.

TABLE 20: AVERAGE STATEMENT OF CONDITION[1]

	Six Months Ended June 30,	
(In millions)	**2020**	**2019**
Assets:		
Interest-bearing deposits with banks	**$ 76,931**	$ 48,462
Securities purchased under resale agreements	**2,574**	2,373
Trading account assets	**896**	879
U.S. Treasury and federal agencies:		
Direct obligations	**14,142**	14,690
Mortgage-and asset-backed securities	**44,374**	40,568
State and political subdivisions	**1,755**	1,911
Other investments:		
Asset-backed securities	**10,499**	9,207
Collateralized mortgage-backed securities and obligations	**712**	949
Other debt investments and equity securities	**25,070**	21,781
Investment securities held to maturity purchased under money market liquidity facility	**10,541**	—
Total investment securities	**107,093**	89,106
Loans	**27,919**	23,442
Other interest-earning assets	**10,298**	15,195
Average total interest-earning assets	**225,711**	179,457
Cash and due from banks	**3,668**	3,547
Other non-interest-earning assets	**38,556**	37,538
Average total assets	**$ 267,935**	$ 220,542
Liabilities and shareholders' equity:		
Interest-bearing deposits:		
U.S.	**$ 85,672**	$ 65,522
Non-U.S.	**65,658**	60,543
Total interest-bearing deposits[2]	**151,330**	126,065
Securities sold under repurchase agreements	**2,584**	1,630
Short-term borrowings under money market liquidity facility	**10,612**	—
Other short-term borrowings	**3,017**	1,601
Long-term debt	**14,431**	11,092
Other interest-bearing liabilities	**3,446**	4,309
Average total interest-bearing liabilities	**185,420**	144,697
Non-interest-bearing deposits[2]	**37,284**	29,895
Other non-interest-bearing liabilities	**20,867**	21,055
Preferred shareholders' equity	**2,666**	3,690
Common shareholders' equity	**21,698**	21,205
Average total liabilities and shareholders' equity	**$ 267,935**	$ 220,542

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

[2] Total deposits averaged $188.61 billion in the six months ended June 30, 2020 compared to $155.96 billion in the same period in 2019.

Investment Securities

TABLE 21: CARRYING VALUES OF INVESTMENT SECURITIES

(In millions)	June 30, 2020	December 31, 2019
Available-for-sale:		
U.S. Treasury and federal agencies:		
Direct obligations	$ 5,804	$ 3,487
Mortgage-backed securities	16,676	17,838
Total U.S. Treasury and federal agencies	22,480	21,325
Asset-backed securities:		
Student loans[1]	404	531
Credit cards	90	89
Collateralized loan obligations	1,919	1,820
Total asset-backed securities	2,413	2,440
Non-U.S. debt securities:		
Mortgage-backed securities	1,706	1,980
Asset-backed securities	1,891	2,179
Government securities	13,119	12,373
Other	10,062	8,658
Total non-U.S. debt securities	26,778	25,190
State and political subdivisions	1,723	1,783
Collateralized mortgage obligations	90	104
Other U.S. debt securities	2,747	2,973
Total available-for-sale	$ 56,231	$ 53,815
Held-to-maturity[2]:		
U.S. Treasury and federal agencies:		
Direct obligations	$ 8,179	$ 10,311
Mortgage-backed securities	28,204	26,297
Total U.S. Treasury and federal agencies	36,383	36,608
Asset-backed securities:		
Student loans[1]	4,148	3,783
Total asset-backed securities	4,148	3,783
Non-U.S. debt securities:		
Mortgage-backed securities	339	366
Government securities	393	328
Total non-U.S. debt securities	732	694
Collateralized mortgage obligations	585	697
Total	41,848	41,782
Held-to-maturity under money market mutual fund liquidity facility[3]	11,261	—
Total held-to-maturity	$ 53,109	$ 41,782

[1] Primarily comprised 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.
[3] Consists entirely of U.S. securities.

Additional information about our investment securities portfolio, including our allowance for credit losses on investment securities, is provided in Note 3 to the consolidated financial statements in this Form 10-Q.

We manage our investment securities portfolio to align with the interest rate and duration characteristics of our client liabilities 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 was 2.4 years and 2.7 years as of June 30, 2020 and December 31, 2019, respectively. The decrease in securities duration is primarily driven by a significant increase in the HTM investment portfolio from securities purchased under the MMLF program. Excluding HTM securities purchased under the MMLF program, the average duration of our investment securities portfolio was 2.8 years and 2.7 years as of June 30, 2020 and December 31, 2019, respectively.

As presented in the table below, approximately 90% of the carrying value of the portfolio was rated "AAA" or "AA" as of both June 30, 2020 and December 31, 2019, excluding the securities purchased under the MMLF program. The Federal Reserve has taken on the credit risk of the assets purchased under the MMLF program, including municipal securities. The securities purchased under the MMLF program were primarily short-duration securities.

TABLE 22: INVESTMENT PORTFOLIO BY EXTERNAL CREDIT RATING (EXCLUDING SECURITIES PURCHASED UNDER THE MMLF PROGRAM)

	June 30, 2020	December 31, 2019
AAA[1]	76%	77%
AA	14	13
A	5	5
BBB	5	5
Below BBB	—	—
	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 and also includes Agency MBS securities which are not explicitly rated but which have an explicit or assumed guarantee from the U.S. government.

As of June 30, 2020 and December 31, 2019, the investment portfolio was diversified with respect to asset class composition. The following table presents the composition of these asset classes.

TABLE 23: INVESTMENT PORTFOLIO BY ASSET CLASS

	June 30, 2020	December 31, 2019
U.S. Agency Mortgage-backed securities	36%	41%
Foreign sovereign	18	19
U.S. Treasuries	13	14
Asset-backed securities	10	11
Other credit[1]	23	15
	100%	100%

[1] Includes the securities purchased under the MMLF program.

Non-U.S. Debt Securities

Approximately 25% and 27% of the aggregate carrying value of our investment securities portfolio was non-U.S. debt securities as of June 30, 2020 and December 31, 2019, respectively.

TABLE 24: NON-U.S. DEBT SECURITIES[1]

(In millions)	June 30, 2020	December 31, 2019
Available-for-sale:		
Canada	$ 2,966	$ 2,611
European[2]	2,659	2,101
France	2,475	2,223
Australia	2,300	2,409
Germany	1,903	1,944
Spain	1,579	1,531
Belgium	1,474	977
Austria	1,422	1,398
United Kingdom	1,395	1,608
Japan	1,372	1,363
Netherlands	1,351	1,524
Ireland	1,123	1,235
Finland	1,039	846
Italy	998	1,113
Asian[2]	713	581
Hong Kong	427	617
Sweden	237	156
Luxembourg	76	124
Brazil	68	93
Norway	56	51
Other[3]	1,145	685
Total	$ 26,778	$ 25,190
Held-to-maturity:		
Singapore	$ 281	$ 214
United Kingdom	120	126
Germany	112	112
Australia	92	109
Spain	83	85
Other	44	48
Total	$ 732	$ 694

[1] Geography is determined primarily based on the domicile of collateral or issuer.
[2] Consists entirely of supranational bonds.
[3] Included approximately $1,097 million and $618 million as of June 30, 2020 and December 31, 2019, respectively, related to supranational and non-U.S. agency bonds.

Approximately 76% and 74% of the aggregate carrying value of these non-U.S. debt securities was rated "AAA" or "AA" as of June 30, 2020 and December 31, 2019, respectively. As of June 30, 2020 and December 31, 2019, approximately 21% and 27%, respectively, of the aggregate carrying value of these non-U.S. debt securities was floating-rate.

As of June 30, 2020, our non-U.S. debt securities had an average market-to-book ratio of 101.1%, and an aggregate pre-tax net unrealized gain of $312 million, composed of gross unrealized gains of $357 million and gross unrealized losses of $45 million. These unrealized amounts included:

- a pre-tax net unrealized gain of $259 million, composed of gross unrealized gains of $297 million and gross unrealized losses of $38 million, associated with non-U.S. AFS debt securities; and
- a pre-tax net unrealized gain of $53 million, composed of gross unrealized gains of $60 million and gross unrealized losses of $7 million, associated with non-U.S. HTM debt securities.

As of June 30, 2020, the securities listed under "Canada" were composed of Canadian government as well as non-U.S. agency securities and municipals. The securities listed under "France" were composed of sovereign bonds, non-U.S. agency securities, ABS, corporate debt, covered bonds and commercial paper. Additionally, the underlying collateral for non-U.S. MBS and ABS primarily included Australian, German, U.K., Dutch and Italian mortgages.

Municipal Obligations

We carried approximately $1.7 billion of municipal securities classified as state and political subdivisions in our investment securities portfolio as of June 30, 2020, as shown in Table 21: Carrying Values of Investment Securities, all of which were classified as AFS. As of June 30, 2020, we also provided approximately $10.0 billion of credit and liquidity facilities to municipal issuers.

TABLE 25: STATE AND MUNICIPAL OBLIGORS[1]

(Dollars in millions)	Total Municipal Securities[2]	Credit and Liquidity Facilities[3]	Total	% of Total Municipal Exposure
June 30, 2020				
State of Issuer:				
Texas	$ 313	$ 2,314	$ 2,627	22%
New York	519	1,773	2,292	19
California	144	2,065	2,209	18
Massachusetts	440	1,059	1,499	12
Total	$ 1,416	$ 7,211	$ 8,627	
December 31, 2019				
State of Issuer:				
Texas	$ 275	$ 2,345	$ 2,620	23%
California	111	2,114	2,225	20
New York	283	1,531	1,814	16
Massachusetts	442	809	1,251	11
Total	$ 1,111	$ 6,799	$ 7,910	

[1] Represented 5% or more of our aggregate municipal credit exposure of approximately $12.05 billion and $11.32 billion across our businesses as of June 30, 2020 and December 31, 2019, respectively.
[2] Includes approximately $0.37 billion of municipal HTM MMLF securities.
[3] Includes municipal loans which are also presented within Table 26: U.S. and Non-U.S. Loans.

Our aggregate municipal securities exposure presented in Table 25: State and Municipal Obligors, was concentrated primarily with highly-rated counterparties, with approximately 86% of the obligors rated "AAA" or "AA", or equivalent, as of June 30, 2020. Additionally, as of June 30, 2020, approximately 27%, 71% and 2% of our aggregate municipal securities exposure was associated with general obligation bonds, revenue bonds and certification participations, 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 impairment of our municipal securities is provided in Note 3 to the consolidated financial statements in this Form 10-Q.

Loans

TABLE 26: U.S. AND NON- U.S. LOANS

(In millions)	As of June 30, 2020	As of December 31, 2019
Domestic[1]:		
Commercial and financial:		
Fund Finance [2]	**$ 9,696**	$ 10,270
Leveraged loans	**3,071**	3,342
Overdrafts	**2,292**	1,739
Other[3]	**2,450**	3,411
Commercial real estate	**1,944**	1,766
Total domestic	**19,453**	20,528
Foreign[1]:		
Commercial and financial:		
Fund Finance[2]	**3,986**	3,145
Leveraged loans	**1,230**	1,119
Overdrafts	**2,163**	1,517
Other[3]	**28**	—
Total foreign	**7,407**	5,781
Total loans	**26,860**	26,309
Allowance for loan losses	**(141)**	(74)
Loans, net of allowance	**$ 26,719**	$ 26,235

[1] Domestic and foreign categorization is based on the borrower's country of domicile.

[2] Fund finance loans include primarily $5,026 million loans to real money funds, $7,272 million private equity capital call finance loans and $820 million loans to business development companies as of June 30, 2020, compared to $6,040 million loans to real money funds, $6,076 million private equity capital call finance loans and $932 million loans to business development companies as of December 31, 2019.

[3] Includes $1,448 million securities finance loans, $933 million loans to municipalities and $97 million other loans as of June 30, 2020 and $2,537 million securities finance loans, $848 million loans to municipalities and $26 million other loans as of December 31, 2019.

The increase in loans in the commercial and financial segment as of June 30, 2020 compared to December 31, 2019 was primarily driven by higher levels of client overdrafts as we helped clients facilitate the higher settlement of trades and FX activities during the first six months of 2020.

As of June 30, 2020 and December 31, 2019, our leveraged loans, totaled approximately $4.30 billion and $4.46 billion, respectively. In addition, we had binding unfunded commitments as of June 30, 2020 and December 31, 2019 of $87 million and $176 million, respectively, to participate in such syndications. Additional information about these unfunded commitments is provided in Note 9 to the consolidated financial statements in this Form 10-Q.

These leveraged loans, which are primarily rated "speculative" under our internal risk-rating framework (refer to Note 4 to the consolidated financial statements in this Form 10-Q), are externally rated "BBB," "BB" or "B," with approximately 83% and 86% of the loans rated "BB" or "B" as of June 30, 2020 and December 31, 2019, respectively. Our investment strategy involves generally limiting our investment to larger, more liquid credits underwritten by major global financial institutions, applying our internal credit analysis process to each potential investment and diversifying our exposure by counterparty and industry segment. However, these loans have significant exposure to credit losses relative to higher-rated loans in our portfolio.

Additional information about all of our loan segments, as well as underlying classes, is provided in Note 4 to the consolidated financial statements in this Form 10-Q.

No loans were modified in troubled debt restructurings as of both June 30, 2020 and December 31, 2019.

Allowance for Credit Losses

TABLE 27: ALLOWANCE FOR CREDIT LOSSES

	Six Months Ended June 30,	
(In millions)	2020	2019[1]
Allowance for credit losses:		
Beginning balance[2]	**$ 93**	**$ 83**
Provision for credit losses (funded commitments)[3]	**86**	**5**
Provision for credit losses (unfunded commitments)[1]	**(1)**	**—**
Provision for credit losses (held-to-maturity securities and all other)	**3**	**—**
Charge-offs[4]	**(19)**	**—**
FX translation	**1**	**—**
Ending balance	**$ 163**	**$ 88**

[1] Prior to the adoption of ASU 2016-13, the provision for unfunded commitments was recorded within other expenses in the consolidated statement of income. Upon adoption of ASU 2016-13 in the first quarter of 2020, the provision for all assets within scope is recorded within the provision for credit losses in the consolidated statement of income.

[2] Beginning 2020, balance activity will not tie to the December 31, 2019 ending balance due to the adoption of ASU 2016-13. Please refer to Note 1 to the consolidated financial statements in this Form 10-Q for additional information.

[3] The provision for credit losses is primarily related to commercial and financial loans.

[4] The charge-offs are related to commercial and financial loans.

As discussed above, we adopted ASU 2016-13 in January 2020. For additional information on this new standard, refer to Note 1 to the consolidated financial statements in this Form 10-Q.

We recorded a provision for credit losses related to loans and financial assets held at amortized cost, including investment securities classified as HTM and off-balance sheet commitments of $52 million and $88 million in the three and six months ended June 30, 2020 respectively, based on the CECL methodology, compared to $1 million and $5 million in the same periods in 2019 respectively (which were under the previous incurred loss model). Additional information is provided in Note 4 to the consolidated financial statements in this Form 10-Q. For additional information on the previous loss model, please refer to Note 4 of the 2019 Form 10-K.

As of June 30, 2020, approximately $113 million of our allowance for credit losses was related to leveraged loans included in the commercial and financial segment compared to $64 million as of June 30, 2019, reflecting portfolio credit migration. As our view on current and future economic scenarios change, our allowance for credit losses related to these loans may be impacted through a change to the provisions for credit losses, reflecting credit downgrades within our loan portfolio, as well as a downward revision in management's economic outlook as of quarter-end. The remaining $50 million and $8 million as of June 30, 2020 and 2019, respectively, was related to off-balance sheet commitments and other financial assets held at amortized cost, including investment securities held to maturity.

An allowance for credit losses is recognized on HTM securities upon acquisition of the security, and on AFS securities when the fair value and expected future cash flows of the investment securities are less than their amortized cost basis. Please refer to Note 3 to the consolidated financial statements in this Form 10-Q for additional information. Our assessment of impairment involves an evaluation of economic and security-specific factors. Such factors are based on estimates, derived by management, which contemplate current market conditions and security-specific performance. To the extent that market conditions are worse than management's expectations or due to idiosyncratic bond performance, the credit-related component of impairment, in particular, could increase and would be recorded in the provision for credit losses. Additional information with respect to the allowance for credit losses, net impairment losses and gross unrealized losses is provided in Note 3 to the consolidated financial statements in this Form 10-Q.

Cross-Border Outstandings

Cross-border outstandings are amounts payable to us by non-U.S. counterparties which are denominated in U.S. dollars or other non-local currency, as well as non-U.S. local currency claims not funded by local currency liabilities. Our cross-border outstandings consist primarily of deposits with banks; loans and lease financing, including short-duration advances; investment securities; amounts related to FX and interest rate contracts; and securities finance. In addition to credit risk, cross-border outstandings have the risk that, as a result of political or economic conditions in a country, borrowers may be unable to meet their contractual repayment obligations of principal and/or interest when due because of the unavailability of, or restrictions on, FX needed by borrowers to repay their obligations.

As market and economic conditions change, the major independent credit rating agencies may downgrade U.S. and non-U.S. financial institutions and sovereign issuers which have been, and may in the future be, significant counterparties to us, or whose financial instruments serve as collateral on which we rely for credit risk mitigation purposes, and may do so again in the future. As a result, we may be exposed to increased counterparty risk, leading to negative ratings volatility.

The cross-border outstandings presented in Table 28: Cross-border outstandings, represented approximately 25% and 28% of our consolidated total assets as of June 30, 2020 and December 31, 2019, respectively.

TABLE 28: CROSS-BORDER OUTSTANDINGS[1]

(In millions)	Investment Securities and Other Assets	Derivatives and Securities on Loan	Total Cross-Border Outstandings
June 30, 2020			
Germany	**$ 20,814**	**$ 426**	**$ 21,240**
United Kingdom	**14,153**	**1,845**	**15,998**
Japan	**11,337**	**594**	**11,931**
Australia	**4,213**	**1,464**	**5,677**
Luxembourg	**4,520**	**1,035**	**5,555**
Canada	**3,222**	**1,830**	**5,052**
France	**3,179**	**605**	**3,784**
December 31, 2019			
Germany	$ 20,968	$ 217	$ 21,185
United Kingdom	13,764	1,468	15,232
Japan	11,121	555	11,676
Luxembourg	3,399	668	4,067
Canada	2,955	783	3,738
Australia	3,100	597	3,697
France	2,813	240	3,053
Ireland	1,988	641	2,629
Switzerland	1,724	589	2,313

[1] Cross-border outstandings included countries in which we do business, and which amounted to at least 1% of our consolidated total assets as of the dates indicated.

As of June 30, 2020, aggregate cross-border outstandings in Ireland, Switzerland and the Netherlands amounted to between 0.75% and 1% of our consolidated assets, at approximately $2.76 billion, $2.63 billion and $2.26 billion, respectively. As of December 31, 2019, aggregate cross-border outstandings in the Netherlands amounted to between 0.75% and 1% of our consolidated assets, at approximately $1.89 billion.

Risk Management

In the normal course of our global business activities, we are exposed to a variety of risks, some inherent in the financial services industry, others more specific to our business activities. Our risk management framework focuses on material risks, which include the following:

- credit and counterparty risk;
- liquidity risk, funding and management;
- operational risk;
- information technology risk;
- market risk associated with our trading activities;
- market risk associated with our non-trading activities, which we refer to as asset-and-liability management, and which consists primarily of interest rate risk;
- model risk;
- strategic risk; and
- reputational, fiduciary and business conduct risk.

Many of these risks, as well as certain of the factors underlying each of these risks that could affect our businesses and our consolidated financial statements, are discussed in detail on pages 18 to 47 included under Item 1A, Risk Factors, in our 2019 Form 10-K.

For additional information about our risk management, including our risk appetite framework and risk governance committee structure, refer to pages 80 to 84 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management Framework", in our 2019 Form 10-K.

Credit Risk Management

We define credit risk as the risk of financial loss if a counterparty, borrower or obligor, collectively referred to as a counterparty, is either unable or unwilling to repay borrowings or settle a transaction in accordance with underlying contractual terms. We assume credit risk in our traditional non-trading lending activities, such as loans and contingent commitments, in our investment securities portfolio, where recourse to a counterparty exists, and in our direct and indirect trading activities, such as securities purchased under a resale agreement, principal securities lending and FX and indemnified agency securities lending. We also assume credit risk in our day-to-day treasury and securities and other settlement operations, in the form of deposit placements and other cash balances, with central banks or private sector institutions and fees receivables.

Allowance for Credit Losses

We maintain an allowance for credit losses to support our on-balance sheet credit exposures, including financial assets held at amortized cost and investment securities held-to-maturity. We also maintain an allowance for unfunded commitments and letters of credit to support our off-balance credit exposure. The two components together represent the allowance for credit losses. Review and evaluation of the adequacy of the allowance for credit losses is ongoing throughout the year, but occurs at least quarterly, and is based, among other factors, on our evaluation of the level of risk in the portfolio, and reasonable and supportable forecasts and their effect on our counterparties in our expectation of credit losses. We utilize multiple economic scenarios, consisting of a baseline, upside and downside scenario, to develop management's forecast of future expected losses.

The economic forecast utilized in the second quarter of 2020 reflects a significant shift in economic outlook, with the expectation of an economic contraction over several quarters due to the impact of COVID-19. We took steps in late March 2020 to incorporate the impact of the COVID-19 pandemic on the economic forecast utilized to determine our allowance for credit losses. Such outlook continues to evolve as new information becomes available and if the economic forecast worsens relative to the information utilized to determine our allowance for credit losses as of June 30, 2020, our allowance for credit losses will increase accordingly in future periods. The market and economic uncertainty has also increased the risks inherent in our activities as a credit provider to investment pools and other institutional investors. Additional information about the allowance for credit losses is provided in Note 4 to the consolidated financial statements in this Form 10-Q.

For additional information about our credit risk management framework, including our core policies and principles, structure and organization, credit ratings, risk parameter estimates, credit risk mitigation, credit limits, reporting, monitoring and controls, refer to pages 84 to 89 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management Framework", in our 2019 Form 10-K.

Liquidity Risk Management

Our liquidity framework contemplates areas of potential risk based on our activities, size and other appropriate risk-related factors. In managing liquidity risk we employ limits, maintain established metrics and early warning indicators and perform routine stress testing to identify potential liquidity needs. This process involves the evaluation of a combination of internal and external scenarios which assist us in measuring our liquidity position and in identifying potential increases in cash needs or decreases in available sources of cash, as well as the potential impairment of our ability to access the global capital markets.

We manage our liquidity on a global, consolidated basis. We also manage liquidity on a stand-alone basis at the Parent Company, as well as at certain branches and subsidiaries of State Street Bank. State Street Bank generally has access to markets and funding sources limited to banks, such as the federal funds market and the Federal Reserve's discount window. The Parent Company is managed to a more conservative liquidity profile, reflecting narrower market access. Additionally, the Parent Company typically holds, or has direct access to, primarily through SSIF, a direct subsidiary of the Parent Company, and the support agreement, as discussed in the "Uses of Liquidity" section of this Management's Discussion and Analysis, enough cash to meet its current debt maturities and cash needs, as well as those projected over the next one-year period. Reference our SPOE Strategy as discussed in the "Uses of Liquidity" section of this Management's Discussion and Analysis. Absent financial distress at the Parent Company, the liquid assets available at SSIF continue to be available to the Parent Company. As of June 30, 2020, the Parent Company and State Street Bank had approximately $3.21 billion of senior notes or subordinated debentures outstanding that will mature in the next twelve months.

As a systemically important financial institution, our liquidity risk management activities are subject to heightened and evolving regulatory requirements, including interpretations of those requirements, under specific U.S. and international regulations and also resulting from published and unpublished guidance, supervisory activities, such as stress tests, resolution planning, examinations and other regulatory interactions. Satisfaction of these requirements could, in some cases, result in changes in the composition of our investment portfolio, reduced NII or NIM, a reduction in the level of certain business activities or modifications to the way in which we deliver our products and services. If we fail to meet regulatory requirements to the satisfaction of our regulators, we could receive negative regulatory stress test results, incur a resolution plan deficiency or determination of a non-credible resolution plan or otherwise receive an adverse regulatory finding. Our efforts to satisfy, or our failure to satisfy, these regulatory requirements could materially adversely affect our business, financial condition or results of operations.

For additional information on our liquidity risk management, as well as liquidity risk metrics, refer to pages 89 to 93 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operation, in our 2019 Form 10-K. For additional information on our liquidity ratios, including LCR and the net stable funding ratio, refer to page 9 included under Item 1, Business, in our 2019 Form 10-K.

Asset Liquidity

Central to the management of our liquidity is asset liquidity, which consists primarily of unencumbered highly liquid securities, cash and cash equivalents reported in our consolidated statement of condition. We restrict the eligibility of securities to be characterized as asset liquidity to U.S. Government and federal agency securities (including MBS), securities of selected non-U.S. Governments and supranational organizations as well as certain other high-quality securities which generally are more liquid than other types of assets even in times of stress. As a banking organization, we are subject to a minimum LCR of 100% under the LCR rule approved by U.S. banking regulators. The LCR is intended to promote the short-term resilience of internationally active banking organizations, like us, 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. HQLA primarily consists of unencumbered cash and certain high quality liquid securities that qualify for inclusion under the LCR rule. We report LCR to the Federal Reserve daily. For the quarters ended June 30, 2020 and December 31, 2019, daily average LCR for the Parent Company was 109% and 110%, respectively. The average HQLA for the Parent Company under the LCR final rule was $141.69 billion and $100.23 billion, post-prescribed haircuts, for the quarters ended June 30, 2020 and December 31, 2019, respectively.

We maintained average cash balances in excess of regulatory requirements governing deposits with the Federal Reserve of approximately $84.44 billion at the Federal Reserve, the ECB and other non-U.S. central banks for the quarter ended June 30, 2020, compared to $41.56 billion for the quarter ended December 31, 2019. The higher levels of average cash balances with central banks reflect higher levels of client deposits.

Liquid securities carried in our asset liquidity include securities pledged without corresponding advances from the Federal Reserve Bank of Boston (FRBB), the FHLB and other non-U.S. central banks. State Street Bank is a member of the FHLB. This membership allows for advances of liquidity in varying terms against high-quality collateral, which helps facilitate asset-and-liability management. As of June 30, 2020 and December 31, 2019, we had no outstanding borrowings from the FHLB.

Access to primary, intra-day and contingent liquidity provided by these utilities is an important source of contingent liquidity with utilization subject to underlying conditions. As of June 30, 2020 and December 31, 2019, we had no outstanding primary credit borrowings from the FRBB discount window.

In addition to the securities included in our asset liquidity, we have significant amounts of other unencumbered investment securities. These securities are available sources of liquidity, although not as rapidly deployed as those included in our asset liquidity.

The average fair value of total unencumbered securities was $83.20 billion for the quarter ended June 30, 2020 compared to $76.94 billion for the quarter ended December 31, 2019.

Uses of Liquidity

Significant uses of our liquidity could result from the following: withdrawals of client deposits; draw-downs by our custody clients of lines of credit; advances to clients to settle securities transactions; or other permitted purposes. Such circumstances would generally arise under stress conditions including deterioration in credit ratings. A recurring significant use of our liquidity involves our deployment of HQLA from our investment portfolio to post collateral to financial institutions serving as sources of securities under our enhanced custody program.

We had unfunded commitments to extend credit with gross contractual amounts totaling $33.13 billion and $29.70 billion and standby letters of credit totaling $3.25 billion and $3.32 billion as of June 30, 2020 and December 31, 2019, respectively. These amounts do not reflect the value of any collateral. As of June 30, 2020, approximately 73% of our unfunded commitments to extend credit and 6% of our standby letters of credit expire within one year. Since many of our commitments are expected to expire or renew without being fully drawn upon, the gross contractual amounts do not necessarily represent our future cash requirements.

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 our 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. We have and will continue to focus management attention and resources to meet regulatory expectations with respect to resolution planning.

We submitted our updated 2019 165(d) resolution plan describing our preferred resolution strategy to the Federal Reserve and FDIC (the Agencies) before July 1, 2019, and our resolution strategy is materially consistent with our prior resolution strategy. In reviewing the 2019 plan, the Agencies noted meaningful improvements over prior plan submissions. The Agencies did not identify any deficiencies in the 2019 plan, but did identify one shortcoming related to the implementation of governance mechanisms. We submitted to the Agencies our plan to remediate this shortcoming in line with the expected timeframe. In addition to the above letter, the Federal Reserve and FDIC jointly issued a final rule that was published in the Federal Register on November 1, 2019. This final rule revised the implementation requirements under the Dodd Frank Act's resolution planning provisions by means of establishing a biennial filing cycle for the U.S. G-SIBs, including State Street. This cycle alternates between a targeted resolution plan, followed two years later by a full resolution plan. The Agencies have published the scope for the upcoming targeted resolution plan, to include the core elements of resolution planning and some specific firm level information, including impacts from the COVID-19 pandemic. The next resolution plan is due on July 1, 2021.

In the event of material financial distress or failure, our preferred resolution strategy is the SPOE Strategy. For additional information about the SPOE Strategy, refer to pages 12 to 14 included under Item 1, Business, in our 2019 Form 10-K. The SPOE Strategy provides that prior to the bankruptcy of the Parent Company and pursuant to a support agreement among the Parent Company, SSIF, our Beneficiary Entities (as defined below) and certain other of our entities, SSIF is obligated, up to its available resources, to recapitalize and/or provide liquidity to State Street Bank and our other entities benefiting from such capital and/or liquidity (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 our 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, debt investments, 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 retain certain amounts of cash needed to meet its upcoming obligations and to fund 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 us to continue to meet our 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, we are 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, we have 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 our financial condition occur. In the event that we experience material financial distress, the support agreement requires us 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; (3) SSIF would be required to provide capital and liquidity support to the Beneficiary Entities to support such entities' continued operation; 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 of our entities from a creditor's perspective or determining whether to enter into a contractual relationship with any of our entities, on any of our affiliates 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 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 2019 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 in accordance with applicable regulations and FDIC guidance, a plan for resolution in the event of its failure, referred to as an Insured Depository Institution (IDI) plan. On April 22, 2019, the Federal Register published the FDIC's advance notice of proposed rulemaking in which it invited comment on potential revisions to its IDI plan requirements. In addition to this advance notice of proposed rulemaking, on April 16, 2019, the FDIC Board voted to delay the next round of submissions under the IDI Rule until the rulemaking process has been completed. On May 20, 2020, the FDIC released a statement notifying of its plan to issue a proposal in the current year that may require the submission of a targeted IDI plan in 2021.

Funding

Deposits

We provide products and services including custody, accounting, administration, daily pricing, FX services, cash management, financial asset management, securities finance and investment advisory services. As a provider of these products and services, we generate client deposits, which have generally provided a stable, low-cost source of funds. As a global custodian, clients place deposits with our entities in various currencies. As of June 30, 2020, approximately 65% of our average total deposit balances were denominated in U.S. dollars, approximately 15% in EUR, 10% in GBP and 10% in all other currencies. As of December 31, 2019, approximately 60% of our average total deposit balances were denominated in U.S. dollars, approximately 20% in EUR, 10% in GBP and 10% in all other currencies.

Short-Term Funding

Our on-balance sheet liquid assets are also an integral component of our liquidity management strategy. These assets provide liquidity through maturities of the assets, but more importantly, they provide us with the ability to raise funds by pledging the securities as collateral for borrowings or through outright sales. In addition, our access to the global capital markets gives us the ability to source incremental funding from wholesale investors. As discussed earlier under "Asset Liquidity," State Street Bank's membership in the FHLB allows for advances of liquidity with varying terms against high-quality collateral.

Short-term secured funding also comes in the form of securities lent or sold under agreements to repurchase. These transactions are short-term in nature, generally overnight and are collateralized by high-quality investment securities. These balances were $3.51 billion and $1.10 billion as of June 30, 2020 and December 31, 2019, respectively.

State Street Bank currently maintains a line of credit with a financial institution of CAD $1.40 billion, or approximately $1.03 billion, as of June 30, 2020, to support its Canadian securities processing operations. The line of credit has no stated termination date and is cancelable by either party with prior notice. As of both June 30, 2020 and December 31, 2019, there was no balance outstanding on this line of credit.

Long-Term Funding

We have the ability to issue debt and equity securities under our current universal shelf registration statement to meet current commitments and business needs, including accommodating the transaction and cash management needs of our clients. In addition, State Street Bank also has current authorization from the Board to issue up to $5 billion in unsecured senior debt and an additional $500 million of subordinated debt.

Agency Credit Ratings

Our ability to maintain consistent access to liquidity is fostered by the maintenance of high investment grade ratings as measured by the major independent credit rating agencies. Factors essential to maintaining high credit ratings include:

- diverse and stable core earnings;
- relative market position;
- strong risk management;
- strong capital ratios;
- diverse liquidity sources, including the global capital markets and client deposits;
- strong liquidity monitoring procedures; and
- preparedness for current or future regulatory developments.

High ratings limit borrowing costs and enhance our liquidity by:

- providing assurance for unsecured funding and depositors;
- increasing the potential market for our debt and improving our ability to offer products;
- serving markets; and
- engaging in transactions in which clients value high credit ratings.

A downgrade or reduction of our credit ratings could have a material adverse effect on our liquidity by restricting our ability to access the capital markets, which could increase the related cost of funds. In turn, this could cause the sudden and large-scale withdrawal of unsecured deposits by our clients, which could lead to draw-downs of unfunded commitments to extend credit or trigger requirements under securities purchase commitments; or require additional collateral or force terminations of certain trading derivative contracts.

A majority of our derivative contracts have been entered into under bilateral agreements with counterparties who may require us to post collateral or terminate the transactions based on changes in our credit ratings. We assess the impact of these arrangements by determining the collateral that would be required assuming a downgrade by all rating agencies. The additional collateral or termination payments related to our net derivative liabilities under these arrangements that could have been called by counterparties in the event of a downgrade in our credit ratings below levels specified in the agreements is provided in Note 7 to the consolidated financial statements in this Form 10-Q. Other funding sources, such as secured financing transactions and other margin requirements, for which there are no explicit triggers, could also be adversely affected.

Operational Risk Management

Operational risk is the risk of loss resulting from inadequate or failed internal processes, human error and systems or from external events.

In light of the COVID-19 pandemic, we have instituted business continuity arrangements across our operating locations and we and a significant percentage of our key service providers are operating significantly or entirely in a work from home environment. Due to the related market disruption, we have also been processing a historically high volume of transactions on behalf of our clients. Both the operating environment and market dynamics increase operational risk and information technology risk, including cyber-threats. See also "Information Technology Risk Management" below.

For additional information about our operational risk framework, refer to pages 93 to 97 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management Framework", in our 2019 Form 10-K.

Information Technology Risk Management

We define information technology risk as the risk associated with the use, ownership, operation, involvement, influence and adoption of information technology. Information technology risk includes risks triggered by technology non-compliance with regulatory obligations, information security and privacy incidents, business disruption, technology internal control and process gaps, technology operational events and adoption of new business technologies.

For additional information about our information technology risk framework, refer to pages 97 to 98 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management", in our 2019 Form 10-K.

Market Risk Management

Market risk is defined by U.S. banking regulators as the risk of loss that could result from broad market movements, such as changes in the general level of interest rates, credit spreads, FX rates or commodity prices. We are exposed to market risk in both our trading and certain of our non-trading, or asset and liability management activities.

Information about the market risk associated with our trading activities is provided below under "Trading Activities." Information about the market risk associated with our non-trading activities, which consists primarily of interest rate risk, is provided below under "Asset and Liability Management Activities."

Trading Activities

In the conduct of our trading activities, we assume market risk, the level of which is a function of our overall risk appetite, business objectives and liquidity needs, our clients' requirements and market volatility, and our execution against those factors.

For additional information about the market risk associated with our trading activities, refer to pages 98 to 99 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K.

As part of our trading activities, we assume positions in the FX and interest-rate markets by buying and selling cash instruments and entering into derivative instruments, including FX forward contracts, FX and interest-rate options and interest rate swaps, interest rate forward contracts, and interest rate futures. As of June 30, 2020, the notional amount of these derivative contracts was $2.64 trillion, of which $2.62 trillion was composed of FX forward, swap and spot contracts. We seek to match positions closely with the objective of tightly controlling related currency and interest rate risk. All FX contracts are valued daily at current market rates.

Value-at-Risk and Stressed Value-at-Risk

We use a variety of risk measurement tools and methodologies, including VaR, which is an estimate of potential loss for a given period within a stated statistical confidence interval. We use a risk measurement methodology to measure trading related VaR daily. We have adopted standards for measuring trading related VaR, and we maintain regulatory capital for market risk associated with currently applicable bank regulatory market risk requirements. Our regulatory VaR-based measure is calculated based on historical volatilities of market risk factors during a two-year observation period calibrated to a one-tail, 99% confidence interval and a ten-business-day holding period.

We calculate a stressed VaR-based measure using the same model we use to calculate VaR, but with model inputs calibrated to historical data from a range of continuous twelve-month periods that reflect significant financial stress. The stressed VaR model identifies the second-worst outcome occurring in the worst continuous one-year rolling period since July 2007. This stressed VaR meets the regulatory requirement as the rolling ten-day period with an outcome that is worse than 99% of other outcomes during that twelve-month period of financial stress. For each portfolio, the stress period is determined algorithmically by seeking the one-year time horizon that produces the largest ten-business-day VaR from within the available historical data. This historical data set includes the financial crisis of 2008, the highly volatile period surrounding the Eurozone sovereign debt crisis and the Standard & Poor's downgrade of U.S. Treasury debt in August 2011. As the historical data set used to determine the stress period expands over time, future market stress events will be automatically incorporated.

For additional information about our VaR measurement tools and methodologies, refer to pages 100 to 103 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K.

Stress Testing

We have a corporate-wide stress testing program in place that incorporates an array of techniques to measure the potential loss we could suffer in a hypothetical scenario of adverse economic and financial conditions. We also monitor concentrations of risk such as concentration by branch, risk component, and currency pairs. We conduct stress testing on a daily basis based on selected historical stress events that are relevant to our positions in order to estimate the potential impact to our current portfolio should similar market conditions recur, and we also perform stress testing as part of the Federal Reserve's CCAR process. Stress testing is conducted, analyzed and reported at the corporate, trading desk, division and risk-factor level (for example, exchange risk, interest rate risk and volatility risk).

Stress testing results and limits are actively monitored on a daily basis by Enterprise Risk Management (ERM) and reported to the Trading and Markets Risk Committee (TMRC). Limit breaches are addressed by ERM risk managers in conjunction with the business units, escalated as appropriate, and reviewed by the TMRC if material. In addition, we have established several action triggers that prompt review by management and the implementation of a remediation plan.

Validation and Back-Testing

We perform frequent back-testing to assess the accuracy of our VaR-based model in estimating loss at the stated confidence level. This back-testing involves the comparison of estimated VaR model outputs to daily, actual P&L outcomes, observed from daily market movements. We back-test our VaR model using "clean" P&L, which excludes non-trading revenue such as fees, commissions and NII, as well as estimated revenue from intra-day trading.

Our VaR definition of trading losses excludes items that are not specific to the price movement of the trading assets and liabilities themselves, such as fees, commissions, changes to reserves and gains or losses from intra-day activity.

We had no back-testing exceptions in the quarter ended June 30, 2020. We had three back-testing exceptions in the quarter ended March 31, 2020, all of which occurred during the heightened market volatility witnessed in March 2020. We had one back-testing exception in the quarter ended June 30, 2019.

The following tables present VaR and stressed VaR associated with our trading activities for covered positions held during the quarters ended June 30, 2020, March 31, 2020 and June 30, 2019. A covered position is generally defined by U.S. banking regulators as an on-or off-balance sheet position associated with the organization's trading activities that is free of any restrictions on its tradability, but does not include intangible assets, certain credit derivatives recognized as guarantees and certain equity positions not publicly traded.

Diversification effect in the table below represents the difference between total VaR and the sum of the VaRs for each trading activity. This effect arises because the trading activities are not perfectly correlated.

TABLE 29: TEN-DAY VALUE-AT-RISK ASSOCIATED WITH TRADING ACTIVITIES FOR COVERED POSITIONS

	Three Months Ended											
	June 30, 2020			March 31, 2020			June 30, 2019			As of June 30, 2020	As of March 31, 2020	As of June 30, 2019
(In thousands)	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	VaR	VaR	VaR
Global Markets	**$ 10,072**	**$ 19,152**	**$ 5,618**	$ 9,533	$ 14,575	$ 5,220	$ 10,812	$ 19,594	$ 4,742	**$ 8,534**	$ 6,496	$ 10,278
Global Treasury	**3,856**	**8,043**	**423**	803	4,018	112	1,066	3,988	167	**4,040**	3,335	1,155
Diversification	**(2,673)**	**(5,294)**	**(307)**	(808)	(4,048)	(121)	(941)	(3,975)	1,360	**(2,293)**	(3,341)	(1,583)
Total VaR	**$ 11,255**	**$ 21,901**	**$ 5,734**	$ 9,528	$ 14,545	$ 5,211	$ 10,937	$ 19,607	$ 6,269	**$ 10,281**	$ 6,490	$ 9,850

TABLE 30: TEN-DAY STRESSED VALUE-AT-RISK ASSOCIATED WITH TRADING ACTIVITIES FOR COVERED POSITIONS

	Three Months Ended											
	June 30, 2020			March 31, 2020			June 30, 2019			As of June 30, 2020	As of March 31, 2020	As of June 30, 2019
(In thousands)	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Stressed VaR	Stressed VaR	Stressed VaR
Global Markets	**$ 29,533**	**$ 59,530**	**$ 17,545**	$ 39,994	$ 61,261	$ 23,402	$ 33,306	$ 50,947	$ 15,312	**$ 30,684**	$ 38,401	$ 47,670
Global Treasury	**8,987**	**16,010**	**1,713**	3,825	14,586	587	5,137	10,840	1,187	**9,755**	10,905	5,813
Diversification	**(7,766)**	**(12,256)**	**1,951**	(4,307)	(15,622)	(615)	(5,476)	(11,508)	(834)	**(12,779)**	(12,045)	(8,713)
Total VaR	**$ 30,754**	**$ 63,284**	**$ 21,209**	$ 39,512	$ 60,225	$ 23,374	$ 32,967	$ 50,279	$ 15,665	**$ 27,660**	$ 37,261	$ 44,770

The three month average of our stressed VaR-based measure was approximately $31 million for the quarter ended June 30, 2020 compared to an average of approximately $40 million for the quarter ended March 31, 2020 and $33 million for the quarter ended June 30, 2019. The decrease in the average stressed VaR compared to the quarters ended March 31, 2020 and June 30, 2019, is primarily attributed to lower foreign exchange and interest rate risk positions.

The VaR-based measures presented in the preceding tables are primarily a reflection of the overall level of market volatility and our appetite for taking market risk in our trading activities. Overall levels of volatility have been low, both on an absolute basis and relative to the historical information observed at the beginning of the period used for the calculations.

We may in the future modify and adjust our models and methodologies used to calculate VaR and stressed VaR, subject to regulatory review and approval, and these modifications and adjustments may result in changes in our VaR-based and stressed VaR-based measures. The following tables present the VaR and stressed-VaR associated with our trading activities attributable to FX risk, interest rate risk and volatility risk as of June 30, 2020, March 31, 2020 and June 30, 2019. Diversification effect in the table below represents the difference between total VaR and the sum of the VaRs for each risk category. This effect arises because the risk categories are not perfectly correlated.

TABLE 31: TEN-DAY VALUE-AT-RISK ASSOCIATED WITH TRADING ACTIVITIES BY RISK FACTOR FOR COVERED POSITIONS[1]

	As of June 30, 2020			As of March 31, 2020			As of June 30, 2019		
(In thousands)	**Foreign Exchange Risk**	**Interest Rate Risk**	**Volatility Risk**	**Foreign Exchange Risk**	**Interest Rate Risk**	**Volatility Risk**	**Foreign Exchange Risk**	**Interest Rate Risk**	**Volatility Risk**
By component:									
Global Markets	**$ 6,243**	**$ 8,706**	**$ 239**	$ 5,599	$ 7,017	$ 162	$ 3,506	$ 9,464	$ 436
Global Treasury	**16**	**4,244**	**—**	22	3,609	—	39	1,141	—
Diversification	**(15)**	**(2,249)**	**—**	(28)	(3,583)	—	(64)	(1,612)	—
Total VaR	**$ 6,244**	**$ 10,701**	**$ 239**	$ 5,593	$ 7,043	$ 162	$ 3,481	$ 8,993	$ 436

TABLE 32: TEN-DAY STRESSED VALUE-AT-RISK ASSOCIATED WITH TRADING ACTIVITIES BY RISK FACTOR FOR COVERED POSITIONS[1]

	As of June 30, 2020			As of March 31, 2020			As of June 30, 2019		
(In thousands)	**Foreign Exchange Risk**	**Interest Rate Risk**	**Volatility Risk**	**Foreign Exchange Risk**	**Interest Rate Risk**	**Volatility Risk**	**Foreign Exchange Risk**	**Interest Rate Risk**	**Volatility Risk**
By component:									
Global Markets	**$ 16,712**	**$ 32,549**	**$ 285**	$ 11,695	$ 51,732	$ 172	$ 7,291	$ 48,433	$ 819
Global Treasury	**34**	**9,484**	**—**	40	10,242	—	85	5,765	—
Diversification	**(56)**	**(9,946)**	**—**	(61)	(11,848)	—	(151)	(6,579)	—
Total VaR	**$ 16,690**	**$ 32,087**	**$ 285**	$ 11,674	$ 50,126	$ 172	$ 7,225	$ 47,619	$ 819

[1] For purposes of risk attribution by component, FX refers only to the risk from market movements in period-end rates. Forwards, futures, options and swaps with maturities greater than period-end have embedded interest rate risk that is captured by the measures used for interest rate risk. Accordingly, the interest rate risk embedded in these FX instruments is included in the interest rate risk component.

Asset and Liability Management Activities

The primary objective of asset and liability management is to provide sustainable NII under varying economic conditions, while protecting the economic value of the assets and liabilities carried on our consolidated statement of condition from the adverse effects of changes in interest rates. While many market factors affect the level of NII and the economic value of our assets and liabilities, one of the most significant factors is our exposure to movements in interest rates. Most of our NII is earned from the investment of client deposits generated by our businesses. We invest these client deposits in assets that conform generally to the characteristics of our balance sheet liabilities, including the currency composition of our significant non-U.S. dollar denominated client liabilities.

We quantify NII sensitivity using an earnings simulation model that includes our expectations for new business growth, changes in balance sheet mix and investment portfolio positioning. This measure compares our baseline view of NII over a twelve-month horizon, based on our internal forecast of interest rates, to a wide range of rate shocks. Table 33, Key Interest Rates for Baseline Forecasts, presents the spot and 12-month forward rates used in our baseline forecasts at June 30, 2020 and June 30, 2019. Our June 30, 2020 baseline forecast assumes no changes by the Federal Reserve over the next 12 months.

TABLE 33: KEY INTEREST RATES FOR BASELINE FORECASTS

	June 30, 2020		June 30, 2019	
	Fed Funds Target	**10-Year Treasury**	**Fed Funds Target**	**10-Year Treasury**
Spot rates	**0.25%**	**0.66%**	2.50%	2.01%
12-month forward rates	**0.25**	**0.92**	1.75	2.18

In Table 34: Net Interest Income Sensitivity, we report the expected change in NII over the next twelve months from instantaneous shocks to various tenors on the yield curve, including the impacts from U.S. and non-U.S. rates. Each scenario assumes no management action is taken to mitigate the adverse effects of interest rate changes on our financial performance. While investment securities balances can fluctuate with the level of rates as prepayment assumptions change, our modeling approach in the past has been to keep our balance sheet consistent with our baseline outlook in both higher and lower rate scenarios. However, for the June 30, 2020 reporting period, and consistent with our approach for the first quarter of 2020, we reevaluated this approach for our +100 bps shock scenario in light of the current rate environment. Under this scenario, which assumes that the Federal Reserve increases its target range by 1.00% to 1.25% along with increases by other central banks, client deposits are modeled to return to average balance levels experienced in the fourth quarter of 2019 with a corresponding reduction in cash and cash equivalents held with central banks. For the -100 bps shock scenario at June 30, 2020, we continue to hold the balance sheet consistent with our baseline outlook, including client deposits, given the amount of fiscal stimulus and monetary policy easing already implied in the baseline scenario. Another factor was that the current -100 bps scenario is impacted by assumed floors as interest rates reach zero for certain currencies including U.S. dollar scenario.

TABLE 34: NET INTEREST INCOME SENSITIVITY

	June 30, 2020			June 30, 2019		
(In millions)	**U.S. Dollar**	**All Other Currencies**	**Total**	**U.S. Dollar**	**All Other Currencies**	**Total**
Rate change:	**Benefit (Exposure)**			**Benefit (Exposure)**		
Parallel shifts:						
+100 bps shock	**$ 314**	**$ 149**	**$ 463**	$ 146	$ 224	$ 370
–100 bps shock	**(107)**	**129**	**22**	(244)	41	(203)
Steeper yield curve:						
+100 bps shift in long-end rates	**194**	**4**	**198**	164	17	181
-100 bps shift in short-end rates	**30**	**130**	**160**	(49)	54	5
Flatter yield curve:						
+100 bps shift in short-end rates	**133**	**145**	**278**	(6)	207	201
-100 bps shift in long-end rates	**(148)**	**(2)**	**(150)**	(180)	(15)	(195)

As of June 30, 2020, NII is expected to benefit from both parallel increases and decreases in interest rates. Compared to June 30, 2019, our NII is more sensitive to parallel rate increases primarily driven by lower deposit beta assumptions given the current interest rate environment. Our positioning to parallel rate decreases has shifted to benefit NII driven by changes to the composition of our deposit base as well as impacts by assumed floors as interest rates in several currencies approach zero, which prevents the full extent of the rate shock to be realized.

U.S. dollar NII as of June 30, 2020 remains positioned to benefit from a parallel rise in interest rates and to decline under a parallel decrease in interest rates. Compared to June 30, 2019, our U.S. dollar NII benefit to higher rates has increased due to lower deposit betas and lower prepayments in the investment portfolio. Compared to June 30, 2019, our U.S. dollar NII sensitivity to lower rates has improved driven by changes to the composition of U.S. deposits and cash flow hedging activity which impacts our short-end sensitivities. Our U.S. declining rate scenarios are also impacted by assumed floors as U.S. interest rates approach zero.

NII is still positioned to benefit from changes in non-U.S. interest rates with the majority of our sensitivity derived from the short-end of the curve given deposit pricing expectations. Compared to June 30, 2019, our non-U.S. benefit to higher rates has decreased while the benefit to lower rates has increased. The decreased benefit to higher rates is driven by EMEA deposit pricing actions in addition to the treatment of excess reserves by the European Central Bank and Swiss National Bank. The increased benefit to lower rates is impacted by the aforementioned deposit pricing and excess reserve changes.

EVE sensitivity is a discounted cash flow model designed to estimate the fair value of assets and liabilities under a series of interest rate shocks over a long-term horizon. In the following table, we report our EVE sensitivity to 200 bps instantaneous rate shocks, relative to spot interest rates. Management compares the change in EVE sensitivity against our aggregate tier 1 and tier 2 risk-based capital, calculated in conformity with current applicable regulatory requirements. EVE sensitivity is dependent on the timing of interest and principal cash flows. Also, the measure only evaluates the spot balance sheet and does not include the impact of new business assumptions.

TABLE 35: ECONOMIC VALUE OF EQUITY SENSITIVITY

	As of June 30,	
(In millions)	**2020**	**2019**
Rate change:	**Benefit (Exposure)**	
+200 bps shock	**$ (1,004)**	$ (1,416)
–200 bps shock	**960**	429

As of June 30, 2020, EVE sensitivity remains exposed to upward shifts in interest rates. Compared to June 30, 2019, the change in the up 200 bps instantaneous shock scenario was primarily driven by the benefit from increased liability duration from deposit modeling updates and long-term debt issuances. The down 200 bps instantaneous shock results are impacted by assumed floors as interest rates in several currencies approach zero, which prevents the full extent of the rate shock to be realized.

Both NII sensitivity and EVE sensitivity are routinely monitored as market conditions change. For additional information about our Asset and Liability Management Activities, refer to pages 103 to 105 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management", in our 2019 Form 10-K.

Model Risk Management

The use of models is widespread throughout the financial services industry, with large and complex organizations relying on sophisticated models to support numerous aspects of their financial decision making. The models contemporaneously represent both a significant advancement in financial management and a source of risk. In large banking organizations like us, model results influence business decisions, and model failure could have a harmful effect on our financial performance. As a result, the Model Risk Management Framework seeks to mitigate our model risk.

For additional information about our model risk management framework, including our governance and model validation, refer to pages 105 to 106 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management Framework", in our 2019 Form 10-K.

Strategic Risk Management

We define strategic risk as the current or prospective impact on earnings or capital arising from adverse business decisions, improper implementation of strategic initiatives, or lack of responsiveness to industry-wide changes. Strategic risks are influenced by changes in the competitive environment; decline in market performance or changes in our business activities; and the potential secondary impacts of reputational risks, not already captured as market, interest rate, credit, operational, model or liquidity risks. We incorporate strategic risk into our assessment of our business plans and risk and capital management processes. Active management of strategic risk is an integral component of all aspects of our business.

For additional information about our strategic risk management framework, refer to page 106 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management Framework", in our 2019 Form 10-K.

Capital

Managing our capital involves evaluating whether our actual and projected levels of capital are commensurate with our risk profile, are in compliance with all applicable regulatory requirements and are sufficient to provide us with the financial flexibility to undertake future strategic business initiatives. We assess capital adequacy based on relevant regulatory capital requirements, as well as our own internal capital goals, targets and other relevant metrics.

Our designation as a G-SIB is based on a number of factors, as evaluated by banking regulators, and requires us to maintain an additional capital surcharge above the minimum capital ratios set forth in the Basel III rule. Further, like all other U.S. G-SIBs, we are also currently subject to a 2.0% leverage buffer under the Basel III rule. If we fail to exceed any regulatory buffer or surcharge, we 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 capital, liquidity and other regulatory requirements.

For additional information about our capital, refer to pages 106 to 113 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K.

Regulatory Capital

We and State Street Bank, as advanced approaches banking organizations, are subject to the U.S. Basel III framework. Provisions of the Basel III rule became effective with full implementation on January 1, 2019. We are also subject to the final market risk capital rule issued by U.S. banking regulators effective as of January 2013.

The minimum capital ratios as of January 1, 2020, including a capital conservation buffer of 2.5% and a G-SIB surcharge of 1.0%, are 8.0% for CET1 capital, 9.5% for tier 1 risk-based capital and 11.5% for total risk-based capital. Based on a calculation date of December 31, 2018, our G-SIB surcharge for 2020 was reduced to 1.0%. Based on a calculation date of December 31, 2019, our G-SIB surcharge for 2021 will be 1.0%.

On June 25, 2020, we were notified by the Federal Reserve of the results from this year's DFAST stress test, including our preliminary SCB of 2.5%, implying no change to our regulatory capital requirements at this time. The Federal Reserve will provide each participating CCAR bank with its final SCB by August 31, 2020. Additionally, included in this notification and in light of the considerable economic uncertainty created by the COVID-19 pandemic, all participating CCAR banks will be required to resubmit their capital plans within 45 days of the Federal Reserve providing updated scenarios.

In line with the decision to administer a new stress test, the Federal Reserve is limiting the ability of all CCAR banking organizations to make capital distributions in the third quarter of 2020, although banking organizations are permitted to pay common stock dividends at previous levels. As a result, CCAR banking organizations, including us, will not be permitted to return capital to shareholders in the form of common share repurchases during the third quarter of 2020, unless otherwise approved by the Federal Reserve. As of now, our capital distributions in the fourth quarter of 2020 and beyond will be governed by our minimum capital requirements inclusive of the SCB. It is unclear at this time when the results of the new stress test will be made available, or whether the results will impact our calculated SCB and distributions beyond the third quarter of 2020.

To maintain the status of the Parent Company as a financial holding company, we and our insured depository institution subsidiaries are required, among other requirements, to be "well capitalized" as defined by Regulation Y and Regulation H, respectively.

The Basel III rule provides for two frameworks for monitoring capital adequacy: the "standardized approach" and the "advanced approaches", applicable to advanced approaches banking organizations, like us. The standardized approach prescribes standardized calculations for credit risk RWA, including specified risk weights for certain on- and off-balance sheet exposures. The advanced approaches consist of the Advanced Internal Ratings-Based Approach used for the calculation of RWA related to credit risk, and the Advanced Measurement Approach used for the calculation of RWA related to operational risk.

The following table presents the regulatory capital structure, total RWA, related regulatory capital ratios and the minimum required regulatory capital ratios for us and State Street Bank, calculated under the advanced approaches and standardized approach provisions of the Basel III final rule as of the dates indicated. We are subject to the more stringent of the risk-based capital ratios calculated under the standardized approach and those calculated under the advanced approaches in the assessment of our capital adequacy under applicable bank regulatory standards.

TABLE 36: REGULATORY CAPITAL STRUCTURE AND RELATED REGULATORY CAPITAL RATIOS

	State Street Corporation				State Street Bank			
(Dollars in millions)	Basel III Advanced Approaches June 30, 2020	Basel III Standardized Approach June 30, 2020	Basel III Advanced Approaches December 31, 2019	Basel III Standardized Approach December 31, 2019	Basel III Advanced Approaches June 30, 2020	Basel III Standardized Approach June 30, 2020	Basel III Advanced Approaches December 31, 2019	Basel III Standardized Approach December 31, 2019
Common shareholders' equity:								
Common stock and related surplus	**$ 10,683**	**$ 10,683**	$ 10,636	$ 10,636	**$ 12,893**	**$ 12,893**	$ 12,893	$ 12,893
Retained earnings	**22,794**	**22,794**	21,918	21,918	**13,103**	**13,103**	13,218	13,218
Accumulated other comprehensive income (loss)	**(430)**	**(430)**	(870)	(870)	**(174)**	**(174)**	(654)	(654)
Treasury stock, at cost	**(10,645)**	**(10,645)**	(10,209)	(10,209)	**—**	**—**	—	—
Total	**22,402**	**22,402**	21,475	21,475	**25,822**	**25,822**	25,457	25,457
Regulatory capital adjustments:								
Goodwill and other intangible assets, net of associated deferred tax liabilities	**(8,973)**	**(8,973)**	(9,112)	(9,112)	**(8,705)**	**(8,705)**	(8,839)	(8,839)
Other adjustments[1]	**(261)**	**(261)**	(150)	(150)	**(119)**	**(119)**	(1)	(1)
Common equity tier 1 capital	**13,168**	**13,168**	12,213	12,213	**16,998**	**16,998**	16,617	16,617
Preferred stock	**2,471**	**2,471**	2,962	2,962	**—**	**—**	—	—
Tier 1 capital	**15,639**	**15,639**	15,175	15,175	**16,998**	**16,998**	16,617	16,617
Qualifying subordinated long-term debt	**964**	**964**	1,095	1,095	**969**	**969**	1,099	1,099
Allowance for credit losses	**47**	**163**	5	90	**55**	**163**	3	90
Total capital	**$ 16,650**	**$ 16,766**	$ 16,275	$ 16,360	**$ 18,022**	**$ 18,130**	$ 17,719	$ 17,806
Risk-weighted assets:								
Credit risk[2]	**$ 57,975**	**$ 105,276**	$ 54,763	$ 102,367	**$ 54,016**	**$ 101,462**	$ 51,610	$ 98,979
Operational risk[3]	**44,225**	**NA**	47,963	NA	**43,738**	**NA**	44,138	NA
Market risk	**1,563**	**1,563**	1,638	1,638	**1,563**	**1,563**	1,638	1,638
Total risk-weighted assets	**$ 103,763**	**$ 106,839**	$ 104,364	$ 104,005	**$ 99,317**	**$ 103,025**	$ 97,386	$ 100,617
Adjusted quarterly average assets	**$ 256,418**	**$ 256,418**	$ 219,624	$ 219,624	**$ 252,725**	**$ 252,725**	$ 216,397	$ 216,397

Capital Ratios:	2020 Minimum Requirements Including Capital Conservation Buffer and G-SIB Surcharge	2019 Minimum Requirements Including Capital Conservation Buffer and G-SIB Surcharge								
Common equity tier 1 capital	**8.0%**	8.5%	**12.7%**	**12.3%**	11.7%	11.7%	**17.1%**	**16.5%**	17.1%	16.5%
Tier 1 capital	**9.5**	10.0	**15.1**	**14.6**	14.5	14.6	**17.1**	**16.5**	17.1	16.5
Total capital	**11.5**	12.0	**16.0**	**15.7**	15.6	15.7	**18.1**	**17.6**	18.2	17.7

[1] Other adjustments within CET1 capital primarily include the overfunded portion of our defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, and other required credit risk based deductions.

[2] Includes a CVA which reflects the risk of potential fair value adjustments for credit risk reflected in our valuation of over-the-counter (OTC) derivative contracts. We used a simple CVA approach in conformity with the Basel III advanced approaches.

[3] Under the current advanced approaches rules and regulatory guidance concerning operational risk models, RWA attributable to operational risk can vary substantially from period-to-period, without direct correlation to the effects of a particular loss event on our results of operations and financial condition and impacting dates and periods that may differ from the dates and periods as of and during which the loss event is reflected in our financial statements, with the timing and categorization dependent on the processes for model updates and, if applicable, model revalidation and regulatory review and related supervisory processes. An individual loss event can have a significant effect on the output of our operational RWA under the advanced approaches depending on the severity of the loss event and its categorization among the seven Basel-defined UOMs.

NA Not applicable

Our CET1 capital increased $0.96 billion as of June 30, 2020 compared to December 31, 2019, primarily driven by higher net income. As a result of the COVID-19 pandemic, we, along with all other U.S. G-SIBs, did not distribute capital in the form of share repurchases in the second quarter of 2020. We also maintained our per share common dividend at $0.52 per share. We are suspending the repurchase of our common stock in the third quarter of 2020. Additionally, our continued capital optimization efforts resulted in lower preferred stock dividends in the second quarter of 2020 compared to the same period in 2019.

Our tier 1 capital increased $0.46 billion as of June 30, 2020 compared to December 31, 2019, due to the aforementioned increase in our CET1 capital, which was partially offset by the redemption of all outstanding Series C non-cumulative perpetual preferred stock as of March 15, 2020 at redemption price of $0.50 billion. Total capital increased under the advanced approaches and standardized approach by $0.38 billion and $0.41 billion, respectively, primarily due to the changes in our tier 1 and tier 2 capital. As described above, no share repurchases were executed in the second quarter of 2020.

The table below presents a roll-forward of CET1 capital, tier 1 capital and total capital for the six months ended June 30, 2020 and for the year ended December 31, 2019.

TABLE 37: CAPITAL ROLL-FORWARD

(In millions)	Basel III Advanced Approaches June 30, 2020	Basel III Standardized Approach June 30, 2020	Basel III Advanced Approaches December 31, 2019	Basel III Standardized Approach December 31, 2019
Common equity tier 1 capital:				
Common equity tier 1 capital balance, beginning of period	**$ 12,213**	**$ 12,213**	$ 11,580	$ 11,580
Net income	**1,328**	**1,328**	2,242	2,242
Changes in treasury stock, at cost	**(436)**	**(436)**	(1,494)	(1,494)
Dividends declared	**(443)**	**(443)**	(939)	(939)
Goodwill and other intangible assets, net of associated deferred tax liabilities	**139**	**139**	238	238
Effect of certain items in accumulated other comprehensive income (loss)	**440**	**440**	462	462
Other adjustments	**(73)**	**(73)**	124	124
Changes in common equity tier 1 capital	**955**	**955**	633	633
Common equity tier 1 capital balance, end of period	**13,168**	**13,168**	12,213	12,213
Additional tier 1 capital:				
Tier 1 capital balance, beginning of period	**15,175**	**15,175**	15,270	15,270
Change in common equity tier 1 capital	**955**	**955**	633	633
Net issuance (redemption) of preferred stock	**(491)**	**(491)**	(728)	(728)
Other adjustments	**—**	**—**	—	—
Changes in tier 1 capital	**464**	**464**	(95)	(95)
Tier 1 capital balance, end of period	**15,639**	**15,639**	15,175	15,175
Tier 2 capital:				
Tier 2 capital balance, beginning of period	**1,100**	**1,185**	792	861
Net issuance and changes in long-term debt qualifying as tier 2	**(131)**	**(131)**	317	317
Changes in allowance for credit losses[1]	**42**	**73**	(9)	7
Change in other adjustments	**—**	**—**	—	—
Changes in tier 2 capital	**(89)**	**(58)**	308	324
Tier 2 capital balance, end of period	**1,011**	**1,127**	1,100	1,185
Total capital:				
Total capital balance, beginning of period	**16,275**	**16,360**	16,062	16,131
Changes in tier 1 capital	**464**	**464**	(95)	(95)
Changes in tier 2 capital	**(89)**	**(58)**	308	324
Total capital balance, end of period	**$ 16,650**	**$ 16,766**	$ 16,275	$ 16,360

[1] We adopted ASU 2016-13, Financial Instruments - Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments, on January 1, 2020. Please refer to Note 1 to the consolidated financial statements in this Form 10-Q for additional information.

The following table presents a roll-forward of the Basel III advanced and standardized approaches RWA for the six months ended June 30, 2020 and for the year ended December 31, 2019.

TABLE 38: ADVANCED & STANDARDIZED APPROACHES RISK-WEIGHTED ASSETS ROLL-FORWARD

(In millions)	Basel III Advanced Approaches June 30, 2020	Basel III Advanced Approaches December 31, 2019	Basel III Standardized Approach June 30, 2020	Basel III Standardized Approach December 31, 2019
Total risk-weighted assets, beginning of period[1]	**$ 104,364**	$ 95,315	**$ 104,005**	$ 98,820
Changes in credit risk-weighted assets:				
Net increase (decrease) in investment securities-wholesale	**53**	3,470	**(134)**	3,882
Net increase (decrease) in loans	**1,992**	2,586	**2,377**	809
Net increase (decrease) in securitization exposures	**(156)**	(140)	**(156)**	(140)
Net increase (decrease) in repo-style transaction exposures	**670**	(45)	**(1,007)**	365
Net increase (decrease) in Over-the-counter derivatives exposures	**(408)**	26	**(45)**	(1,124)
Net increase (decrease) in all other[2][3]	**1,061**	1,128	**1,874**	1,272
Net increase (decrease) in credit risk-weighted assets	**3,212**	7,025	**2,909**	5,064
Net increase (decrease) in market risk-weighted assets	**(75)**	121	**(75)**	121
Net increase (decrease) in operational risk-weighted assets	**(3,738)**	1,903	**N/A**	N/A
Total risk-weighted assets, end of period	**$ 103,763**	$ 104,364	**$ 106,839**	$ 104,005

[1] Standardized approach RWA as of the periods noted above were calculated using our estimates, based on our then current interpretation of the Basel III rule.
[2] Includes assets not in a definable category, cleared transactions, non-material portfolio, other wholesale, cash and due from, and interest-bearing deposits with banks, equity exposures and 6% credit risk supervisory charge.
[3] Includes assets not in a definable category, cleared transactions, other wholesale, cash and due from, and interest-bearing deposits with banks and equity exposures.

As of June 30, 2020, total advanced approaches RWA decreased $0.60 billion compared to December 31, 2019, mainly due to a decrease in operational risk RWA, partially offset by an increase in credit risk RWA. The decrease in operational risk RWA was driven by a decline in the frequency of conduct and compliance loss events. The increase in credit risk RWA was primarily due to an increase in loans, all other, and repo-style transactions RWA, partially offset by a decrease in OTC derivatives RWA.

As of June 30, 2020, total standardized approach RWA increased $2.83 billion compared to December 31, 2019, mainly due to an increase in credit risk RWA. The increase in credit risk RWA was primarily due to an increase in loans and all other RWA, partially offset by a decrease in repo-style transactions RWA.

The regulatory capital ratios as of June 30, 2020, presented in Table 36: Regulatory Capital Structure and Related Regulatory Capital Ratios, are calculated under the standardized approach and advanced approaches in conformity with the Basel III rule. The advanced approaches-based ratios reflect calculations and determinations with respect to our capital and related matters as of June 30, 2020, based on our and external data, quantitative formulae, statistical models, historical correlations and assumptions, collectively referred to as "advanced systems," in effect and used by us for those purposes as of the time we first reported such ratios in a quarterly report on Form 10-Q or an annual report on Form 10-K. Significant components of these advanced systems involve the exercise of judgment by us and our regulators, and 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.

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 RWA 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 unit of measure (UOM), 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 these advanced systems, whether resulting from changes in data inputs, regulation or regulatory supervision or interpretation, specific to us or market activities or experiences or other updates or factors, we expect that our advanced systems and our capital ratios calculated in conformity with the Basel III 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. The full effects of the Basel III rule on us and State Street Bank are therefore subject to further evaluation and also to further regulatory guidance, action or rule-making.

Tier 1 and Supplementary Leverage Ratios

The SLR rule requires that, as of January 1, 2018, (i) State Street Bank maintains an SLR of at least 6.0% to be well capitalized under the U.S. banking regulators' Prompt Corrective Action Framework and (ii) we maintain an SLR of at least 5.0% to avoid limitations on capital distributions and discretionary bonus payments. In addition to the SLR, State Street Bank is subject to a well capitalized tier 1 leverage ratio requirement of 5.0%.

Effective April 1, 2020, the Federal Reserve and the other U.S. federal banking agencies adopted a final rule as part of the EGRRCPA that establishes a deduction for qualifying central bank deposits from a custodial banking organization's total leverage exposure equal to the lesser of (i) the total amount of funds the custodial banking organization and its consolidated subsidiaries have on deposit at qualifying central banks and (ii) the total amount of client funds on deposit at the custodial banking organization that are linked to fiduciary or custodial and safekeeping accounts. For the quarter ended June 30, 2020, we have excluded $84.5 billion of average balances held on deposit at central banks from the denominator used in the calculation of our SLR, based on this custodial banking deduction.

TABLE 39: TIER 1 AND SUPPLEMENTARY LEVERAGE RATIOS

(Dollars in millions)	June 30, 2020	December 31, 2019
State Street Corporation:		
Tier 1 capital	**$ 15,639**	$ 15,175
Average assets	**280,242**	228,886
Less: adjustments for deductions from tier 1 capital	**(23,824)**	(9,262)
Adjusted average assets	**256,418**	219,624
Off-balance sheet exposures[1]	**(67,386)**	28,238
Total assets for SLR	**$ 189,032**	$ 247,862
Tier 1 leverage ratio[2]	**6.1%**	6.9%
Supplementary leverage ratio	**8.3**	6.1
State Street Bank:		
Tier 1 capital	**$ 16,998**	$ 16,617
Average assets	**284,688**	225,234
Less: adjustments for deductions from tier 1 capital	**(31,963)**	(8,837)
Adjusted average assets	**252,725**	216,397
Off-balance sheet exposures[1]	**(53,205)**	28,266
Total assets for SLR	**$ 199,520**	$ 244,663
Tier 1 leverage ratio[2]	**6.7%**	7.7%
Supplementary leverage ratio	**8.5**	6.8

[1] Includes regulatory relief granted under EGRRCPA and the interim final rule.

[2] Tier 1 leverage ratios were calculated in conformity with the Basel III rule.

Total Loss-Absorbing Capacity

In 2016, the Federal Reserve released its final rule on TLAC, LTD and clean holding company requirements for U.S. domiciled G-SIBs, such as us, that is intended to improve the resiliency and resolvability of certain U.S. banking organizations through enhanced prudential standards. Among other things, the TLAC final rule requires us to comply with minimum requirements for external TLAC and external LTD effective January 1, 2019. Specifically, we must hold (1) combined eligible tier 1 regulatory capital and LTD in the amount equal to the greater of 21.5% of total RWA (18.0% minimum plus a 2.5% capital conservation buffer plus a G-SIB surcharge calculated for these purposes under Method 1 of 1.0%) and 9.5% of total leverage exposure (7.5% minimum plus the SLR buffer of 2.0%), as defined by the SLR final rule; and (2) qualifying external LTD equal to the greater of 7.0% of RWA (6.0% minimum plus a G-SIB surcharge calculated for these purposes under method 2 of 1.0%) and 4.5% of total leverage exposure, as defined by the SLR final rule. As of April 1, 2020, the TLAC and LTD requirements calibrated to SLR reflect the deduction of certain central bank balances as prescribed by the regulatory relief implemented under the EGRRCPA.

The following table presents our external LTD and external TLAC as of June 30, 2020.

TABLE 40: TOTAL LOSS-ABSORBING CAPACITY

	As of June 30, 2020			
(Dollars in millions)	Actual		Requirement	
Total loss-absorbing capacity (eligible Tier 1 regulatory capacity and long term debt):				
Risk-weighted assets	**27,894**	**26.1**	**$ 22,970**	**21.5**
Supplementary leverage exposure	**27,894**	**14.8**	**17,958**	**9.5**
Long term debt:				
Risk-weighted assets	**12,255**	**11.5**	**7,479**	**7.0**
Supplementary leverage exposure	**12,255**	**6.5**	**$ 8,506**	**4.5**

Regulatory Developments

In April 2018, the Federal Reserve issued a proposed rule which would replace the current 2.0% supplementary leverage ratio buffer for G-SIBs, with a buffer equal to 50% of their G-SIB surcharge, which is currently 1.0% for us. This proposal would also make conforming modifications to our TLAC and eligible LTD requirements applicable to G-SIBs. At this point in time, it is unclear whether this proposal will be implemented as proposed.

In November 2019, the Federal Reserve and other U.S. federal banking agencies issued a final rule to implement the Standardized Approach for counterparty credit risk as a replacement of the Current Exposure Method for calculating exposure-at-default of derivatives exposures. Mandatory compliance with the final rule is required by January 1, 2022.

On March 4, 2020, the Agencies issued the SCB final rule that will replace, under the Standardized Approach, the current capital conservation buffer (2.5%) with a SCB calculated as the difference between the institution's starting and lowest projected CET1 ratio under the CCAR severely adverse scenario plus planned common stock dividend payments (as a percentage of RWA) from the fourth through seventh quarter of the CCAR planning horizon. The SCB requirement can be no less than 2.5% of RWA. Effective October 1, 2020, State Street will be subject to the SCB requirement, which will replace the capital conservation buffer. Our calculated SCB under this year's supervisory stress test was well below the 2.5% minimum, preliminarily resulting in an SCB at that floor.

Following the launch of the MMLF program, the Federal Reserve issued a rule on March 19, 2020, allowing Bank Holding Companies (BHCs) to exclude assets purchased with the MMLF program from their RWA, total leverage exposure and average total consolidated assets.

On March 27, 2020, the Basel Committee on Banking Supervision (BCBS) announced the deferral of the implementation of the revisions to the Basel III framework to January 1, 2023. As of now, the U.S. Agencies have not formally proposed the implementation of the BCBS revisions.

On March 20, 2020, the Federal Reserve and other U.S. federal banking agencies issued an interim final rule that revised the definition of eligible retained income for all U.S. banking organizations. The revised definition of eligible retained income makes any automatic limitations on capital distributions that could apply under the federal banking agencies' capital or TLAC rules take effect on a more gradual basis in the event that a banking organization's capital, leverage, or TLAC ratios were to decline below regulatory requirements (including buffers).

In addition to the regulatory relief granted to custodial banks under the EGRRCPA, an SLR interim final rule released on April 1, 2020 allows all BHCs to deduct their deposits at Federal Reserve Banks and their investments in U.S. Treasuries from their total leverage exposure on a temporary basis, from the second quarter of 2020 through the first quarter of 2021. The temporary deduction of State Street's investment in U.S. Treasuries is incremental to the enduring central bank placement deduction granted to custodian banks under EGRRCPA. For the quarter ended June 30, 2020, State Street was permitted to deduct $14.2 billion invested in U.S. Treasuries from its total leverage exposure. On May 15, 2020, the U.S. Agencies released an interim final rule that permits insured depository institutions of BHCs also to temporarily exclude deposits at Federal Reserve Banks and investments in U.S. Treasuries from their total leverage exposure. State Street Bank has elected not to apply such exclusions as of June 30, 2020.

On June 25, 2020, we were notified by the Federal Reserve of the results from this year's DFAST stress test, including our preliminary SCB of 2.5%, implying no change to our regulatory capital requirements at this time. The Federal Reserve will provide each participating CCAR bank with its final SCB by August 31, 2020. Additionally, included in this notification and in light of the considerable economic uncertainty created by the COVID-19 pandemic, all participating CCAR banks will be required to resubmit their capital plans within 45 days of the Federal Reserve providing updated scenarios.

In line with the decision to administer a new stress test, the Federal Reserve is limiting the ability of all CCAR banking organizations to make capital distributions in the third quarter of 2020, although banking organizations are permitted to pay common stock dividends at previous levels. As a result, CCAR banking organizations, including us, will not be permitted to return capital to shareholders in the form of common share repurchases during the third quarter of 2020, unless otherwise approved by the Federal Reserve. As of now, our capital distributions in the fourth quarter of 2020 and beyond will be governed by our minimum capital requirements inclusive of the SCB. It is unclear at this time when the results of the new stress test will be made available, or whether the results will impact our calculated SCB and distributions beyond the third quarter of 2020.

For additional information about our capital, refer to pages 106-113 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K.

Capital Actions

Preferred Stock

The following table summarizes selected terms of each of the series of the preferred stock issued and outstanding as of June 30, 2020:

TABLE 41: PREFERRED STOCK ISSUED AND OUTSTANDING

Preferred Stock[2]:	Issuance Date	Depositary Shares Issued	Amount outstanding (in millions)	Ownership Interest Per Depositary Share	Liquidation Preference Per Share	Liquidation Preference Per Depositary Share	Per Annum Dividend Rate	Dividend Payment Frequency	Carrying Value as of June 30, 2020 (In millions)	Redemption Date[1]
Series D	February 2014	30,000,000	$ 750	1/4,000th	$ 100,000	$ 25	5.90% to but excluding March 15, 2024, then a floating rate equal to the three-month LIBOR plus 3.108%	Quarterly: March, June, September and December	$ 742	March 15, 2024
Series F	May 2015	750,000	750	1/100th	100,000	1,000	5.25% to but excluding September 15, 2020, then a floating rate equal to the three-month LIBOR plus 3.597%	Semi-annually: March and September	742	September 15, 2020
Series G	April 2016	20,000,000	500	1/4,000th	100,000	25	5.35% to but excluding March 15, 2026, then a floating rate equal to the three-month LIBOR plus 3.709%	Quarterly: March, June, September and December	493	March 15, 2026
Series H	September 2018	500,000	500	1/100th	100,000	1,000	5.625% to but excluding December 15, 2023, then a floating rate equal to the three-month LIBOR plus 2.539%	Semi-annually: June and December	494	December 15, 2023

[1] On the redemption date, or any dividend payment date thereafter, the preferred stock and corresponding depositary shares may be redeemed by us, in whole or in part, at the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

[2] The preferred stock and corresponding depositary shares may be redeemed at our option in whole, but not in part, prior to the redemption date upon the occurrence of a regulatory capital treatment event, as defined in the certificate of designation, at a redemption price equal to the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

The following tables present the dividends declared for each of the series of preferred stock issued and outstanding for the periods indicated:

TABLE 42: PREFERRED STOCK DIVIDENDS

	Three Months Ended June 30,					
	2020			2019		
(Dollars in millions, except per share amounts)	Dividends Declared per Share	Dividends Declared per Depositary Share	Total (In millions)[1]	Dividends Declared per Share	Dividends Declared per Depositary Share	Total (In millions)
Preferred Stock:						
Series C[1]	$ —	$ —	$ —	$ 1,313	$ 0.33	$ 7
Series D	1,475	0.37	11	1,475	0.37	11
Series E[2]	—	—	—	1,500	0.38	11
Series F	—	—	—	—	—	—
Series G	1,338	0.33	7	1,338	0.33	7
Series H	2,813	28.13	14	2,813	28.13	14
Total			$ 32			$ 50

	Six Months Ended June 30,					
	2020			2019		
(Dollars in millions, except per share amounts)	Dividends Declared per Share	Dividends Declared per Depositary Share	Total	Dividends Declared per Share	Dividends Declared per Depositary Share	Total
Preferred Stock:						
Series C[1]	$ 1,313	$ 0.33	$ 6	$ 2,626	$ 0.66	$ 13
Series D	2,950	0.74	22	2,950	0.74	22
Series E[2]	—	—	—	3,000	0.76	22
Series F	2,625	26.25	20	2,625	26.25	20
Series G	2,676	0.66	14	2,676	0.66	14
Series H	2,813	28.13	14	2,813	28.13	14
Total			$ 76			$ 105

[1] We redeemed all outstanding Series C non-cumulative perpetual preferred stock as of March 15, 2020 at a redemption price of $500 million ($100,000 per share equivalent to $25.00 per depositary share) plus accrued and unpaid dividends.
[2] We redeemed all outstanding Series E non-cumulative perpetual preferred stock as of December 15, 2019 at a redemption price of $750 million ($100,000 per share equivalent to $25.00 per depositary share) plus accrued and unpaid dividends.

In July 2020, we declared dividends in our Series D, F and G preferred stock of approximately $1,475, $2,625 and $1,338, respectively, per share, or approximately $0.37, $26.25 and $0.33, respectively, per depositary share. These dividends total approximately $11 million, $20 million and $7 million on our Series D, F and G preferred stock respectively, which will be paid in September 2020.

Common Stock

In June 2019, the Federal Reserve issued a non-objection to our capital plan submitted as part of the CCAR 2019 submission; and in connection with that capital plan, our Board approved a common stock purchase program authorizing the purchase of up to $2.0 billion of our common stock from July 1, 2019 through June 30, 2020 (the 2019 Program). On March 16, 2020, we, along with the other U.S. G-SIBs, suspended common share repurchases through the second quarter of 2020 to bolster capital in response to the COVID-19 pandemic. As a result, we had no repurchases of our common stock in the second quarter of 2020 under our common stock purchase program announced in June 2019.

The table below presents the activity under our common stock purchase program during the periods indicated:

TABLE 43: SHARES REPURCHASED

	Three Months Ended June 30, 2020			Six Months Ended June 30, 2020		
	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)
2019 Program	—	$ —	$ —	**6.5**	**$ 77.35**	**$ 500**

	Three Months Ended June, 2019			Six Months Ended June 30, 2019		
	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)
2018 Program	4.6	$ 65.25	$ 300	8.8	$ 67.97	$ 600

The table below presents the dividends declared on common stock for the periods indicated:

TABLE 44: COMMON STOCK DIVIDENDS

	Three Months Ended June 30,			
	2020		2019	
	Dividends Declared per Share	Total (In millions)	Dividends Declared per Share	Total (In millions)
Common Stock	**$ 0.52**	**$ 183**	$ 0.47	$ 175

	Six Months Ended June 30,			
	2020		2019	
	Dividends Declared per Share	Total (In millions)	Dividends Declared per Share	Total (In millions)
Common Stock	**$ 1.04**	**$ 366**	$ 0.94	$ 352

Federal and state banking regulations place certain restrictions on dividends paid by subsidiary banks to the parent holding company. In addition, banking regulators have the authority to prohibit bank holding companies from paying dividends. For information concerning limitations on dividends from our subsidiary banks, refer to pages 52 and 53 included under Item 5, Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities, in our 2019 Form 10-K, and to Note 15 on pages 159 to 161 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K. Our common stock and preferred stock dividends, including the declaration, timing and amount thereof, are subject to consideration and approval by the Board at the relevant times.

Stock purchases may be made using various types of mechanisms, including open market purchases, accelerated share repurchases 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 and our capital positions, financial performance and investment opportunities. The common stock purchase program does not have specific price targets and may be suspended at any time.

OFF-BALANCE SHEET ARRANGEMENTS

On behalf of clients enrolled in our securities lending program, we lend securities to banks, broker/dealers and other institutions. In most circumstances, we indemnify our clients for the fair market value of those securities against a failure of the borrower to return such securities. Though these transactions are collateralized, the substantial volume of these activities necessitates detailed credit-based underwriting and monitoring processes. The aggregate amount of indemnified securities on loan totaled $367.21 billion and $367.90 billion as of June 30, 2020 and December 31, 2019, respectively. We require the borrower to provide collateral in an amount in excess of 100% of the fair market value of the securities borrowed. We hold the collateral received in connection with these securities lending services as agent, and the collateral is not recorded in our consolidated statement of condition. We revalue the securities on loan and the collateral daily to determine if additional collateral is necessary or if excess collateral is required to be returned to the borrower. We held, as agent, cash and securities totaling $384.76 billion and $385.43 billion as collateral for indemnified securities on loan as of June 30, 2020 and December 31, 2019, respectively.

The cash collateral held by us as agent is invested on behalf of our clients. In certain cases, the cash collateral is invested in third-party repurchase agreements, for which we indemnify the client against loss of the principal invested. We require the counterparty to the indemnified repurchase agreement to provide collateral in an amount in excess of 100% of the amount of the repurchase agreement. In our role as agent, the indemnified repurchase agreements and the related collateral held by us are not recorded in our consolidated statement of condition. Of the collateral of $384.76 billion and $385.43 billion, referenced above, $53.27 billion and $45.66 billion was invested in indemnified repurchase agreements as of June 30, 2020 and December 31, 2019, respectively. We or our agents held $56.83 billion and $48.89 billion as collateral for indemnified investments in repurchase agreements as of June 30, 2020 and December 31, 2019, respectively.

Additional information about our securities finance activities and other off-balance sheet arrangements is provided in Notes 7, 9 and 11 to the consolidated financial statements in this Form 10-Q.

SIGNIFICANT ACCOUNTING ESTIMATES

Our consolidated financial statements are prepared in conformity with U.S. GAAP, and we apply accounting policies that affect the determination of amounts reported in the consolidated financial statements.

Certain of our accounting policies, by their nature, require management to make judgments, involving significant estimates and assumptions, about the effects of matters that are inherently uncertain. These estimates and assumptions are based on information available as of the date of the consolidated financial statements, and changes in this information over time could materially affect the amounts of assets, liabilities, equity, revenue and expenses reported in subsequent consolidated financial statements.

Based on the sensitivity of reported financial statement amounts to the underlying estimates and assumptions, the more significant accounting policies applied by us have been identified by management as those associated with recurring fair value measurements, impairment of goodwill and other intangible assets, contingencies and allowance for credit losses. These accounting policies require the most subjective or complex judgments, and underlying estimates and assumptions could be most subject to revision as new information becomes available. An understanding of the judgments, estimates and assumptions underlying these accounting policies is essential in order to understand our reported consolidated results of operations and financial condition.

Allowance for Credit Losses

In January 2020, we adopted ASC 326, which replaces the incurred loss methodology with an expected loss methodology. We maintain an allowance for credit losses to support our on-balance sheet credit exposures, including financial assets held at amortized cost and investment securities held to-maturity. We also maintain an allowance for unfunded commitments and letters of credit to support our off-balance credit exposure. The two components together represent the allowance for credit losses.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods, factors and forecasts then prevailing may result in significant changes in the allowance for credit losses in those future periods. We estimate credit losses over the contractual life of the financial asset while factoring in prepayment activity where supported by data over a three year reasonable and supportable forecast period. We utilize a baseline, upside and downside scenario which are applied based on a probability weighting, in order to better reflect management's expectation of expected credit losses

given existing market conditions and the changes in the economic environment. The multiple scenarios are based on a three year horizon (or less depending on contractual maturity) and then revert linearly over a two year period to a ten-year historical average thereafter. The contractual term excludes expected extensions, renewals and modifications, but includes prepayment assumptions where applicable.

Additional information about our allowance for credit losses is provided in Note 4 to the consolidated financial statements in this Form 10-Q.

For additional information about these significant accounting policies refer to pages 115 to 117, "Significant Accounting Estimates" included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K.

RECENT ACCOUNTING DEVELOPMENTS

Information with respect to recent accounting developments is provided in Note 1 to the consolidated financial statements in this Form 10-Q.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information provided under Financial Condition - Market Risk Management in Management's Discussion and Analysis, included in this Form 10-Q, is incorporated by reference herein. For more information on our market risk refer to pages 98 to 105 included under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in our 2019 Form 10-K.

CONTROLS AND PROCEDURES

We have established and maintain disclosure controls and procedures that are designed to ensure that information related to us and our subsidiaries on a consolidated basis required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. For the quarter ended June 30, 2020, our management carried out an evaluation, with the participation of the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on the evaluation of these disclosure controls and procedures, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of June 30, 2020.

We have established and maintain internal control over financial reporting as a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in conformity with U.S. GAAP. In the ordinary course of business, we routinely enhance our internal controls and procedures for financial reporting by either upgrading our current systems or implementing new systems. Changes have been made and may be made to our internal controls and procedures for financial reporting as a result of these efforts. During the quarter ended June 30, 2020, no change occurred in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF INCOME
(UNAUDITED)

(Dollars in millions, except per share amounts)	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Fee revenue:				
Servicing fees	**$ 1,272**	$ 1,252	**$ 2,559**	$ 2,503
Management fees	**425**	441	**874**	861
Foreign exchange trading services	**344**	273	**803**	553
Securities finance	**92**	126	**184**	244
Software and processing fees	**245**	168	**357**	359
Total fee revenue	**2,378**	2,260	**4,777**	4,520
Net interest income:				
Interest income	**674**	1,007	**1,542**	2,034
Interest expense	**115**	394	**319**	748
Net interest income	**559**	613	**1,223**	1,286
Other income:				
Gains from sales of available-for-sale securities, net	**—**	—	**2**	—
Other income (loss)	**—**	—	**—**	(1)
Total other income	**—**	—	**2**	(1)
Total revenue	**2,937**	2,873	**6,002**	5,805
Provision for credit losses	**52**	1	**88**	5
Expenses:				
Compensation and employee benefits	**1,051**	1,084	**2,259**	2,313
Information systems and communications	**376**	365	**761**	727
Transaction processing services	**233**	245	**487**	487
Occupancy	**109**	115	**218**	231
Acquisition and restructuring costs	**12**	12	**23**	21
Amortization of other intangible assets	**58**	59	**116**	119
Other	**243**	274	**473**	549
Total expenses	**2,082**	2,154	**4,337**	4,447
Income before income tax expense	**803**	718	**1,577**	1,353
Income tax expense	**109**	131	**249**	258
Net income	**$ 694**	$ 587	**$ 1,328**	$ 1,095
Net income available to common shareholders	**$ 662**	$ 537	**$ 1,242**	$ 989
Earnings per common share:				
Basic	**$ 1.88**	$ 1.44	**$ 3.52**	$ 2.63
Diluted	**1.86**	1.42	**3.48**	2.61
Average common shares outstanding (in thousands):				
Basic	**352,157**	373,773	**352,952**	375,832
Diluted	**356,413**	377,577	**357,028**	379,465
Cash dividends declared per common share	**$ .52**	$ .47	**$ 1.04**	$ .94

The accompanying condensed notes are an integral part of these consolidated financial statements.

STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
(UNAUDITED)

	Three Months Ended June 30,	
(In millions)	**2020**	**2019**
Net income	**$ 694**	$ 587
Other comprehensive income, net of related taxes:		
Foreign currency translation, net of related taxes of $4 and $10, respectively	**152**	42
Net unrealized gains on available-for-sale securities, net of reclassification adjustment and net of related taxes of $132 and $102, respectively	**327**	257
Net unrealized gains on available-for-sale securities designated in fair value hedges, net of related taxes of $1 and $2, respectively	**3**	5
Non-credit impairment on held-to-maturity securities previously identified under ASC 320, net of related taxes of zero and zero, respectively[1]	**—**	1
Net unrealized gains on cash flow hedges, net of related taxes of $3 and zero, respectively	**6**	1
Net unrealized gains on retirement plans, net of related taxes of $1 and zero, respectively	**2**	—
Other comprehensive income	**490**	306
Total comprehensive income	**$ 1,184**	$ 893

	Six Months Ended June 30,	
(In millions)	**2020**	**2019**
Net income	**$ 1,328**	$ 1,095
Other comprehensive income, net of related taxes:		
Foreign currency translation, net of related taxes of ($6) and $7, respectively	**(148)**	16
Net unrealized gains on available-for-sale securities, net of reclassification adjustment and net of related taxes of $167 and $210, respectively	**461**	529
Net unrealized (losses) gains on available-for-sale securities designated in fair value hedges, net of related taxes of ($2) and $1, respectively	**(4)**	3
Non-credit impairment on held-to-maturity securities previously identified under ASC 320, net of related taxes of zero and $1, respectively[1]	**—**	1
Net unrealized gains on cash flow hedges, net of related taxes of $47 and $9, respectively	**123**	25
Net unrealized gains (losses) on retirement plans, net of related taxes of $5 and ($4), respectively	**14**	(8)
Other comprehensive income	**446**	566
Total comprehensive income	**$ 1,774**	$ 1,661

[1] We adopted ASU 2016-13, Financial Instruments - Credit Losses (ASC 326) : Measurement of Credit Losses on Financial Instruments, on January 1, 2020. Non-credit impairment on HTM securities was previously recognized under ASC 320. Please refer to Note 1 for additional information.

The accompanying condensed notes are an integral part of these consolidated financial statements.

STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF CONDITION

(Dollars in millions, except per share amounts)	June 30, 2020 (UNAUDITED)	December 31, 2019
Assets		
Cash and due from banks	**$ 3,685**	$ 3,302
Interest-bearing deposits with banks	**90,199**	68,965
Securities purchased under resale agreements	**4,026**	1,487
Trading account assets	**883**	914
Investment securities available-for-sale	**56,231**	53,815
Investment securities to held-to-maturity purchased under money market liquidity facility (less allowance for credit losses of $4) (fair value of $11,294)	**11,257**	—
Investment securities held-to-maturity (fair value of $43,037 and $42,157)	**41,848**	41,782
Loans (less allowance for credit losses on loans of $141 and $74)	**26,719**	26,235
Premises and equipment (net of accumulated depreciation of $4,591 and $4,367)	**2,212**	2,282
Accrued interest and fees receivable	**3,235**	3,231
Goodwill	**7,538**	7,556
Other intangible assets	**1,914**	2,030
Other assets	**30,495**	34,011
Total assets	**$ 280,242**	$ 245,610
Liabilities:		
Deposits:		
Non-interest-bearing	**$ 42,132**	$ 34,031
Interest-bearing - U.S.	**87,197**	77,504
Interest-bearing - non-U.S.	**71,133**	70,337
Total deposits	**200,462**	181,872
Securities sold under repurchase agreements	**3,513**	1,102
Short-term borrowings under money market liquidity facility	**11,261**	—
Other short-term borrowings	**912**	839
Accrued expenses and other liabilities	**23,634**	24,857
Long-term debt	**15,587**	12,509
Total liabilities	**255,369**	221,179
Commitments, guarantees and contingencies (Notes 9 and 10)		
Shareholders' equity:		
Preferred stock, no par, 3,500,000 shares authorized:		
Series C, 5,000 shares issued and outstanding	**—**	491
Series D, 7,500 shares issued and outstanding	**742**	742
Series F, 7,500 shares issued and outstanding	**742**	742
Series G, 5,000 shares issued and outstanding	**493**	493
Series H, 5,000 shares issued and outstanding	**494**	494
Common stock, $1 par, 750,000,000 shares authorized:		
503,879,642 and 503,879,642 shares issued, and 352,383,250 and 357,389,416 shares outstanding	**504**	504
Surplus	**10,179**	10,132
Retained earnings	**22,794**	21,918
Accumulated other comprehensive income (loss)	**(430)**	(876)
Treasury stock, at cost (151,496,392 and 146,490,226 shares)	**(10,645)**	(10,209)
Total shareholders' equity	**24,873**	24,431
Total liabilities and shareholders' equity	**$ 280,242**	$ 245,610

The accompanying condensed notes are an integral part of these consolidated financial statements.

STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY
(UNAUDITED)

(Dollars in millions, except per share amounts, shares in thousands)	Preferred Stock	Common Stock Shares	Common Stock Amount	Surplus	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock Shares	Treasury Stock Amount	Total
Balance at December 31, 2018	$ 3,690	503,880	$ 504	$ 10,061	$ 20,553	$ (1,356)	123,933	$ (8,715)	$ 24,737
Reclassification of certain tax effects[1]					84	(84)			—
Net income					508				508
Other comprehensive income (loss)						260			260
Cash dividends declared:									
Common stock - $0.47 per share					(177)				(177)
Preferred stock					(55)				(55)
Common stock acquired							4,230	(300)	(300)
Common stock awards exercised				26			(1,002)	45	71
Other				(5)	(2)		(2)	1	(6)
Balance at March 31, 2019	$ 3,690	503,880	$ 504	$ 10,082	$ 20,911	$ (1,180)	127,159	$ (8,969)	$ 25,038
Net income					587				587
Other comprehensive income (loss)						306			306
Cash dividends declared:									
Common stock - $0.47 per share					(175)				(175)
Preferred stock					(50)				(50)
Common stock acquired							4,598	(300)	(300)
Common stock awards exercised				27			(452)	20	47
Other					1		2	—	1
Balance at June 30, 2019	$ 3,690	503,880	$ 504	$ 10,109	$ 21,274	$ (874)	131,307	$ (9,249)	$ 25,454
Balance at December 31, 2019	$ 2,962	503,880	$ 504	$ 10,132	$ 21,918	$ (876)	146,490	$ (10,209)	$ 24,431
Net income					634				634
Other comprehensive income (loss)						(44)			(44)
Preferred stock redeemed	(491)				(9)				(500)
Cash dividends declared:									
Common stock - $0.52 per share					(183)				(183)
Preferred stock					(44)				(44)
Common stock acquired							6,464	(500)	(500)
Common stock awards exercised				23			(1,017)	45	68
Other[2]					(1)		(1)		(1)
Balance at March 31, 2020	**$ 2,471**	**503,880**	**$ 504**	**$ 10,155**	**$ 22,315**	**$ (920)**	**151,936**	**$ (10,664)**	**$ 23,861**
Net income					**694**				**694**
Other comprehensive income (loss)						**490**			**490**
Cash dividends declared:									
Common stock - $0.52 per share					**(183)**				**(183)**
Preferred stock					**(32)**				**(32)**
Common stock awards exercised				**24**			**(443)**	**20**	**44**
Other					**—**		**3**	**(1)**	**(1)**
Balance at June 30, 2020	**$ 2,471**	**503,880**	**$ 504**	**$ 10,179**	**$ 22,794**	**$ (430)**	**151,496**	**$ (10,645)**	**$ 24,873**

[1] Represents the reclassification from accumulated other comprehensive income into retained earnings as a result of our adoption of ASU 2018-02 - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income in the first quarter of 2019.

[2] Includes the impact of transitioning to ASC 326 consisting of a decrease in retained earnings of $3 million in the first quarter of 2020.

The accompanying condensed notes are an integral part of these consolidated financial statements.

STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF CASH FLOWS
(UNAUDITED)

	Six Months Ended June 30,	
(In millions)	**2020**	**2019**
Operating Activities:		
Net income	**$ 1,328**	$ 1,095
Adjustments to reconcile net income to net cash provided by operating activities:		
Deferred income tax expense (benefit)	**3**	56
Amortization of other intangible assets	**116**	119
Other non-cash adjustments for depreciation, amortization and accretion, net	**568**	515
Losses (gains) related to investment securities, net	**(2)**	(1)
Change in trading account assets, net	**31**	(34)
Change in accrued interest and fees receivable, net	**(3)**	1
Change in collateral deposits, net	**166**	(3,711)
Change in unrealized losses (gains) on foreign exchange derivatives, net	**(789)**	1,601
Change in other assets, net	**(844)**	(1,317)
Change in accrued expenses and other liabilities, net	**4,494**	1,107
Other, net	**307**	242
Net cash provided by (used in) operating activities	**5,375**	(327)
Investing Activities:		
Net decrease (increase) in interest-bearing deposits with banks	**(21,234)**	10,506
Net decrease (increase) in securities purchased under resale agreements	**(2,539)**	2,947
Proceeds from sales of available-for-sale securities	**2,086**	3,947
Proceeds from maturities of available-for-sale securities	**10,147**	9,166
Purchases of available-for-sale securities	**(16,761)**	(20,216)
Purchases of held-to-maturity securities under the MMLF program	**(29,242)**	—
Proceeds from maturities of held-to-maturity securities under the MMLF program	**18,014**	—
Proceeds from maturities of held-to-maturity securities	**6,041**	4,917
Purchases of held-to-maturity securities	**(3,997)**	(2,797)
Net (increase) in loans	**(551)**	369
Business acquisitions, net of cash acquired	**—**	(54)
Purchases of equity investments and other long-term assets	**(810)**	(184)
Purchases of premises and equipment, net	**(271)**	(342)
Other, net	**822**	294
Net cash (used in) provided by investing activities	**(38,295)**	8,553
Financing Activities:		
Net (decrease) increase in time deposits	**(33,097)**	(5,228)
Net increase (decrease) in all other deposits	**51,686**	(4,538)
Net increase in short-term borrowings under money market liquidity facility	**11,261**	—
Net (decrease) increase in other short-term borrowings	**2,484**	2,594
Proceeds from issuance of long-term debt, net of issuance costs	**2,497**	—
Payments for long-term debt and obligations under finance leases	**(16)**	(39)
Payments for redemption of preferred stock	**(500)**	—
Repurchases of common stock	**(515)**	(600)
Repurchases of common stock for employee tax withholding	**(52)**	(56)
Payments for cash dividends	**(445)**	(461)
Net cash (used in) financing activities	**33,303**	(8,328)
Net increase	**383**	(102)
Cash and due from banks at beginning of period	**3,302**	3,212
Cash and due from banks at end of period	**$ 3,685**	$ 3,110

The accompanying condensed notes are an integral part of these consolidated financial statements.

Note 1. Summary of Significant Accounting Policies

Basis of Presentation

The accounting and financial reporting policies of State Street Corporation conform to U.S. GAAP. State Street Corporation, the Parent Company, is a financial holding company headquartered in Boston, Massachusetts. Unless otherwise indicated or unless the context requires otherwise, all references in these notes to consolidated financial statements to "State Street," "we," "us," "our" or similar references mean State Street Corporation and its subsidiaries on a consolidated basis. Our principal banking subsidiary is State Street Bank.

The accompanying consolidated financial statements should be read in conjunction with the financial and risk factor information included in our 2019 Form 10-K, which we previously filed with the SEC.

The consolidated financial statements accompanying these condensed notes are unaudited. In the opinion of management, all adjustments, consisting only of normal recurring adjustments, which are necessary for a fair statement of the consolidated results of operations in these financial statements, have been made. Certain previously reported amounts presented in this Form 10-Q have been reclassified to conform to current-period presentation. Events occurring subsequent to the date of our consolidated statement of condition were evaluated for potential recognition or disclosure in our consolidated financial statements through the date we filed this Form 10-Q with the SEC.

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions in the application of certain of our significant accounting policies that may materially affect the reported amounts of assets, liabilities, equity, revenue and expenses. As a result of unanticipated events or circumstances, actual results could differ from those estimates. These accounting estimates reflect the best judgment of management, but actual results could differ.

Our consolidated statement of condition as of December 31, 2019 included in the accompanying consolidated financial statements was derived from the audited financial statements as of that date, but does not include all notes required by U.S. GAAP for a complete set of consolidated financial statements.

Recent Accounting Developments

Relevant standards that were adopted in the first six months of 2020:

In January 2020, we adopted ASU 2016-13, Financial Instruments - Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments, which replaces the incurred loss methodology with an expected loss methodology that is referred to as CECL methodology. This standard requires immediate recognition of expected credit losses for certain financial assets and off-balance sheet commitments, including trade and other receivables, loans and commitments, held-to-maturity debt securities, and other financial assets held at amortized cost at the reporting date, to be measured based on historical experience, current conditions, and reasonable and supportable forecasts. Credit losses on available-for-sale securities are recorded as an allowance against the amortized cost basis of the security, limited to the amount by which the security's amortized cost basis exceeds the fair value, and reversal of impairment losses are allowed when the credit of the issuer improves.

ASC 326 was adopted using a modified retrospective method of transition for all financial assets measured at amortized cost and off balance sheet commitments, which requires the impact of applying the standard on prior periods to be reflected in opening retained earnings upon adoption. Results for reporting periods beginning after January 1, 2020 are presented under the CECL methodology in ASC 326, while prior period amounts continue to be reported in accordance with previously applicable GAAP. Additional information about the reporting for prior periods can be found in our 2019 Form 10-K filed with the SEC on February 20, 2020. The impact of transitioning to ASC 326 on the consolidated financial statements was an increase in the allowance for credit losses and a decrease in retained earnings of $3 million primarily arising from:

- An increase of $1 million in the allowance for credit losses related to loans and other financial assets held at amortized cost.
- An increase of $2 million in the allowance for credit losses related to off-balance sheet commitments

In January 2020, we adopted the remaining provisions of ASU 2018-13 - Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value, specifically the provisions of the standard that add disclosures. We previously adopted the provisions of the standard that eliminated or amended disclosures as of December 31, 2018. There are no material impacts to the disclosures as a result of the adoption.

In January 2020, we adopted ASU 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. There are no material impacts to our financial statements as a result of the adoption.

In January 2020, we adopted ASU 2018-15, Intangibles-Goodwill and Other-Internal Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement. There are no material impacts to our financial statements as a result of the adoption.

ASU 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting is effective as of March 12, 2020. The guidance provides temporary optional expedients and exceptions to the existing guidance in U.S. GAAP on contract modifications and hedge accounting in relation to the transition from LIBOR and other interbank offered rates to alternative reference rates. The guidance also allows a one-time election to sell and/or reclassify to AFS or trading HTM debt securities that reference an interest rate affected by reference rate reform. There were no material impacts to our financial statements as a result of the adoption; we are evaluating the one-time election to sell/transfer HTM securities impacted by reference rate reform.

Note 2. Fair Value

Fair Value Measurements

We carry trading account assets and liabilities, AFS debt securities, certain equity securities and various types of derivative financial instruments, at fair value in our consolidated statement of condition on a recurring basis. Changes in the fair values of these financial assets and liabilities are recorded either as components of our consolidated statement of income or as components of AOCI within shareholders' equity in our consolidated statement of condition.

We measure fair value for the above-described financial assets and liabilities in conformity with U.S. GAAP that governs the measurement of the fair value of financial instruments. Management believes that its valuation techniques and underlying assumptions used to measure fair value conform to the provisions of U.S. GAAP. We categorize the financial assets and liabilities that we carry at fair value based on a prescribed three-level valuation hierarchy. For information about our valuation techniques for financial assets and financial liabilities measured at fair value and the fair value hierarchy, refer to pages 128 to 134 in Note 2 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

The following tables present information with respect to our financial assets and liabilities carried at fair value in our consolidated statement of condition on a recurring basis as of the dates indicated:

(In millions)	Quoted Market Prices in Active Markets (Level 1)	Pricing Methods with Significant Observable Market Inputs (Level 2)	Pricing Methods with Significant Unobservable Market Inputs (Level 3)	Impact of Netting[1]	Total Net Carrying Value in Consolidated Statement of Condition
	Fair Value Measurements on a Recurring Basis				
	As of June 30, 2020				
Assets:					
Trading account assets:					
U.S. government securities	$ 35	$ —	$ —		$ 35
Non-U.S. government securities	94	225	—		319
Other	17	512	—		529
Total trading account assets	146	737	—		883
Available-for-sale investment securities:					
U.S. Treasury and federal agencies:					
Direct obligations	5,804	—	—		5,804
Mortgage-backed securities	—	16,676	—		16,676
Total U.S. Treasury and federal agencies	5,804	16,676	—		22,480
Asset-backed securities:					
Student loans	—	404	—		404
Credit cards	—	90	—		90
Collateralized loan obligations	—	50	1,869		1,919
Total asset-backed securities	—	544	1,869		2,413
Non-U.S. debt securities:					
Mortgage-backed securities	—	1,706	—		1,706
Asset-backed securities	—	1,015	876		1,891
Government securities	—	13,119	—		13,119
Other[2]	—	10,017	45		10,062
Total non-U.S. debt securities	—	25,857	921		26,778
State and political subdivisions	—	1,723	—		1,723
Collateralized mortgage obligations	—	90	—		90
Other U.S. debt securities	—	2,747	—		2,747
Total available-for-sale investment securities	5,804	47,637	2,790		56,231
Other assets:					
Derivative instruments:					
Foreign exchange contracts	4	15,984	2	$ (11,254)	4,736
Interest rate contracts	—	51	—	(16)	35
Total derivative instruments	4	16,035	2	(11,270)	4,771
Other	—	280	—	—	280
Total assets carried at fair value	$ 5,954	$ 64,689	$ 2,792	$ (11,270)	$ 62,165
Liabilities:					
Accrued expenses and other liabilities:					
Trading account liabilities:					
Other	$ 4	$ —	$ —	$ —	$ 4
Derivative instruments:					
Foreign exchange contracts	$ 5	$ 15,679	$ 1	$ (10,831)	$ 4,854
Interest rate contracts	4	52	—	(16)	40
Other derivative contracts	—	185	—	—	185
Total derivative instruments	9	15,916	1	(10,847)	5,079
Total liabilities carried at fair value	$ 13	$ 15,916	$ 1	$ (10,847)	$ 5,083

[1] Represents counterparty netting against level 2 financial assets and liabilities where a legally enforceable master netting agreement exists between us and the counterparty. Netting also reflects asset and liability reductions of $1.97 billion and $1.55 billion, respectively, for cash collateral received from and provided to derivative counterparties.

[2] As of June 30, 2020, the fair value of other non-U.S. debt securities included $6.65 billion of supranational and non-U.S. agency bonds, $1.77 billion of corporate bonds and $0.48 billion of covered bonds.

(In millions)	Fair Value Measurements on a Recurring Basis As of December 31, 2019 Quoted Market Prices in Active Markets (Level 1)	Pricing Methods with Significant Observable Market Inputs (Level 2)	Pricing Methods with Significant Unobservable Market Inputs (Level 3)	Impact of Netting[1]	Total Net Carrying Value in Consolidated Statement of Condition
Assets:					
Trading account assets:					
U.S. government securities	$ 34	$ —	$ —		$ 34
Non-U.S. government securities	146	173	—		319
Other	21	540	—		561
Total trading account assets	201	713	—		914
Available-for-sale investment securities:					
U.S. Treasury and federal agencies:					
Direct obligations	3,487	—	—		3,487
Mortgage-backed securities	—	17,838	—		17,838
Total U.S. Treasury and federal agencies	3,487	17,838	—		21,325
Asset-backed securities:					
Student loans	—	531	—		531
Credit cards	—	89	—		89
Collateralized loan obligations	—	—	1,820		1,820
Total asset-backed securities	—	620	1,820		2,440
Non-U.S. debt securities:					
Mortgage-backed securities	—	1,980	—		1,980
Asset-backed securities	—	1,292	887		2,179
Government securities	—	12,373	—		12,373
Other[2]	—	8,613	45		8,658
Total non-U.S. debt securities	—	24,258	932		25,190
State and political subdivisions	—	1,783	—		1,783
Collateralized mortgage obligations	—	104	—		104
Other U.S. debt securities	—	2,973	—		2,973
Total available-for-sale investment securities	3,487	47,576	2,752		53,815
Other assets:					
Derivative instruments:					
Foreign exchange contracts	—	15,136	4	$ (10,391)	4,749
Interest rate contracts	—	8	—	(4)	4
Total derivative instruments	—	15,144	4	(10,395)	4,753
Other	—	504	—	—	504
Total assets carried at fair value	$ 3,688	$ 63,937	$ 2,756	$ (10,395)	$ 59,986
Liabilities:					
Accrued expenses and other liabilities:					
Trading account liabilities:					
Other	$ 5	$ —	$ —	$ —	$ 5
Derivative instruments:					
Foreign exchange contracts	$ 3	$ 15,144	$ 3	$ (8,918)	$ 6,232
Interest rate contracts	6	43	—	(4)	45
Other derivative contracts	—	182	—	—	182
Total derivative instruments	9	15,369	3	(8,922)	6,459
Total liabilities carried at fair value	$ 14	$ 15,369	$ 3	$ (8,922)	$ 6,464

[1] Represents counterparty netting against level 2 financial assets and liabilities where a legally enforceable master netting agreement exists between us and the counterparty. Netting also reflects asset and liability reductions of $2.31 billion and $0.84 billion, respectively, for cash collateral received from and provided to derivative counterparties.

[2] As of December 31, 2019, the fair value of other non-U.S. debt securities included $5.50 billion of supranational and non-U.S. agency bonds, $1.78 billion of corporate bonds and $0.68 billion of covered bonds.

The following tables present activity related to our level 3 financial assets during the three and six months ended June 30, 2020 and 2019, respectively. Transfers into and out of level 3 are reported as of the beginning of the period presented. During the three and six months ended June 30, 2020, there were no transfers into and out of level 3. During the three and six months ended June 30, 2019, transfers into level 3 were primarily related to collateralized loan obligations. During the three and six months ended June 30, 2019, transfers out of level 3 were mainly related to certain non-U.S. debt securities, for which fair value was measured using prices for which observable market information, other than quoted prices included in Level 1, became available.

	Fair Value Measurements Using Significant Unobservable Inputs									
	Three Months Ended June 30, 2020									
		Total Realized and Unrealized Gains (Losses)								
(In millions)	Fair Value as of March 31, 2020	Recorded in Revenue[1]	Recorded in Other Comprehensive Income[1]	Purchases	Sales	Settlements	Transfers into Level 3	Transfers out of Level 3	Fair Value as of June 30, 2020[1]	Change in Unrealized Gains (Losses) Related to Financial Instruments Held as of June 30, 2020
Assets:										
Available-for-sale Investment securities:										
U.S. Treasury and federal agencies:										
Asset-backed securities:										
Collateralized loan obligations	$ 1,841	$ —	$ 59	$ 10	$ (19)	$ (22)	$ —	$ —	$ 1,869	
Total asset-backed securities	1,841	—	59	10	(19)	(22)	—	—	1,869	
Non-U.S. debt securities:										
Asset-backed securities	820	—	55	1	—	—	—	—	876	
Other	44	—	1	—	—	—	—	—	45	
Total non-U.S. debt securities	864	—	56	1	—	—	—	—	921	
Total available-for-sale investment securities	2,705	—	115	11	(19)	(22)	—	—	2,790	
Other assets:										
Derivative instruments:										
Foreign exchange contracts	17	(17)	—	2	—	—	—	—	2	$ (9)
Total derivative instruments	17	(17)	—	2	—	—	—	—	2	(9)
Total assets carried at fair value	$ 2,722	$ (17)	$ 115	$ 13	$ (19)	$ (22)	$ —	$ —	$ 2,792	$ (9)

[1] Total realized and unrealized gains (losses) on AFS investment securities are included within gains (losses) related to investment securities, net. Total realized and unrealized gains (losses) on derivative instruments are included within foreign exchange trading services.

	Fair Value Measurements Using Significant Unobservable Inputs									
	Six Months Ended June 30, 2020									
		Total Realized and Unrealized Gains (Losses)								
(In millions)	Fair Value as of December 31, 2019	Recorded in Revenue[1]	Recorded in Other Comprehensive Income[1]	Purchases	Sales	Settlements	Transfers into Level 3	Transfers out of Level 3	Fair Value as of June 30, 2020[1]	Change in Unrealized Gains (Losses) Related to Financial Instruments Held as of June 30, 2020
Assets:										
Available-for-sale Investment securities:										
Asset-backed securities:										
Collateralized loan obligations	$ 1,820	$ —	$ (24)	$ 188	$ (61)	$ (54)	$ —	$ —	$ 1,869	
Total asset-backed securities	1,820	—	(24)	188	(61)	(54)	—	—	1,869	
Non-U.S. debt securities:										
Asset-backed securities	887	—	(10)	1	—	(2)	—	—	876	
Other	45	—	—	—	—	—	—	—	45	
Total non-U.S. debt securities	932	—	(10)	1	—	(2)	—	—	921	
Total available-for-sale investment securities	2,752	—	(34)	189	(61)	(56)	—	—	2,790	
Other assets:										
Derivative instruments:										
Foreign exchange contracts	4	(6)	—	5	—	(1)	—	—	2	$ (3)
Total derivative instruments	4	(6)	—	5	—	(1)	—	—	2	(3)
Total assets carried at fair value	$ 2,756	$ (6)	$ (34)	$ 194	$ (61)	$ (57)	$ —	$ —	$ 2,792	$ (3)

[1] Total realized and unrealized gains (losses) on AFS investment securities are included within gains (losses) related to investment securities, net. Total realized and unrealized gains (losses) on derivative instruments are included within foreign exchange trading services.

	Fair Value Measurements Using Significant Unobservable Inputs Three Months Ended June 30, 2019									
(In millions)	Fair Value as of March 31, 2019	Total Realized and Unrealized Gains (Losses) Recorded in Revenue[1]	Total Realized and Unrealized Gains (Losses) Recorded in Other Comprehensive Income[1]	Purchases	Sales	Settlements	Transfers into Level 3	Transfers out of Level 3	Fair Value as of June 30, 2019[1]	Change in Unrealized Gains (Losses) Related to Financial Instruments Held as of June 30, 2019
Assets:										
Available-for-sale Investment securities:										
U.S. Treasury and federal agencies:										
Mortgage-backed securities	$ —	$ —	$ —	$ 123	$ —	$ —	$ —	$ —	$ 123	
Asset-backed securities:										
Collateralized loan obligations	668	—	2	455	—	(119)	216	—	1,222	
Total asset-backed securities	668	—	2	455	—	(119)	216	—	1,222	
Non-U.S. debt securities:										
Asset-backed securities	627	—	3	82	—	9	—	—	721	
Other	45	—	—	—	—	1	—	—	46	
Total non-U.S. debt securities	672	—	3	82	—	10	—	—	767	
Total Available-for-sale investment securities	1,340	—	5	660	—	(109)	216	—	2,112	
Other assets:										
Derivative instruments:										
Foreign exchange contracts	4	(3)	—	10	—	—	—	—	11	$ (2)
Total derivative instruments	4	(3)	—	10	—	—	—	—	11	(2)
Total assets carried at fair value	$ 1,344	$ (3)	$ 5	$ 670	$ —	$ (109)	$ 216	$ —	$ 2,123	$ (2)

[1] Total realized and unrealized gains (losses) on AFS investment securities are included within gains (losses) related to investment securities, net. Total realized and unrealized gains (losses) on derivative instruments are included within foreign exchange trading services.

Fair Value Measurements Using Significant Unobservable Inputs
Six Months Ended June 30, 2019

(In millions)	Fair Value as of December 31, 2018	Total Realized and Unrealized Gains (Losses) Recorded in Revenue[1]	Total Realized and Unrealized Gains (Losses) Recorded in Other Comprehensive Income[1]	Purchases	Sales	Settlements	Transfers into Level 3	Transfers out of Level 3	Fair Value as of June 30, 2019[1]	Change in Unrealized Gains (Losses) Related to Financial Instruments Held as of June 30, 2019
Assets:										
Available-for-sale Investment securities:										
U.S. Treasury and federal agencies:										
Mortgage-backed securities	$ —	$ —	$ —	$ 123	$ —	$ —	$ —	$ —	$ 123	
Asset-backed securities:										
Collateralized loan obligations	593	1	—	587	—	(175)	216	—	1,222	
Total asset-backed securities	593	1	—	587	—	(175)	216	—	1,222	
Non-U.S. debt securities:										
Asset-backed securities	631	—	1	92	—	(3)	—	—	721	
Other	58	—	—	—	—	—	—	(12)	46	
Total non-U.S. debt securities	689	—	1	92	—	(3)	—	(12)	767	
Collateralized mortgage obligations	2	—	—	—	—	(2)	—	—	—	
Total Available-for-sale investment securities	1,284	1	1	802	—	(180)	216	(12)	2,112	
Other assets:										
Derivative instruments:										
Foreign exchange contracts	4	(5)	—	12	—	—	—	—	11	$ (2)
Total derivative instruments	4	(5)	—	12	—	—	—	—	11	(2)
Total assets carried at fair value	$ 1,288	$ (4)	$ 1	$ 814	$ —	$ (180)	$ 216	$ (12)	$ 2,123	$ (2)

[1] Total realized and unrealized gains (losses) on AFS investment securities are included within gains (losses) related to investment securities, net. Total realized and unrealized gains (losses) on derivative instruments are included within foreign exchange trading services.

The following table presents quantitative information, as of the dates indicated, about the valuation techniques and significant unobservable inputs used in the valuation of our level 3 financial assets and liabilities measured at fair value on a recurring basis for which we use pricing models. The significant unobservable inputs for our level 3 financial assets and liabilities whose fair value is measured using pricing information from non-binding broker/dealer quotes are not included in the table, as the specific inputs applied are not provided by the broker/dealer.

Quantitative Information about Level 3 Fair Value Measurements

(Dollars in millions)	Fair Value As of June 30, 2020	Fair Value As of December 31, 2019	Valuation Technique	Significant Unobservable Input[1]	Range As of June 30, 2020	Weighted-Average As of June 30, 2020	Weighted-Average As of December 31, 2019
Significant unobservable inputs readily available to State Street:							
Assets:							
Derivative Instruments, foreign exchange contracts	**$ 2**	$ 4	Option model	Volatility	**6.3% - 13.9%**	**8.6%**	8.2%
Total	**$ 2**	$ 4					
Liabilities:							
Derivative instruments, foreign exchange contracts	**$ 1**	$ 3	Option model	Volatility	**6.3% - 12.7%**	**8.9%**	7.0%
Total	**$ 1**	$ 3					

[1] Significant changes in these unobservable inputs may result in significant changes in fair value measurement of the derivative instrument.

Fair Value Estimates

Estimates of fair value for financial instruments not carried at fair value on a recurring basis in our consolidated statement of condition are generally subjective in nature, and are determined as of a specific point in time based on the characteristics of the financial instruments and relevant market information.

The following tables present the reported amounts and estimated fair values of the financial assets and liabilities not carried at fair value, as they would be categorized within the fair value hierarchy, as of the dates indicated:

			Fair Value Hierarchy		
(In millions)	**Reported Amount**	**Estimated Fair Value**	**Quoted Market Prices in Active Markets (Level 1)**	**Pricing Methods with Significant Observable Market Inputs (Level 2)**	**Pricing Methods with Significant Unobservable Market Inputs (Level 3)**
June 30, 2020					
Financial Assets:					
Cash and due from banks	**$ 3,685**	**$ 3,685**	**$ 3,685**	**$ —**	**$ —**
Interest-bearing deposits with banks	**90,199**	**90,199**	**—**	**90,199**	**—**
Securities purchased under resale agreements	**4,026**	**4,026**	**—**	**4,026**	**—**
HTM securities purchased under the MMLF program	**11,257**	**11,294**	**—**	**11,294**	**—**
Investment securities held-to-maturity	**41,848**	**43,037**	**8,288**	**34,344**	**405**
Net loans[1]	**26,719**	**26,583**	**—**	**24,511**	**2,072**
Other[2]	**2,502**	**2,502**	**—**	**2,502**	**—**
Financial Liabilities:					
Deposits:					
Non-interest-bearing	**$ 42,132**	**$ 42,132**	**$ —**	**$ 42,132**	**$ —**
Interest-bearing - U.S.	**87,197**	**87,197**	**—**	**87,197**	**—**
Interest-bearing - non-U.S.	**71,133**	**71,133**	**—**	**71,133**	**—**
Securities sold under repurchase agreements	**3,513**	**3,513**	**—**	**3,513**	**—**
Short-term borrowings under the MMLF program	**11,261**	**11,261**	**—**	**11,261**	**—**
Other short-term borrowings	**912**	**912**	**—**	**912**	**—**
Long-term debt	**15,587**	**15,865**	**—**	**15,732**	**133**
Other[2]	**2,502**	**2,502**	**—**	**2,502**	**—**

[1] Includes $21 million of loans classified as held-for-sale that were measured at fair value in level 2 on a non-recurring basis as of June 30, 2020.
[2] Represents a portion of underlying client assets related to our enhanced custody business, which clients have allowed us to transfer and re-pledge.

			Fair Value Hierarchy		
(In millions)	**Reported Amount**	**Estimated Fair Value**	**Quoted Market Prices in Active Markets (Level 1)**	**Pricing Methods with Significant Observable Market Inputs (Level 2)**	**Pricing Methods with Significant Unobservable Market Inputs (Level 3)**
December 31, 2019					
Financial Assets:					
Cash and due from banks	$ 3,302	$ 3,302	$ 3,302	$ —	$ —
Interest-bearing deposits with banks	68,965	68,965	—	68,965	—
Securities purchased under resale agreements	1,487	1,487	—	1,487	—
Investment securities held-to-maturity	41,782	42,157	10,299	31,682	176
Net loans[1]	26,235	26,292	—	24,432	1,860
Other[2]	7,500	7,500	—	7,500	—
Financial Liabilities:					
Deposits:					
Non-interest-bearing	$ 34,031	$ 34,031	$ —	$ 34,031	$ —
Interest-bearing - U.S.	77,504	77,504	—	77,504	—
Interest-bearing - non-U.S.	70,337	70,337	—	70,337	—
Securities sold under repurchase agreements	1,102	1,102	—	1,102	—
Other short-term borrowings	839	839	—	839	—
Long-term debt	12,509	12,770	—	12,621	149
Other[2]	7,500	7,500	—	7,500	—

[1] Includes $9 million of loans classified as held-for-sale that were measured at fair value in level 2 on a non-recurring basis as of December 31, 2019.
[2] Represents a portion of underlying client assets related to our enhanced custody business, which clients have allowed us to transfer and re-pledge.

Note 3. Investment Securities

Investment securities held by us are classified as either trading account assets, AFS, HTM or equity securities held at fair value at the time of purchase and reassessed periodically, based on management's intent. For additional information on our accounting for investment securities, refer to page 135 in Note 3 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

Trading account assets are carried at fair value. Both realized and unrealized gains and losses on trading account assets are recorded in foreign exchange trading services revenue in our consolidated statement of income. AFS securities are carried at fair value, with any allowance for credit losses recorded through the consolidated statement of income and after-tax net unrealized non-credit related gains and losses recorded in AOCI. Gains or losses related on sales of AFS investment securities are computed using the specific identification method and are recorded in gains (losses) related to investment securities, net in our consolidated statement of income.

Starting in the first quarter of 2020, we supported our client's liquidity needs through the MMLF program, purchasing a total of $29 billion of investment securities under that program, $11 billion of which remain outstanding as of June 30, 2020.

HTM investment securities are carried at cost, adjusted for amortization of premiums and accretion of discounts, with any allowance for credit losses recorded through the consolidated statement of income. As of June 30, 2020, we recognized an allowance for credit losses on all HTM investment securities of $4 million.

The following table presents the amortized cost, fair value and associated unrealized gains and losses of AFS and HTM investment securities as of the dates indicated:

	June 30, 2020				December 31, 2019			
		Gross Unrealized				Gross Unrealized		
(In millions)	Amortized Cost	Gains	Losses	Fair Value	Amortized Cost	Gains	Losses	Fair Value
Available-for-sale:								
U.S. Treasury and federal agencies:								
Direct obligations	**$ 5,631**	**$ 173**	**$ —**	**$ 5,804**	$ 3,506	$ 9	$ 28	$ 3,487
Mortgage-backed securities	**16,118**	**564**	**6**	**16,676**	17,599	264	25	17,838
Total U.S. Treasury and federal agencies	**21,749**	**737**	**6**	**22,480**	21,105	273	53	21,325
Asset-backed securities:								
Student loans[1]	**409**	**2**	**7**	**404**	532	1	2	531
Credit cards	**90**	**—**	**—**	**90**	90	—	1	89
Collateralized loan obligations	**1,949**	**—**	**30**	**1,919**	1,822	1	3	1,820
Total asset-backed securities	**2,448**	**2**	**37**	**2,413**	2,444	2	6	2,440
Non-U.S. debt securities:								
Mortgage-backed securities	**1,714**	**—**	**8**	**1,706**	1,978	3	1	1,980
Asset-backed securities	**1,906**	**—**	**15**	**1,891**	2,179	2	2	2,179
Government securities	**12,964**	**162**	**7**	**13,119**	12,243	131	1	12,373
Other[2]	**9,935**	**135**	**8**	**10,062**	8,595	73	10	8,658
Total non-U.S. debt securities	**26,519**	**297**	**38**	**26,778**	24,995	209	14	25,190
State and political subdivisions[3]	**1,654**	**73**	**4**	**1,723**	1,725	59	1	1,783
Collateralized mortgage obligations	**89**	**1**	**—**	**90**	104	—	—	104
Other U.S. debt securities	**2,685**	**63**	**1**	**2,747**	2,941	32	—	2,973
Total	**$ 55,144**	**$ 1,173**	**$ 86**	**$ 56,231**	$ 53,314	$ 575	$ 74	$ 53,815
Held-to-maturity:								
U.S. Treasury and federal agencies:								
Direct obligations	**$ 8,179**	**$ 138**	**$ —**	**$ 8,317**	$ 10,311	$ 24	$ 3	$ 10,332
Mortgage-backed securities	**28,204**	**1,079**	**7**	**29,276**	26,297	316	44	26,569
Total U.S. Treasury and federal agencies	**36,383**	**1,217**	**7**	**37,593**	36,608	340	47	36,901
Asset-backed securities:								
Student loans[1]	**4,148**	**8**	**104**	**4,052**	3,783	10	41	3,752
Total asset-backed securities	**4,148**	**8**	**104**	**4,052**	3,783	10	41	3,752
Non-U.S. debt securities:								
Mortgage-backed securities	**339**	**60**	**7**	**392**	366	82	6	442
Government securities	**393**	**—**	**—**	**393**	328	—	—	328
Total non-U.S. debt securities	**732**	**60**	**7**	**785**	694	82	6	770
Collateralized mortgage obligations	**585**	**28**	**6**	**607**	697	38	1	734
Total[4]	**41,848**	**1,313**	**124**	**43,037**	41,782	470	95	42,157
HTM securities purchased under the MMLF program[5]	**11,261**	**33**	**—**	**11,294**	—	—	—	—
Total held-to-maturity securities	**$ 53,109**	**$ 1,346**	**$ 124**	**$ 54,331**	$ 41,782	$ 470	$ 95	$ 42,157

[1] Primarily comprised of securities guaranteed by the federal government with respect to at least 97% of defaulted principal and accrued interest on the underlying loans.

[2] As of June 30, 2020 and December 31, 2019, the fair value of other non-U.S. debt securities included $6.65 billion and $5.50 billion, respectively, primarily of supranational and non-U.S. agency bonds, $1.77 billion and $1.78 billion, respectively, of corporate bonds and $0.48 billion and $0.68 billion, respectively, of covered bonds.

[3] As of June 30, 2020 and December 31, 2019, the fair value of state and political subdivisions includes securities in trusts of $0.87 billion and $0.94 billion respectively. Additional information about these trusts is provided in Note 12.

[4] An immaterial amount of accrued interest related to HTM and AFS investment securities was excluded from the amortized cost basis for the period ended June 30, 2020.

[5] As of June 30, 2020, we recognized an allowance for credit losses of $4 million on HTM investment securities.

Aggregate investment securities with carrying values of approximately $52.73 billion and $49.48 billion as of June 30, 2020 and December 31, 2019, respectively, were designated as pledged for public and trust deposits, short-term borrowings and for other purposes as provided by law.

The following tables present the aggregate fair values of AFS investment securities that have been in a continuous unrealized loss position for less than 12 months, and those that have been in a continuous unrealized loss position for 12 months or longer, as of the dates indicated:

	As of June 30, 2020					
	Less than 12 months		12 months or longer		Total	
(In millions)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Available-for-sale:						
U.S. Treasury and federal agencies:						
Direct obligations	$ 350	$ —	$ —	$ —	$ 350	$ —
Mortgage-backed securities	1,001	5	124	1	1,125	6
Total U.S. Treasury and federal agencies	1,351	5	124	1	1,475	6
Asset-backed securities:						
Student loans	268	7	71	—	339	7
Credit cards	—	—	—	—	—	—
Collateralized loan obligations	1,586	25	283	5	1,869	30
Total asset-backed securities	1,854	32	354	5	2,208	37
Non-U.S. debt securities:						
Mortgage-backed securities	1,246	6	206	2	1,452	8
Asset-backed securities	1,483	13	105	2	1,588	15
Government securities	1,145	7	—	—	1,145	7
Other	856	7	747	1	1,603	8
Total non-U.S. debt securities	4,730	33	1,058	5	5,788	38
State and political subdivisions	344	3	22	1	366	4
Other U.S. debt securities	212	1	—	—	212	1
Total	$ 8,491	$ 74	$ 1,558	$ 12	$ 10,049	$ 86

	As of December 31, 2019					
	Less than 12 months		12 months or longer		Total	
(In millions)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Available-for-sale:						
U.S. Treasury and federal agencies:						
Direct obligations	$ 1,430	$ 28	$ —	$ —	$ 1,430	$ 28
Mortgage-backed securities	2,499	7	1,665	18	4,164	25
Total U.S. Treasury and federal agencies	3,929	35	1,665	18	5,594	53
Asset-backed securities:						
Student loans	271	1	127	1	398	2
Credit cards	89	1	—	—	89	1
Collateralized loan obligations	862	2	278	1	1,140	3
Total asset-backed securities	1,222	4	405	2	1,627	6
Non-U.S. debt securities:						
Mortgage-backed securities	228	—	220	1	448	1
Asset-backed securities	672	1	109	1	781	2
Government securities	3,246	1	—	—	3,246	1
Other	2,736	9	187	1	2,923	10
Total non-U.S. debt securities	6,882	11	516	3	7,398	14
State and political subdivisions	163	—	22	1	185	1
Collateralized mortgage obligations	13	—	4	—	17	—
Other U.S. debt securities	219	—	14	—	233	—
Total	$ 12,428	$ 50	$ 2,626	$ 24	$ 15,054	$ 74

The following table presents the amortized cost and the fair value of contractual maturities of debt investment securities as of June 30, 2020. The maturities of certain ABS, MBS and collateralized mortgage obligations are based on expected principal payments. Actual maturities may differ from these expected maturities since certain borrowers have the right to prepay obligations with or without prepayment penalties.

	As of June 30, 2020									
(In millions)	Under 1 Year		1 to 5 Years		6 to 10 Years		Over 10 Years		Total	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Available-for-sale:										
U.S. Treasury and federal agencies:										
Direct obligations	$ 1,560	$ 1,569	$ 2,022	$ 2,057	$ 2,049	$ 2,178	$ —	$ —	$ 5,631	$ 5,804
Mortgage-backed securities	199	206	706	726	2,639	2,672	12,574	13,072	16,118	16,676
Total U.S. Treasury and federal agencies	1,759	1,775	2,728	2,783	4,688	4,850	12,574	13,072	21,749	22,480
Asset-backed securities:										
Student loans	163	164	127	126	2	2	117	112	409	404
Credit cards	—	—	—	—	90	90	—	—	90	90
Collateralized loan obligations	31	29	978	964	823	811	117	115	1,949	1,919
Total asset-backed securities	194	193	1,105	1,090	915	903	234	227	2,448	2,413
Non-U.S. debt securities:										
Mortgage-backed securities	252	251	550	546	130	129	782	780	1,714	1,706
Asset-backed securities	272	270	984	977	318	315	332	329	1,906	1,891
Government securities	4,690	4,694	7,339	7,488	689	693	246	244	12,964	13,119
Other	1,446	1,452	6,968	7,068	1,431	1,451	90	91	9,935	10,062
Total non-U.S. debt securities	6,660	6,667	15,841	16,079	2,568	2,588	1,450	1,444	26,519	26,778
State and political subdivisions	169	169	669	683	526	564	290	307	1,654	1,723
Collateralized mortgage obligations	—	—	—	—	—	—	89	90	89	90
Other U.S. debt securities	695	700	1,887	1,938	103	109	—	—	2,685	2,747
Total	$ 9,477	$ 9,504	$ 22,230	$ 22,573	$ 8,800	$ 9,014	$ 14,637	$ 15,140	$ 55,144	$ 56,231
Held-to-maturity:										
U.S. Treasury and federal agencies:										
Direct obligations	$ 3,310	$ 3,332	$ 4,840	$ 4,956	$ 5	$ 5	$ 24	$ 24	$ 8,179	$ 8,317
Mortgage-backed securities	61	63	545	557	3,716	3,898	23,882	24,758	28,204	29,276
Total U.S. Treasury and federal agencies	3,371	3,395	5,385	5,513	3,721	3,903	23,906	24,782	36,383	37,593
Asset-backed securities:										
Student loans	359	343	200	193	539	523	3,050	2,993	4,148	4,052
Total asset-backed securities	359	343	200	193	539	523	3,050	2,993	4,148	4,052
Non-U.S. debt securities:										
Mortgage-backed securities	117	112	27	27	3	3	192	250	339	392
Government securities	393	393	—	—	—	—	—	—	393	393
Total non-U.S. debt securities	510	505	27	27	3	3	192	250	732	785
Collateralized mortgage obligations	149	157	274	273	5	5	157	172	585	607
Total	4,389	4,400	5,886	6,006	4,268	4,434	27,305	28,197	41,848	43,037
Held-to-maturity under money market mutual fund liquidity facility	11,261	11,294	—	—	—	—	—	—	11,261	11,294
Total held-to-maturity securities	$ 15,650	$ 15,694	$ 5,886	$ 6,006	$ 4,268	$ 4,434	$ 27,305	$ 28,197	$ 53,109	$ 54,331

Interest income related to debt securities is recognized in our consolidated statement of income using the effective interest method, or on a basis approximating a level rate of return over the contractual or estimated life of the security. The level rate of return considers any non-refundable fees or costs, as well as purchase premiums or discounts, adjusted as prepayments occur, resulting in amortization or accretion, accordingly.

Allowance for Credit Losses on Debt Securities and Impairment of AFS Securities

As discussed in Note 1, we adopted ASC 326 on January 1, 2020. We conduct periodic reviews of individual securities to assess whether an allowance for credit losses is required. HTM securities are evaluated for expected credit loss utilizing a probability of default methodology, or discounted cash flows assessed against the amortized cost of the investment security excluding accrued interest. An AFS security is impaired when the current fair value of an individual security is below its amortized cost basis. An allowance for credit losses on impaired AFS securities is recorded when the present value of expected future cash flows of the investment security is less than its amortized cost basis, limited to the amount by which the security's amortized cost basis exceeds the fair value. Investment securities will be written down to fair value through the consolidated statement of income when management intends to sell (or may be required to sell) the securities before they recover in value.

We monitor the credit quality of the HTM and AFS investment securities through the use of credit ratings on a quarterly basis. As of June 30, 2020, 99% of our HTM and AFS investment portfolio is publicly rated investment grade.

For additional information about the review of securities under previous other-than-temporary impairment guidance, refer to pages 140 to 141 in Note 3 to the consolidated financial statements included under Item 8. Financial Statements and Supplementary Data, in our 2019 Form 10-K.

We recorded an allowance for credit losses of approximately $4 million on our HTM securities under the new CECL guidance as of June 30, 2020.

In the second quarter of 2020, we recorded no provision or charge offs on HTM securities. In the six months ended June 30, 2020, we recorded a $4 million provision and no charge offs on HTM securities.

We recorded approximately $1 million of other-than-temporary-impairment in the six months ended June 30, 2019, which resulted from adverse changes in the timing of expected future cash flows from non-U.S. mortgage- and asset backed securities.

Our review of impaired AFS investment securities generally includes:

- the identification and evaluation of securities that have indications of potential impairment, such as issuer-specific concerns, including deteriorating financial condition or bankruptcy;
- the analysis of expected future cash flows of securities, based on quantitative and qualitative factors;
- the analysis of the collectability of those future cash flows, including information about past events, current conditions, and reasonable and supportable forecasts;
- the analysis of the underlying collateral for MBS and ABS;
- the analysis of individual impaired securities, including the anticipated recovery period and the magnitude of the overall price decline;
- evaluation of factors or triggers that could cause individual securities to be deemed impaired and those that would not support impairment; and
- documentation of the results of these analyses.

Substantially all of our investment securities portfolio is composed of debt securities. A critical component of our assessment of impairment of these debt securities is the identification of credit-impaired securities for which management does not expect to receive cash flows sufficient to recover the entire amortized cost basis of the security.

Debt securities that are not deemed to be credit-impaired are subject to additional management analysis to assess whether management intends to sell, or, more likely than not, would be required to sell, the security before the expected recovery of its amortized cost basis.

With respect to certain classes of debt securities, primarily U.S. Treasuries and agency securities (mainly issued by U.S. Government entities and agencies, as well as G7 sovereigns), we consider the history of credit losses, current conditions and reasonable and supportable forecasts, which may indicate that the expectation that nonpayment of the amortized cost basis is or continues to be zero, even if the U.S. government were to technically default. Therefore, for those securities, we do not record expected credit losses.

We have elected to not record an allowance on accrued interest for HTM and AFS securities. Accrued Interest on these securities is reversed against interest income when payment on a security is delinquent for greater than 90 days from the date of payment.

After a review of the investment portfolio, taking into consideration current economic conditions, adverse situations that might affect our ability to fully collect principal and interest, the timing of future payments, the credit quality and performance of the collateral underlying MBS and ABS and other relevant factors, management considers the aggregate decline in fair value of the investment securities portfolio and the resulting gross pre-tax unrealized losses of $210 million related to 632 securities as of June 30, 2020 to not be the result of any material changes in the credit characteristics of the securities.

Note 4. Loans and Allowance for Credit Losses

We segregate our loans into two segments: commercial and financial loans and commercial real estate loans. We further classify commercial and financial loans as fund finance loans, leveraged loans, overdrafts and other. These classifications reflect their risk characteristics, their initial measurement attributes and the methods we use to monitor and assess credit risk. For additional information on our loans, including our internal risk-rating system used to assess our risk of credit loss for each loan, refer to pages 141 to 143 in Note 4 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

The following table presents our recorded investment in loans, by segment, as of the dates indicated:

(In millions)	June 30, 2020	December 31, 2019
Domestic[1]:		
Commercial and financial:		
Fund Finance [2]	**$ 9,696**	$ 10,270
Leveraged loans	**3,071**	3,342
Overdrafts	**2,292**	1,739
Other[3]	**2,450**	3,411
Commercial real estate	**1,944**	1,766
Total domestic	**19,453**	20,528
Foreign[1]:		
Commercial and financial:		
Fund Finance[2]	**3,986**	3,145
Leveraged loans	**1,230**	1,119
Overdrafts	**2,163**	1,517
Other[3]	**28**	—
Total foreign	**7,407**	5,781
Total loans	**26,860**	26,309
Allowance for loan losses	**(141)**	(74)
Loans, net of allowance	**$ 26,719**	$ 26,235

[1] Domestic and foreign categorization is based on the borrower's country of domicile.

[2] Fund finance loans include primarily $5,026 million loans to real money funds, $7,272 million private equity capital call finance loans and $820 million loans to business development companies as of June 30, 2020, compared to $6,040 million loans to real money funds, $6,076 million private equity capital call finance loans and $932 million loans to business development companies as of December 31, 2019.

[3] Includes $1,448 million securities finance loans, $933 million loans to municipalities and $97 million other loans as of June 30, 2020 and $2,537 million securities finance loans, $848 million loans to municipalities and $26 million other loans as of December 31, 2019.

The commercial and financial segment is composed primarily of fund finance loans, leveraged loans, overdrafts and other loans. Fund finance loans are composed of revolving credit lines providing liquidity and leverage to mutual fund and private equity fund clients.

Certain loans are pledged as collateral for access to the Federal Reserve's discount window. As of June 30, 2020 and December 31, 2019, the loans pledged as collateral totaled $7.51 billion and $6.75 billion, respectively.

As of June 30, 2020 and December 31, 2019, we had no loans on non-accrual status and no loans 30 days or more contractually past due.

We sold $127 million leveraged loans in the second quarter of 2020, of which $23 million remain unsettled and held for sale as of June 30, 2020.

In certain circumstances, we restructure troubled loans by granting concessions to borrowers experiencing financial difficulty. Once restructured, the loans are generally considered impaired until their maturity, regardless of whether the borrowers perform under the modified terms of the loans. There were no loans modified in troubled debt restructurings as of both June 30, 2020 and December 31, 2019.

Allowance for Credit Losses

We recognize an allowance for credit losses in accordance with ASC 326 for financial assets held at amortized cost and off-balance sheet commitments. Further discussion of our adoption of ASC 326 on January 1, 2020, including the impact on our consolidated financial statements, is provided in Note 1. For additional discussion on the allowance for credit loss for debt securities, please refer to Note 3.

When the allowance is recorded, a provision for credit losses expense is recognized in net income. The allowance for credit losses for financial assets represents the portion of the amortized cost basis, including accrued interest for financial assets held at amortized cost, which management does not expect to recover due to expected credit losses and is presented on the statement of condition as an offset to the amortized cost basis. The accrued interest balance is presented separately on the statement of condition within accrued interest and fees receivable. The allowance for off-balance sheet commitments is presented within other liabilities.

The allowance for credit losses may be determined using various methods, including discounted cash flow methods, loss-rate methods, probability-of-default methods, or other methods as determined by us. The method used to estimate expected credit losses may vary depending on the type of financial asset, our ability to predict the timing of cash flows, and the information available to us.

We measure expected credit losses of financial assets on a collective (pool) basis when similar risk characteristic exist. Each reporting period, we assess whether the assets in the pool continue to display similar risk characteristics.

Prior to the implementation of ASC 326, we reviewed loans for indicators of impairment. Loans where indicators existed were evaluated individually for impairment at least quarterly. For those loans where no such indicators were identified, the loans were collectively evaluated for impairment. As of December 31, 2019, we had one loan for $25 million in the

commercial and financial segment that was individually evaluated for impairment and deemed to be impaired. We recorded a specific reserve of $1 million for this loan.

For a financial asset that does not share risk characteristics with other assets, expected credit losses are measured based on net realizable value, that is, the difference between the discounted value of the expected future cash flows, utilizing the effective interest rate, and the amortized cost basis of the asset. As of June 30, 2020, we had one loan for $25 million in the commercial and financial segment that no longer met the similar risk characteristics of their collective pool.

When the asset is collateral dependent, which means when the borrower is experiencing financial difficulty and repayment is expected to be provided substantially through the operation or sale of the collateral, expected credit losses are measured as the difference between the amortized cost basis of the asset and the fair value of the collateral, adjusted for the estimated costs to sell.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods, factors and forecasts then prevailing may result in significant changes in the allowance for credit losses in those future periods.

We estimate credit losses over the contractual life of the financial asset while factoring in prepayment activity where supported by data over a three year reasonable and supportable forecast period. We utilize a baseline, upside and downside scenario which are applied based on a probability weighting, in order to better reflect management's expectation of expected credit losses given existing market conditions and the changes in the economic environment. The multiple scenarios are based on a three year horizon (or less depending on contractual maturity) and then revert linearly over a two year period to a ten-year historical average thereafter. The contractual term excludes expected extensions, renewals and modifications, but includes prepayment assumptions where applicable.

Credit Quality

Credit quality for financial assets held at amortized cost are continuously monitored by management and is reflected within the allowance for credit losses. The allowance for credit losses as reported in our consolidated statement of condition is adjusted by provision for credit losses, which is reported in earnings, and reduced by the charge-off of principal amounts, net of recoveries.

We use an internal risk-rating system to assess our risk of credit loss for each financial asset. The risk-rating process incorporates the use of risk-rating tools in conjunction with management judgment. Qualitative and quantitative inputs are captured in a systematic manner and following a formal review and approval process, an internal credit rating based on our credit scale is assigned.

When computing allowance levels, credit loss assumptions are estimated using a model that categorizes asset pools based on loss history, delinquency status and other credit trends and risk characteristics, including current conditions and reasonable and supportable forecasts about the future. Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods evaluations of the overall asset portfolio, in light of the factors and forecasts then prevailing, may result in significant changes in the allowance and credit loss expense in those future periods.

Credit quality is assessed and monitored at least annually, by evaluating various attributes in order to enable the earliest possible detection of any concerns with the customer's credit rating. The results of those evaluations are utilized in underwriting new loans and transactions with counterparties and in our process for estimation of expected credit losses.

In assessing the risk rating assigned to each financial asset held at amortized cost, among the factors considered are the borrower's debt capacity, collateral coverage, payment history and delinquency experience, financial flexibility and earnings strength, the expected amounts and source of repayment, the level and nature of contingencies, if any, and the industry and geography in which the borrower operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Credit counterparties are evaluated and risk-rated on an individual basis at least annually.

Management regularly reviews financial assets in the portfolio to assess credit quality indicators and to determine appropriate loans classification and grading in accordance with applicable bank regulations. Our internal risk rating methodology assigns risk ratings ranging from Investment Grade, Speculative, Special Mention, Substandard, Doubtful and Loss.

- *Investment Grade*. Assets consisting of counterparties with strong credit quality and low expected credit risk and probability of default. Ratings apply to counterparties with a strong capacity to support the timely repayment of any financial commitment. Approximately 79% of our loans were rated as investment grade as of June 30, 2020 with external credit ratings, or equivalent, of "BBB-" or better.

- *Speculative*. Assets consisting of counterparties that face ongoing uncertainties or exposure to business, financial or economic downturns. However, these counterparties may have financial flexibility or access to financial alternatives, which allow for financial commitments to be met. Assets rated as speculative, which is approximately 21% of our loans as of June 30, 2020, primarily comprises our leveraged loans. Approximately 83% of those leveraged loans have an external credit rating, or equivalent, of "BB" or "B" as of June 30, 2020.
- *Special Mention.* Assets consisting of counterparties with potential weaknesses that, if uncorrected, may result in deterioration of repayment prospects.
- *Substandard.* Assets consisting of counterparties with well-defined weakness that jeopardizes repayment with the possibility we will sustain some loss.
- *Doubtful.* Assets consisting of counterparties with well-defined weakness which make collection or liquidation in full highly questionable and improbable.
- *Loss.* Assets which are uncollectible or have little value.

The following tables present our recorded investment in each class of loans by credit quality indicator as of the dates indicated:

June 30, 2020 (In millions)	Commercial and Financial	Commercial Real Estate	Total Loans
Investment grade	$ 19,413	$ 1,777	$ 21,190
Speculative	5,449	167	5,616
Special mention	54	—	54
Total[1]	$ 24,916	$ 1,944	$ 26,860

December 31, 2019 (In millions)	Commercial and Financial	Commercial Real Estate	Total Loans
Investment grade	$ 19,501	$ 1,766	$ 21,267
Speculative	5,008	—	5,008
Special mention	25	—	25
Substandard	9	—	9
Total[1]	$ 24,543	$ 1,766	$ 26,309

[1] Loans Include $4,455 million and $3,256 million of overdrafts as of June 30, 2020 and December 31, 2019, respectively. Overdrafts are short-term in nature and do not present a significant credit risk to us.

Financial assets held at amortized cost that are not loans are disaggregated based on product type. We assess credit risk based on the entire balance within fees receivable.

Securities purchased under a resale agreement and securities-financing within our principal business utilized the collateral maintenance provisions included within ASC 326. An allowance for credit losses is recognized for any remaining exposure based on counterparty type.

The allowance for credit losses for off-balance sheet credit exposures, recorded in accrued expenses and other liabilities in our consolidated statement of condition, represents management's' estimate of credit losses primarily in outstanding letters and lines of credit and other credit-enhancement facilities provided to our clients and outstanding as of the balance sheet date. The allowance is evaluated quarterly by management. Factors considered in evaluating the appropriate level of this allowance are similar to those considered with respect to the allowance for credit losses on financial assets held at amortized cost. Provisions to maintain the allowance at a level considered by us to be appropriate to absorb estimated credit losses in outstanding facilities are recorded in the provision for credit losses in our consolidated statement of income.

The following table presents the amortized cost basis, by year of origination and credit quality indicator as of June 30, 2020. For origination years before the fifth annual period, we present the aggregate amortized cost basis of loans. For purchased loans, the date of issuance is used to determine the year of origination, not the date of acquisition. For modified, extended or renewed lending arrangements, we evaluate whether a credit event has occurred which would consider the loan to be a new arrangement.

(In millions)	2020	2019	2018	2017	2016	2015	Prior	Revolving Loans	Total[1][2]
Domestic loans:									
Commercial and financial:									
Risk Rating:									
Investment grade	$ 2,478	$ 438	$ 5	$ 120	$ —	$ —	$ —	$ 10,465	$ 13,506
Speculative	322	999	944	741	108	—	—	835	3,949
Special mention	—	—	29	25	—	—	—	—	54
Total commercial and financing	$ 2,800	$ 1,437	$ 978	$ 886	$ 108	$ —	$ —	$ 11,300	$ 17,509
Commercial real estate:									
Risk Rating:									
Investment grade	$ 178	$ 440	$ 654	$ 279	$ 197	$ 29	$ —	$ —	$ 1,777
Speculative	—	110	57	—	—	—	—	—	167
Total commercial real estate	$ 178	$ 550	$ 711	$ 279	$ 197	$ 29	$ —	$ —	$ 1,944
Non-U.S. loans:									
Commercial and financial:									
Risk Rating:									
Investment grade	$ 2,001	$ —	$ —	$ —	$ —	$ —	$ —	$ 3,906	$ 5,907
Speculative	336	412	348	208	25	—	63	108	1,500
Total commercial and financing	$ 2,337	$ 412	$ 348	$ 208	$ 25	$ —	$ 63	$ 4,014	$ 7,407
Total loans	$ 5,315	$ 2,399	$ 2,037	$ 1,373	$ 330	$ 29	$ 63	$ 15,314	$ 26,860
Off-balance sheet commitments and guarantees:									
Unfunded credit facilities	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ 33,126	$ 33,126
Indemnified securities financing	367,214	—	—	—	—	—	—	—	367,214
Standby letters of credit	—	—	—	—	—	—	—	3,246	3,246
Total off-balance sheet commitments and guarantees	$ 367,214	$ —	$ —	$ —	$ —	$ —	$ —	$ 36,372	$ 403,586
Total financing receivables and off-balance sheet commitments and guarantees	$ 372,529	$ 2,399	$ 2,037	$ 1,373	$ 330	$ 29	$ 63	$ 51,686	$ 430,446

[1] Any reserve associated with accrued interest is not material.
[2] As of June 30, 2020, accrued interest receivable of $63 million included in the amortized cost basis of loans has been excluded from the amortized cost basis within this table.

The following table presents the activity in the allowance for credit losses by portfolio and class for the periods indicated:

	Three Months Ended June 30, 2020					
	Commercial and Financial					
(In millions)	Leveraged Loans	Other Loans	Commercial Real Estate	Off-Balance Sheet Commitments	All Other [2]	Total Credit Reserve
Allowance for credit losses:						
Beginning balance	$ 83	$ 10	$ 4	$ 22	$ 5	$ 124
Charge-offs[1]	(14)	—	—	—	—	(14)
Provision	43	10	4	(4)	(1)	52
FX translation	1	—	—	—	—	1
Ending balance	$ 113	$ 20	$ 8	$ 18	$ 4	$ 163

[1] Related to the sale of leveraged loans in the second quarter of 2020.
[2] Includes the reserves on HTM investment securities.

	Six Months Ended June 30, 2020					
	Commercial and Financial					
(In millions)	Leveraged Loans	Other Loans	Commercial Real Estate	Off-Balance Sheet Commitments	All Other[2]	Total Credit Reserve
Allowance for credit losses:						
Beginning balance	$ 61	$ 10	$ 2	$ 19	$ 1	$ 93
Charge-offs[1]	(19)	—	—	—	—	(19)
Provision	70	10	6	(1)	3	88
FX translation	1	—	—	—	—	1
Ending balance	$ 113	$ 20	$ 8	$ 18	$ 4	$ 163

[1] Primarily related to the sale of leveraged loans in the second quarter of 2020.
[2] Includes the reserves on HTM investment securities.

Allowance for Loan Losses under Incurred Loss Methodology for the period ended June 30, 2019

The following table presents activity in the allowance for loan losses as of June 30, 2019 under the incurred loss methodology:

(In millions)	Three months ended June 30, 2019
Allowance for loan losses:	
Beginning balance	$ 70
Provision for credit losses[1]	1
Other[2]	1
Ending balance	$ 72

(In millions)	Six months ended June 30, 2019
Allowance for loan losses:	
Beginning balance	$ 67
Provision for credit losses[1]	5
Ending balance	$ 72

[1] The provisions for credit losses were primarily attributable to exposure to purchased leveraged loans to non-investment grade loans.
[2] Consists primarily of FX translation.

Loans are reviewed on a regular basis, and any provisions for loan losses that are recorded reflect management's estimate of the amount necessary to maintain the allowance for loan losses at a level considered appropriate to absorb estimated incurred losses in the loan and lease portfolio. The $52 million provision for credit losses recognized for the three months ended June 30, 2020 was primarily due to portfolio credit migration within our loan portfolio, as well as a downward revision in management's economic outlook.

Note 5. Goodwill and Other Intangible Assets

The following table presents changes in the carrying amount of goodwill during the periods indicated:

(In millions)	Investment Servicing[1]	Investment Management	Total
Goodwill:			
Ending balance December 31, 2018	$ 7,180	$ 266	$ 7,446
Acquisitions[2]	122	—	122
Foreign currency translation	(13)	1	(12)
Ending balance December 31, 2019	$ 7,289	$ 267	$ 7,556
Foreign currency translation	**(16)**	**(2)**	**(18)**
Ending balance June 30, 2020	**$ 7,273**	**$ 265**	**$ 7,538**

[1] Investment Servicing includes our acquisition of CRD.
[2] We completed the purchase price accounting for CRD as of March 31, 2019. Upon completion of valuation procedures related to the acquired assets and assumed liabilities, primarily the identifiable intangible assets, we recorded measurement period adjustments resulting in an increase in the goodwill of $113 million and a decrease of $93 million in intangible assets.

The following table presents changes in the net carrying amount of other intangible assets during the periods indicated:

(In millions)	Investment Servicing[1]	Investment Management	Total
Other intangible assets:			
Ending balance December 31, 2018	$ 2,218	$ 151	$ 2,369
Acquisitions[2]	(93)	—	(93)
Amortization	(207)	(29)	(236)
Foreign currency translation	(10)	—	(10)
Ending balance December 31, 2019	$ 1,908	$ 122	$ 2,030
Amortization	**(102)**	**(14)**	**(116)**
Ending balance June 30, 2020	**$ 1,806**	**$ 108**	**$ 1,914**

[1] Investment Servicing includes our acquisition of CRD.
[2] We completed the purchase price accounting for CRD as of March 31, 2019. Upon completion of valuation procedures related to the acquired assets and assumed liabilities, primarily the identifiable intangible assets, we recorded measurement period adjustments resulting in a decrease in the fair value of intangible assets of $93 million in intangible assets with a corresponding increase to goodwill.

The following table presents the gross carrying amount, accumulated amortization and net carrying amount of other intangible assets by type as of the dates indicated:

June 30, 2020 (In millions)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Other intangible assets:			
Client relationships	**$ 2,639**	**$ (1,329)**	**$ 1,310**
Technology	**390**	**(92)**	**298**
Core deposits	**673**	**(398)**	**275**
Other	**100**	**(69)**	**31**
Total	**$ 3,802**	**$ (1,888)**	**$ 1,914**

December 31, 2019 (In millions)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Other intangible assets:			
Client relationships	$ 3,104	$ (1,718)	$ 1,386
Technology	403	(87)	316
Core deposits	673	(381)	292
Other	100	(64)	36
Total	$ 4,280	$ (2,250)	$ 2,030

Note 6. Other Assets

The following table presents the components of other assets as of the dates indicated:

(In millions)	June 30, 2020	December 31, 2019
Securities borrowed[1]	$ 13,035	$ 18,524
Derivative instruments, net	4,771	4,753
Bank-owned life insurance	3,442	3,395
Investments in joint ventures and other unconsolidated entities	2,696	2,899
Collateral, net	1,779	874
Receivable for securities settlement	1,368	336
Right-of-use assets	802	858
Accounts receivable	715	432
Prepaid expenses	446	395
Income taxes receivable	293	309
Deferred tax assets, net of valuation allowance[2]	199	216
Deposits with clearing organizations	58	58
Other[3]	891	962
Total	$ 30,495	$ 34,011

[1] Refer to Note 8, for further information on the impact of collateral on our financial statement presentation of securities borrowing and securities lending transactions.
[2] Deferred tax assets and liabilities recorded in our consolidated statement of condition are netted within the same tax jurisdiction.
[3] Consists primarily of advances for $0.60 billion and $0.67 billion as of June 30, 2020 and December 31, 2019, respectively.

Note 7. Derivative Financial Instruments

We use derivative financial instruments to support our clients' needs and to manage our interest rate and currency risks. These financial instruments consist of FX contracts such as forwards, futures and options contracts; interest rate contracts such as interest rate swaps (cross currency and single currency) and futures; and other derivative contracts. Derivative instruments used for risk management purposes that are highly effective in offsetting the risk being hedged are generally designated as hedging instruments in hedge accounting relationships while others are economic hedges and not designated in hedge accounting relationships. For additional information on our derivative financial instruments, including derivatives not designated as hedging instruments, refer to pages 147 to 148 in Note 10 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

Derivatives Designated as Hedging Instruments

For additional information on our derivatives designated as hedging instruments, including our risk management objectives and hedging documentation methodologies, refer to page 148 in Note 10 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

Fair Value Hedges

Derivatives designated as fair value hedges are utilized to mitigate the risk of changes in the fair values of recognized assets and liabilities, including long-term debt, AFS securities, and foreign currency investment securities. We use interest rate or FX contracts in this manner to manage our exposure to changes in the fair value of hedged items caused by changes in interest rates or FX rates.

Changes in the fair value of the derivative and changes in fair value of the hedged item due to changes in the hedged risk are recognized in earnings in the same line item. If a hedge is terminated, all remaining adjustments to the carrying amount of the hedged item shall be amortized over a period that is consistent with the amortization of other discounts or premiums associated with the hedged item.

Cash Flow Hedges

Derivatives designated as cash flow hedges are utilized to offset the variability of cash flows of recognized assets or liabilities or forecasted transactions. We have entered into FX contracts to hedge the change in cash flows attributable to FX movements in foreign currency denominated investment securities. Additionally, we have entered into interest rate swap agreements to hedge the forecasted cash flows associated with LIBOR indexed floating-rate loans. The interest rate swaps synthetically convert the loan interest receipts from a variable-rate to a fixed-rate, thereby mitigating the risk attributable to changes in the LIBOR benchmark rate.

Changes in fair value of the derivatives designated as cash flow hedges are initially recorded in AOCI and then reclassified into earnings in the same period or periods during which the hedged forecasted transaction affects earnings and are presented in the same income statement line item as the earnings effect of the hedged item. If the hedge relationship is terminated, the change in fair value on the derivative recorded in AOCI is reclassified into earnings consistent with the timing of the hedged item. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge terms, any related derivative values recorded in AOCI are immediately recognized in earnings. As of June 30, 2020, the maximum maturity date of the underlying loans is approximately 4 years.

Net Investment Hedges

Derivatives categorized as net investment hedges are entered into to protect the net investment in our foreign operations against adverse changes in exchange rates. We use FX forward contracts to convert the foreign currency risk to U.S. dollars to mitigate our exposure to fluctuations in FX rates. The changes in fair value of the FX forward contracts are recorded, net of taxes, in the foreign currency translation component of other comprehensive income (OCI).

The following table presents the aggregate contractual, or notional, amounts of derivative financial instruments entered into in connection with our trading and asset-and-liability management activities as of the dates indicated:

(In millions)	June 30, 2020	December 31, 2019
Derivatives not designated as hedging instruments:		
Interest-rate contracts:		
Futures	$ 2,500	$ 4,368
Foreign exchange contracts:		
Forward, swap and spot	2,614,018	2,378,808
Options purchased	1,165	1,581
Options written	907	1,110
Futures	1,436	1,040
Other:		
Stable value contracts[1]	29,060	26,895
Deferred value awards[2]	426	389
Derivatives designated as hedging instruments:		
Interest-rate contracts:		
Swap agreements	15,929	15,196
Foreign exchange contracts:		
Forward and swap	5,516	3,176

[1] The notional value of the stable value contracts represents our maximum exposure. However, exposure to various stable value contracts is generally contractually limited to substantially lower amounts than the notional values.
[2] Represents grants of deferred value awards to employees; refer to pages 147 to 148 in Note 10 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

Notional amounts are provided here as an indication of the volume of our derivative activity and serve as a reference to calculate the fair values of the derivative.

The following tables present the fair value of derivative financial instruments, excluding the impact of master netting agreements, recorded in our consolidated statement of condition as of the dates indicated. The impact of master netting agreements is provided in Note 8.

	Fair Value			
	Derivative Assets[1]		Derivative Liabilities[2]	
(In millions)	June 30, 2020	December 31, 2019	June 30, 2020	December 31, 2019
Derivatives not designated as hedging instruments:				
Foreign exchange contracts	$ 15,974	$ 15,140	$ 15,547	$ 15,054
Other derivative contracts	—	—	185	182
Total	$ 15,974	$ 15,140	$ 15,732	$ 15,236
Derivatives designated as hedging instruments:				
Foreign exchange contracts	$ 16	$ —	$ 138	$ 96
Interest-rate contracts	51	8	56	49
Total	$ 67	$ 8	$ 194	$ 145

[1] Derivative assets are included within other assets in our consolidated statement of condition.
[2] Derivative liabilities are included within accrued expenses and other liabilities in our consolidated statement of condition.

The following tables present the impact of our use of derivative financial instruments on our consolidated statement of income for the periods indicated:

	Location of Gain (Loss) on Derivative in Consolidated Statement of Income	Amount of Gain (Loss) on Derivative Recognized in Consolidated Statement of Income			
		Three Months Ended June 30,		Six Months Ended June 30,	
(In millions)		2020	2019	2020	2019
Derivatives not designated as hedging instruments:					
Foreign exchange contracts	Foreign exchange trading services revenue	$ 215	$ 156	$ 548	$ 316
Foreign exchange contracts	Interest expense	17	(59)	19	(98)
Interest rate contracts	Foreign exchange trading services revenue	—	—	3	(1)
Other derivative contracts	Compensation and employee benefits	(45)	(46)	(112)	(120)
Total		$ 187	$ 51	$ 458	$ 97

The following table shows the carrying amount and associated cumulative basis adjustments related to the application of hedge accounting that is included in the carrying amount of hedged assets and liabilities in fair value hedging relationships:

	June 30, 2020			
	Hedged Items Currently Designated		Hedged Items No Longer Designated[1]	
(In millions)	Carrying Amount of Assets and Liabilities	Cumulative Hedge Accounting Basis Adjustments	Carrying Amount of Assets and Liabilities	Cumulative Hedge Accounting Basis Adjustments
Long-term debt	$ 10,515	$ 762	$ 1,200	$ (2)
Available-for-sale securities	873	55	—	—
Total	$ 11,388	$ 817	$ 1,200	$ (2)

	December 31, 2019			
	Hedged Items Currently Designated		Hedged Items No Longer Designated[1]	
(In millions)	Carrying Amount of Assets and Liabilities	Cumulative Hedge Accounting Basis Adjustments	Carrying Amount of Assets and Liabilities	Cumulative Hedge Accounting Basis Adjustments
Long-term debt	$ 9,769	$ 164	$ 1,199	$ (8)
Available-for-sale securities	940	49	—	—
Total	$ 10,709	$ 213	$ 1,199	$ (8)

[1] Represents hedged items no longer designated in qualifying fair value hedging relationships for which an associated basis adjustment exists at the balance sheet date.

As of June 30, 2020 and December 31, 2019, the total notional amount of the interest rate swaps of fair value hedges was $10.93 billion and $10.20 billion, respectively.

The following tables present the impact of our use of derivative financial instruments on our consolidated statement of income for the periods indicated:

		Three Months Ended June 30,				Three Months Ended June 30,	
		2020	2019			2020	2019
(In millions)	Location of Gain (Loss) on Derivative in Consolidated Statement of Income	Amount of Gain (Loss) on Derivative Recognized in Consolidated Statement of Income		Hedged Item in Fair Value Hedging Relationship	Location of Gain (Loss) on Hedged Item in Consolidated Statement of Income	Amount of Gain (Loss) on Hedged Item Recognized in Consolidated Statement of Income	
Derivatives designated as fair value hedges:							
Interest rate contracts	Net interest income	$ 3	$ (8)	Available-for-sale securities[1]	Net interest income	$ (4)	$ 7
Interest rate contracts	Net interest income	36	185	Long-term debt	Net interest income	(39)	(183)
Total		$ 39	$ 177			$ (43)	$ (176)

		Six Months Ended June 30,				Six Months Ended June 30,	
		2020	2019			2020	2019
(In millions)	Location of Gain (Loss) on Derivative in Consolidated Statement of Income	Amount of Gain (Loss) on Derivative Recognized in Consolidated Statement of Income		Hedged Item in Fair Value Hedging Relationship	Location of Gain (Loss) on Hedged Item in Consolidated Statement of Income	Amount of Gain (Loss) on Hedged Item Recognized in Consolidated Statement of Income	
Derivatives designated as fair value hedges:							
Interest rate contracts	Net interest income	(8)	(11)	Available-for-sale securities[2]	Net interest income	6	11
Interest rate contracts	Net interest income	583	291	Long-term debt	Net interest income	(574)	(285)
Total		$ 575	$ 280			$ (568)	$ (274)

[1] In the three months ended June 30, 2020, $3 million of net unrealized gains on AFS investment securities designated in fair value hedges was recognized in OCI compared to $5 million of net unrealized gains in the same period in 2019.

[2] In the six months ended June 30, 2020, $4 million of net unrealized losses on AFS investment securities designated in fair value hedges was recognized in OCI compared to $3 million of net unrealized gains in the same period in 2019.

(In millions)	Three Months Ended June 30, 2020 Amount of Gain or (Loss) Recognized in Other Comprehensive Income on Derivative	Three Months Ended June 30, 2019 Amount of Gain or (Loss) Recognized in Other Comprehensive Income on Derivative	Location of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income	Three Months Ended June 30, 2020 Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income	Three Months Ended June 30, 2019 Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income
Derivatives designated as cash flow hedges:					
Interest rate contracts	$ 21	$ 21	Net interest income	$ 14	$ (2)
Foreign exchange contracts	9	(15)	Net interest income	7	7
Total derivatives designated as cash flow hedges	$ 30	$ 6		$ 21	$ 5
Derivatives designated as net investment hedges:					
Foreign exchange contracts	$ (86)	$ (2)	Gains (Losses) related to investment securities, net	$ —	$ —
Total derivatives designated as net investment hedges	(86)	(2)		—	—
Total	$ (56)	$ 4		$ 21	$ 5

(In millions)	Six Months Ended June 30, 2020 Amount of Gain or (Loss) Recognized in Other Comprehensive Income on Derivative	Six Months Ended June 30, 2019 Amount of Gain or (Loss) Recognized in Other Comprehensive Income on Derivative	Location of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income	Six Months Ended June 30, 2020 Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income	Six Months Ended June 30, 2019 Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income into Income
Derivatives designated as cash flow hedges:					
Interest rate contracts	$ 179	$ 31	Net interest income	$ 14	$ (4)
Foreign exchange contracts	19	12	Net interest income	14	14
Total derivatives designated as cash flow hedges	$ 198	$ 43		$ 28	$ 10
Derivatives designated as net investment hedges:					
Foreign exchange contracts	$ 22	$ 18	Gains (losses) related to investment securities, net	$ —	$ —
Total derivatives designated as net investment hedges	22	18		—	—
Total	$ 220	$ 61		$ 28	$ 10

Derivatives Netting and Credit Contingencies

Netting

Derivatives receivable and payable as well as cash collateral from the same counterparty are netted in the consolidated statement of condition for those counterparties with whom we have legally binding master netting agreements in place. In addition to cash collateral received and transferred presented on a net basis, we also receive and transfer collateral in the form of securities, which mitigate credit risk but are not eligible for netting. Additional information on netting is provided in Note 8.

Credit Contingencies

Certain of our derivatives are subject to master netting agreements with our derivative counterparties containing credit risk-related contingent features, which requires us to maintain an investment grade credit rating with the various credit rating agencies. If our rating falls below investment grade, we would be in violation of the provisions, and counterparties to the derivatives could request immediate payment or demand full overnight collateralization on derivatives instruments in net liability positions. The aggregate fair value of all derivatives with credit contingent features and in a liability position as of June 30, 2020 totaled approximately $1.77 billion, against which we provided $1.03 billion of collateral in the normal course of business. If our credit related contingent features underlying these agreements were triggered as of June 30, 2020, the maximum additional collateral we would be required to post to our counterparties is approximately $0.74 billion.

Note 8. Offsetting Arrangements

For additional information on our offsetting arrangements, refer to page 152 in Note 11 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

As of June 30, 2020 and December 31, 2019, the value of securities received as collateral from third parties where we are permitted to transfer or re-pledge the securities totaled $8.86 billion and $10.09 billion, respectively, and the fair value of the portion that had been transferred or re-pledged as of the same dates was $1.94 billion and $5.72 billion, respectively.

The following tables present information about the offsetting of assets related to derivative contracts and secured financing transactions, as of the dates indicated:

Assets:	June 30, 2020				
				Gross Amounts Not Offset in Statement of Condition	
(In millions)	Gross Amounts of Recognized Assets[1][2]	Gross Amounts Offset in Statement of Condition[3]	Net Amounts of Assets Presented in Statement of Condition	Cash and Securities Received[4]	Net Amount[5]
Derivatives:					
Foreign exchange contracts	$ 15,990	$ (9,285)	$ 6,705	$ —	$ 6,705
Interest rate contracts[6]	51	(16)	35	—	35
Cash collateral and securities netting	NA	(1,969)	(1,969)	(451)	(2,420)
Total derivatives	16,041	(11,270)	4,771	(451)	4,320
Other financial instruments:					
Resale agreements and securities borrowing[7][8]	97,012	(79,951)	17,061	(15,367)	1,694
Total derivatives and other financial instruments	$ 113,053	$ (91,221)	$ 21,832	$ (15,818)	$ 6,014

Assets:	December 31, 2019				
				Gross Amounts Not Offset in Statement of Condition	
(In millions)	Gross Amounts of Recognized Assets[1][2]	Gross Amounts Offset in Statement of Condition[3]	Net Amounts of Assets Presented in Statement of Condition	Cash and Securities Received[4]	Net Amount[5]
Derivatives:					
Foreign exchange contracts	$ 15,140	$ (8,081)	$ 7,059	$ —	$ 7,059
Interest rate contracts[6]	8	(4)	4	—	4
Cash collateral and securities netting	NA	(2,310)	(2,310)	(685)	(2,995)
Total derivatives	15,148	(10,395)	4,753	(685)	4,068
Other financial instruments:					
Resale agreements and securities borrowing[7][8]	179,989	(159,978)	20,011	(19,572)	439
Total derivatives and other financial instruments	$ 195,137	$ (170,373)	$ 24,764	$ (20,257)	$ 4,507

[1] Amounts include all transactions regardless of whether or not they are subject to an enforceable netting arrangement.
[2] Refer to Note 1 and Note 2 for additional information about the measurement basis of derivative instruments.
[3] Amounts subject to netting arrangements which have been determined to be legally enforceable and eligible for netting in the consolidated statement of condition.
[4] Includes securities in connection with our securities borrowing transactions.
[5] Includes amounts secured by collateral not determined to be subject to enforceable netting arrangements.
[6] Variation margin payments presented as settlements rather than collateral.
[7] Included in the $17.06 billion as of June 30, 2020 were $4.03 billion of resale agreements and $13.04 billion of collateral provided related to securities borrowing. Included in the $20.01 billion as of December 31, 2019 were $1.49 billion of resale agreements and $18.52 billion of collateral provided related to securities borrowing. Resale agreements and collateral provided related to securities borrowing were recorded in securities purchased under resale agreements and other assets, respectively, in our consolidated statement of condition. Refer to Note 9 for additional information with respect to principal securities finance transactions.
[8] Offsetting of resale agreements primarily relates to our involvement in FICC, where we settle transactions on a net basis for payment and delivery through the Fedwire system.
[NA] Not applicable

The following tables present information about the offsetting of liabilities related to derivative contracts and secured financing transactions, as of the dates indicated:

Liabilities:	June 30, 2020				
				Gross Amounts Not Offset in Statement of Condition	
(In millions)	Gross Amounts of Recognized Liabilities[1][2]	Gross Amounts Offset in Statement of Condition[3]	Net Amounts of Liabilities Presented in Statement of Condition	Cash and Securities Received[4]	Net Amount[5]
Derivatives:					
Foreign exchange contracts	$ 15,685	$ (9,285)	$ 6,400	$ —	$ 6,400
Interest rate contracts[6]	56	(16)	40	—	40
Other derivative contracts	185	—	185	—	185
Cash collateral and securities netting	NA	(1,546)	(1,546)	(571)	(2,117)
Total derivatives	15,926	(10,847)	5,079	(571)	4,508
Other financial instruments:					
Repurchase agreements and securities lending[7][8]	89,465	(79,951)	9,514	(8,036)	1,478
Total derivatives and other financial instruments	$ 105,391	$ (90,798)	$ 14,593	$ (8,607)	$ 5,986

Liabilities:	December 31, 2019				
				Gross Amounts Not Offset in Statement of Condition	
(In millions)	Gross Amounts of Recognized Liabilities[1][2]	Gross Amounts Offset in Statement of Condition[3]	Net Amounts of Liabilities Presented in Statement of Condition	Cash and Securities Received[4]	Net Amount[5]
Derivatives:					
Foreign exchange contracts	$ 15,150	$ (8,081)	$ 7,069	$ —	$ 7,069
Interest rate contracts[6]	49	(4)	45	—	45
Other derivative contracts	182	—	182	—	182
Cash collateral and securities netting	NA	(837)	(837)	(557)	(1,394)
Total derivatives	15,381	(8,922)	6,459	(557)	5,902
Other financial instruments:					
Repurchase agreements and securities lending[7][8]	171,853	(159,977)	11,876	(10,793)	1,083
Total derivatives and other financial instruments	$ 187,234	$ (168,899)	$ 18,335	$ (11,350)	$ 6,985

(1) Amounts include all transactions regardless of whether or not they are subject to an enforceable netting arrangement.
(2) Refer to Note 1 and Note 2 for additional information about the measurement basis of derivative instruments.
(3) Amounts subject to netting arrangements which have been determined to be legally enforceable and eligible for netting in the consolidated statement of condition.
(4) Includes securities provided in connection with our securities lending transactions.
(5) Includes amounts secured by collateral not determined to be subject to enforceable netting arrangements.
(6) Variation margin payments presented as settlements rather than collateral.
(7) Included in the $9.51 billion as of June 30, 2020 were $3.51 billion of repurchase agreements and $6.00 billion of collateral received related to securities lending transactions. Included in the $11.88 billion as of December 31, 2019 were $1.10 billion of repurchase agreements and $10.77 billion of collateral received related to securities lending transactions. Repurchase agreements and collateral received related to securities lending were recorded in securities sold under repurchase agreements and accrued expenses and other liabilities, respectively, in our consolidated statement of condition. Refer to Note 9 for additional information with respect to principal securities finance transactions.
(8) Offsetting of repurchase agreements primarily relates to our involvement in FICC, where we settle transactions on a net basis for payment and delivery through the Fedwire system.
NA Not applicable

The securities transferred under resale and repurchase agreements typically are U.S. Treasury, agency and agency MBS. In our principal securities borrowing and lending arrangements, the securities transferred are predominantly equity securities and some corporate debt securities. The fair value of the securities transferred may increase in value to an amount greater than the amount received under our repurchase and securities lending arrangements, which exposes us to counterparty risk. We require the review of the price of the underlying securities in relation to the carrying value of the repurchase agreements and securities lending arrangements on a daily basis and when appropriate, adjust the cash or security to be obtained or returned to counterparties that is reflective of the required collateral levels.

The following table summarizes our repurchase agreements and securities lending transactions by category of collateral pledged and remaining maturity of these agreements as of the periods indicated:

	As of June 30, 2020				As of December 31, 2019			
(In millions)	Overnight and Continuous	Up to 30 Days	Greater than 90 Days	Total	Overnight and Continuous	Up to 30 Days	Greater than 90 Days	Total
Repurchase agreements:								
U.S. Treasury and agency securities	**$ 79,585**	**$ —**	**$ —**	**$ 79,585**	$ 156,465	$ —	$ —	$ 156,465
Total	**79,585**	**—**	**—**	**79,585**	156,465	—	—	156,465
Securities lending transactions:								
US Treasury and agency securities	**23**	**—**	**—**	**23**	15	—	—	15
Corporate debt securities	**143**	**—**	**—**	**143**	354	—	—	354
Equity securities	**6,509**	**35**	**668**	**7,212**	7,389	—	130	7,519
Other[1]	**2,502**	**—**	**—**	**2,502**	7,500	—	—	7,500
Total	**9,177**	**35**	**668**	**9,880**	15,258	—	130	15,388
Gross amount of recognized liabilities for repurchase agreements and securities lending	**$ 88,762**	**$ 35**	**$ 668**	**$ 89,465**	$ 171,723	$ —	$ 130	$ 171,853

(1) Represents a security interest in underlying client assets related to our enhanced custody business, which assets clients have allowed us to transfer and re-pledge.

Note 9. Commitments and Guarantees

For additional information on our commitments and guarantees, refer to page 155 in Note 12 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

The following table presents the aggregate gross contractual amounts of our off-balance sheet commitments and off-balance sheet guarantees as of the dates indicated:

(In millions)	June 30, 2020	December 31, 2019
Commitments:		
Unfunded credit facilities[1]	**$ 33,126**	$ 29,697
Guarantees[2]:		
Indemnified securities financing	**$ 367,214**	$ 367,901
Standby letters of credit	**3,246**	3,324

[1] As of June 30, 2020, approximately 73% of our unfunded commitments to extend credit expire within one year.
[2] The potential losses associated with these guarantees equal the gross contractual amounts and do not consider the value of any collateral or reflect any participations to independent third parties.

Indemnified Securities Financing

For additional information on our indemnified securities financing, refer to page 155 in Note 12 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

The following table summarizes the aggregate fair values of indemnified securities financing and related collateral, as well as collateral invested in indemnified repurchase agreements, as of the dates indicated:

(In millions)	June 30, 2020	December 31, 2019
Fair value of indemnified securities financing	**$ 367,214**	$ 367,901
Fair value of cash and securities held by us, as agent, as collateral for indemnified securities financing	**384,761**	385,428
Fair value of collateral for indemnified securities financing invested in indemnified repurchase agreements	**53,273**	45,658
Fair value of cash and securities held by us or our agents as collateral for investments in indemnified repurchase agreements	**56,829**	48,887

In certain cases, we participate in securities finance transactions as a principal. As a principal, we borrow securities from the lending client and then lend such securities to the subsequent borrower, either our client or a broker/dealer. Our right to receive and obligation to return collateral in connection with our securities lending transactions are recorded in other assets and other liabilities, respectively, in our consolidated statement of condition. As of June 30, 2020 and December 31, 2019, we had approximately $13.04 billion and $18.52 billion, respectively, of collateral provided and approximately $6.00 billion and $10.77 billion, respectively, of collateral received from clients in connection with our participation in principal securities finance transactions.

FICC Guarantee

As a sponsoring member in the FICC member program, we provide a guarantee to FICC in the event a customer fails to perform its obligations under a transaction. In order to minimize the risk associated with this guarantee, sponsored members acting as buyers generally grant a security interest in the subject securities received under and held on their behalf by State Street. For additional information on our repurchase and reverse repurchase agreements, please refer to Note 8.

Note 10. Contingencies

Legal and Regulatory Matters

In the ordinary course of business, we and our subsidiaries are involved in disputes, litigation, and governmental or regulatory inquiries and investigations, both pending and threatened. These matters, if resolved adversely against us or settled, may result in monetary awards or payments, fines and penalties or require changes in our business practices. The resolution or settlement of these matters is inherently difficult to predict. Based on our assessment of these pending matters, we do not believe that the amount of any judgment, settlement or other action arising from any pending matter is likely to have a material adverse effect on our consolidated financial condition. However, an adverse outcome or development in certain of the matters described below could have a material adverse effect on our consolidated results of operations for the period in which such matter is resolved, or an accrual is determined to be required, on our consolidated financial condition, or on our reputation.

We evaluate our needs for accruals of loss contingencies related to legal and regulatory proceedings on a case-by-case basis. When we have a liability that we deem probable, and we deem the amount of such liability can be reasonably estimated as of the date of our consolidated financial statements, we accrue our estimate of the amount of loss. We also consider a loss probable and establish an accrual when we make, or intend to make, an offer of settlement. Once established, an accrual is subject to subsequent adjustment as a result of additional information. The resolution of legal and regulatory proceedings and the amount of reasonably estimable loss (or range thereof) are inherently difficult to predict, especially in the early stages of proceedings. Even if a loss is probable, an amount (or range) of loss might not be reasonably estimated until the later stages of the proceeding due to many factors such as the presence of complex or

novel legal theories, the discretion of governmental authorities in seeking sanctions or negotiating resolutions in civil and criminal matters, the pace and timing of discovery and other assessments of facts and the procedural posture of the matter (collectively, "factors influencing reasonable estimates").

As of June 30, 2020, our aggregate accruals for loss contingencies for legal, regulatory and related matters totaled approximately $147 million, including potential fines by government agencies and civil litigation with respect to the matters specifically discussed below. To the extent that we have established accruals in our consolidated statement of condition for probable loss contingencies, such accruals may not be sufficient to cover our ultimate financial exposure associated with any settlements or judgments. Any such ultimate financial exposure, or proceedings to which we may become subject in the future, could have a material adverse effect on our businesses, on our future consolidated financial statements or on our reputation.

As of June 30, 2020, for those matters for which we have accrued probable loss contingencies (including the Invoicing Matter described below) and for other matters for which loss is reasonably possible (but not probable) in future periods, and for which we are able to estimate a range of reasonably possible loss, our estimate of the aggregate reasonably possible loss (in excess of any accrued amounts) ranges up to approximately $65 million. Our estimate with respect to the aggregate reasonably possible loss is based upon currently available information and is subject to significant judgment and a variety of assumptions and known and unknown uncertainties, which may change quickly and significantly from time to time, particularly if and as we engage with applicable governmental agencies or plaintiffs in connection with a proceeding. Also, the matters underlying the reasonably possible loss will change from time to time. As a result, actual results may vary significantly from the current estimate.

In certain pending matters, it is not currently feasible to reasonably estimate the amount or a range of reasonably possible loss, and such losses, which may be significant, are not included in the estimate of reasonably possible loss discussed above. This is due to, among other factors, the factors influencing reasonable estimates described above. An adverse outcome in one or more of the matters for which we have not estimated the amount or a range of reasonably possible loss, individually or in the aggregate, could have a material adverse effect on our businesses, on our future consolidated financial statements or on our reputation. Given that our actual losses from any legal or regulatory proceeding for which we have provided an estimate of the reasonably possible loss could significantly exceed such estimate, and given that we cannot estimate reasonably possible loss for all legal and regulatory proceedings as to which we may be subject now or in the future, no conclusion as to our ultimate exposure from current pending or potential legal or regulatory proceedings should be drawn from the current estimate of reasonably possible loss.

The following discussion provides information with respect to significant legal, governmental and regulatory matters.

Invoicing Matter

In 2015, we determined that we had incorrectly invoiced clients for certain expenses. We have reimbursed most of our affected customers for those expenses, and we have implemented enhancements to our billing processes. In connection with our enhancements to our billing processes, we continue to review historical billing practices and may from time to time identify additional remediation. In 2017, we identified an additional area of incorrect expense billing associated with mailing services in our retirement services business. We currently expect the cumulative total of our payments to customers for these invoicing errors, including the error in the retirement services business, to be at least $375 million, all of which has been paid or is accrued. However, we may identify additional remediation costs.

In March 2017, a purported class action was commenced against us alleging that our invoicing practices violated duties owed to retirement plan customers under the Employee Retirement Income Security Act. In addition, 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.

We are also cooperating with investigations by governmental and regulatory authorities on these matters, including the civil and criminal divisions of the DOJ and the DOL, which reviews could result in significant fines or other sanctions, civil and criminal, against us. In June 2019, we reached an agreement with the SEC to settle its claims that we violated the recordkeeping provisions of Section 34(b) of the Investment Company Act of 1940 and caused violations of Section 31(a) of the Investment Company Act and Rules 31a-1(a) and 31a-1(b) thereunder in connection with our overcharges of customers which are registered investment companies. In reaching this settlement, we neither admitted nor denied the claims contained in the SEC’s order, and agreed to pay a civil monetary penalty of $40 million. Also in June 2019, we reached an agreement with the Massachusetts Attorney General’s office to resolve its claims related to this matter. In reaching this settlement, we neither admitted nor denied the claims in the order, and agreed to pay a civil monetary penalty of $5.5 million. The costs associated

with these settlements were within our related previously established accruals for loss contingencies. The SEC and Massachusetts Attorney General's office settlements both recognize that the payment of $48.8 million in disgorgement and interest is satisfied by our direct reimbursements of our customers.

In January 2020, the DOJ outlined a framework for a possible resolution of their review. We are discussing the terms of a potential settlement of this matter with the DOJ. Separately, we have inquired of the DOL as to the status of their review but have not entered into settlement discussions with the DOL. There can be no assurance that any settlement with the DOJ or DOL will be reached on financial or other terms acceptable to us or at all. The aggregate amount of penalties that may potentially be imposed upon us in connection with the resolution of all outstanding investigations into our historical billing practices is not currently known. We have established a legal accrual with respect to the pending governmental investigations and civil litigation with respect to this matter; however, our ultimate liability with respect to this matter might be significantly in excess of our current accrual. Government authorities have significant discretion in criminal and civil matters as to the fines and other penalties they may seek to impose. Any resolution of the DOJ and DOL claims may involve penalties that could be a significant percentage, or a multiple of, all or a portion of the overcharge. The severity of such fines or penalties could take into account factors such as the amount or duration of our incorrect invoicing and the government's or regulators' assessment of the conduct of our employees, as well as prior conduct such as that which resulted in our January 2017 deferred prosecution agreement and settlement of civil claims regarding our indirect FX 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 additional consequences for our business and reputation.

Federal Reserve/Massachusetts Division of Banks Written Agreement

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, Anti-Money Laundering regulations and U.S. economic sanctions regulations promulgated by the Office of Foreign Assets Control. As part of this enforcement action, we have been required to, among other things, implement improvements to our compliance programs. In June 2020, the Federal Reserve and the Massachusetts Division of Banks terminated the written agreement, based on our compliance with its requirements.

Shareholder Litigation

A shareholder of ours has filed a derivative complaint against the Company's past and present officers and directors to recover alleged losses incurred by the Company relating to the invoicing matter and to the Ohio public retirement plans matter.

Income Taxes

In determining our provision for income taxes, we make certain judgments and interpretations with respect to tax laws in jurisdictions in which we have business operations. Because of the complex nature of these laws, in the normal course of our business, we are subject to challenges from U.S. and non-U.S. income tax authorities regarding the amount of income taxes due. These challenges may result in adjustments to the timing or amount of taxable income or deductions or the allocation of taxable income among tax jurisdictions. We recognize a tax benefit when it is more likely than not that our position will result in a tax deduction or credit. Unrecognized tax benefits of approximately $146 million as of June 30, 2020 decreased from $149 million as of December 31, 2019.

We are presently under audit by a number of tax authorities, and the Internal Revenue Service is currently reviewing our U.S. income tax returns for the tax years 2017 and 2018. The earliest tax year open to examination in jurisdictions where we have material operations is 2012. Management believes that we have sufficiently accrued liabilities as of June 30, 2020 for potential tax exposures.

Note 11. Variable Interest Entities

For additional information on our variable interest entities (VIEs), refer to pages 158 to 159 in Note 14 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, "Variable Interest Entities", in our 2019 Form 10-K.

Tax Exempt Investment Program

In the normal course of our business, we structure and sell certificated interests in pools of tax exempt investment grade assets, principally to our mutual fund clients. We structure these pools as partnership trusts, and the assets and liabilities of the trusts are recorded in our consolidated statement of condition as AFS investment securities and other short-term borrowings. As of June 30, 2020 and December 31, 2019, we carried AFS investment securities, composed of securities related to state and political subdivisions, with a fair value of $0.87 billion and $0.94 billion, respectively, and other short-term borrowings of $0.77 billion and $0.82 billion, respectively, in our consolidated statement of condition in connection with these trusts. The interest income and interest expense generated by the investments and certificated interests, respectively, are recorded as components of NII when earned or incurred.

The trusts had a weighted average life of approximately 2.6 years and 3.0 years as of June 30, 2020 and December 31, 2019, respectively.

Interests in Investment Funds

As of June 30, 2020, the aggregate assets and liabilities of our consolidated sponsored investment funds totaled $17 million and $4 million, respectively. As of December 31, 2019, the aggregate assets and liabilities of our consolidated sponsored investment funds totaled $21 million and $5 million, respectively.

As of June 30, 2020 and December 31, 2019, our maximum total exposure associated with the consolidated sponsored investment funds totaled $13 million and $16 million, respectively, and represented the value of our economic ownership interest in the funds.

We managed certain funds, considered VIEs, in which we held a variable interest but for which we were not deemed to be the primary beneficiary. Our potential maximum loss exposure related to these unconsolidated funds totaled $20 million as of June 30, 2020 and $21 million as of December 31, 2019, and represented the carrying value of our investments, which are recorded in other assets in our consolidated statement of condition. The amount of loss we may recognize during any period is limited to the carrying amount of our investments in the unconsolidated funds.

Note 12. Shareholders' Equity

Preferred Stock

The following table summarizes selected terms of each of the series of the preferred stock issued and outstanding as of June 30, 2020:

Preferred Stock[2]:	Issuance Date	Depositary Shares Issued	Ownership Interest Per Depositary Share	Liquidation Preference Per Share	Liquidation Preference Per Depositary Share	Per Annum Dividend Rate	Dividend Payment Frequency	Carrying Value as of June 30, 2020 (In millions)	Redemption Date[1]
Series D	February 2014	30,000,000	1/4,000th	$ 100,000	$ 25	5.90% to but excluding March 15, 2024, then a floating rate equal to the three-month LIBOR plus 3.108%	Quarterly	$ 742	March 15, 2024
Series F	May 2015	750,000	1/100th	100,000	1,000	5.25% to but excluding September 15, 2020, then a floating rate equal to the three-month LIBOR plus 3.597%	Semi-annually	742	September 15, 2020
Series G	April 2016	20,000,000	1/4,000th	100,000	25	5.35% to but excluding March 15, 2026, then a floating rate equal to the three-month LIBOR plus 3.709%	Quarterly	493	March 15, 2026
Series H	September 2018	500,000	1/100th	100,000	1,000	5.625% to but excluding December 15, 2023, then a floating rate equal to the three-month LIBOR plus 2.539%	Semi-annually	494	December 15, 2023

[1] On the redemption date, or any dividend payment date thereafter, the preferred stock and corresponding depositary shares may be redeemed by us, in whole or in part, at the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

[2] The preferred stock and corresponding depositary shares may be redeemed at our option in whole, but not in part, prior to the redemption date upon the occurrence of a regulatory capital treatment event, as defined in the certificate of designation, at a redemption price equal to the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

The following table presents the dividends declared for each of the series of preferred stock issued and outstanding for the periods indicated:

	Three Months Ended June 30,					
	2020			2019		
	Dividends Declared per Share	Dividends Declared per Depositary Share	Total (In millions)[1]	Dividends Declared per Share	Dividends Declared per Depositary Share	Total (In millions)
Preferred Stock:						
Series C[1]	$ —	$ —	$ —	$ 1,313	$ 0.33	$ 7
Series D	1,475	0.37	11	1,475	0.37	11
Series E[2]	—	—	—	1,500	0.38	11
Series F	—	—	—	—	—	—
Series G	1,338	0.33	7	1,338	0.33	7
Series H	28.13	28.13	14	2,813	28.13	14
Total			$ 32			$ 50

	Six Months Ended June 30,					
	2020			2019		
(Dollars in millions, except per share amounts)	Dividends Declared per Share	Dividends Declared per Depositary Share	Total	Dividends Declared per Share	Dividends Declared per Depositary Share	Total
Preferred Stock:						
Series C[1]	$ 1,313	$ 0.33	$ 6	$ 2,626	$ 0.66	$ 13
Series D	2,950	0.74	22	2,950	0.74	22
Series E[2]	—	—	—	3,000	0.76	22
Series F	2,625	26.25	20	2,625	26.25	20
Series G	2,676	0.66	14	2,676	0.66	14
Series H	2,813	28.13	14	2,813	28.13	14
Total			$ 76			$ 105

[1] We redeemed all outstanding Series C non-cumulative perpetual preferred stock as of March 15, 2020 at a redemption price of $500 million ($100,000 per share equivalent to $25.00 per depositary share) plus accrued and unpaid dividends.
[2] We redeemed all outstanding Series E non-cumulative perpetual preferred stock as of December 15, 2019 at a redemption price of $750 million ($100,000 per share equivalent to $25.00 per depositary share) plus accrued and unpaid dividends.

In July 2020, we declared dividends in our Series D, F and G preferred stock of approximately $1,475, $2,625 and $1,338, respectively, per share, or approximately $0.37, $26.25 and $0.33, respectively, per depositary share. These dividends total approximately $11 million, $20 million and $7 million on our Series D, F and G preferred stock respectively, which will be paid in September 2020.

Common Stock

In June 2019, our Board approved a common stock purchase program authorizing the purchase of up to $2.0 billion of our common stock from July 1, 2019 through June 30, 2020 (the 2019 Program). On March 16, 2020, we, along with the other U.S. G-SIBs, suspended common share repurchases through the second quarter of 2020 to bolster capital in response to the COVID-19 pandemic. As a result, we had no repurchases of our common stock in the second quarter of 2020 under our common stock purchase program announced in June 2019.

In June 2020, the Federal Reserve released results from the CCAR 2020 submission, which included limitations on all CCAR banks' ability to distribute capital during the third quarter of 2020, beyond common stock dividends at their current levels. In addition, all CCAR banks are required to resubmit their capital plan and stress test results based on a new scenario to be provided by the Federal Reserve. It is unclear at this time when the results of the new stress test will be available, whether they will impact our calculated SCB and our ability to execute a common share repurchase program in the fourth quarter of 2020.

In June 2018, our Board approved a common stock purchase program authorizing the purchase of up to $1.2 billion of our common stock through June 30, 2019 (the 2018 Program). We repurchased $300 million of our common stock in each of the first and second quarters of 2019 under the 2018 Program.

The table below presents the activity under our common stock purchase program during the periods indicated:

	Three Months Ended June 30, 2020			Six Months Ended June 30, 2020		
	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)
2019 Program	**—**	**$ —**	**$ —**	**6.5**	**$ 77.35**	**$ 500**

	Three Months Ended June 30, 2019			Six Months Ended June 30, 2019		
	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)	Shares Acquired (In millions)	Average Cost per Share	Total Acquired (In millions)
2018 Program	4.6	$ 65.25	$ 300	8.8	$ 67.97	$ 600

The table below presents the dividends declared on common stock for the periods indicated:

	Three Months Ended June 30,			
	2020		2019	
	Dividends Declared per Share	Total (In millions)	Dividends Declared per Share	Total (In millions)
Common Stock	**$ 0.52**	**$ 183**	$ 0.47	$ 175

	Six Months Ended June 30,			
	2020		2019	
	Dividends Declared per Share	Total (In millions)	Dividends Declared per Share	Total (In millions)
Common Stock	**$ 1.04**	**$ 366**	$ 0.94	$ 352

Accumulated Other Comprehensive Income (Loss)

The following table presents the after-tax components of AOCI as of the dates indicated:

	Six Months Ended June 30,	
(In millions)	**2020**	**2019**
Net unrealized (losses) on cash flow hedges	**$ 53**	$ (70)
Net unrealized gains on available-for-sale securities portfolio	**899**	372
Net unrealized gains related to reclassified available-for-sale securities	**7**	57
Net unrealized gains on available-for-sale securities	**906**	429
Net unrealized (losses) on available-for-sale securities designated in fair value hedges	**(40)**	(51)
Net unrealized gains on hedges of net investments in non-U.S. subsidiaries	**68**	34
Non-credit impairment on held-to-maturity securities previously identified under ASC 320	**(2)**	(2)
Net unrealized (losses) on retirement plans	**(173)**	(179)
Foreign currency translation	**(1,242)**	(1,035)
Total	**$ (430)**	$ (874)

The following table presents changes in AOCI by component, net of related taxes, for the periods indicated:

(In millions)	Net Unrealized Gains (Losses) on Cash Flow Hedges	Net Unrealized Gains (Losses) on Available-for-Sale Securities	Net Unrealized Gains (Losses) on Hedges of Net Investments in Non-U.S. Subsidiaries	Non-credit Impairment on Held-to-Maturity Securities	Net Unrealized Losses on Retirement Plans	Foreign Currency Translation	Total
Balance as of December 31, 2019	$ (70)	$ 409	$ 46	$ (2)	$ (187)	$ (1,072)	$ (876)
Other comprehensive income (loss) before reclassifications	**103**	**456**	**22**	**—**	**—**	**(170)**	**411**
Amounts reclassified into (out of) earnings	**20**	**1**	**—**	**—**	**14**	**—**	**35**
Other comprehensive income (loss)	**123**	**457**	**22**	**—**	**14**	**(170)**	**446**
Balance as of June 30, 2020	**$ 53**	**$ 866**	**$ 68**	**$ (2)**	**$ (173)**	**$ (1,242)**	**$ (430)**

(In millions)	Net Unrealized Gains (Losses) on Cash Flow Hedges	Net Unrealized Gains (Losses) on Available-for-Sale Securities	Net Unrealized Gains (Losses) on Hedges of Net Investments in Non-U.S. Subsidiaries	Other-Than-Temporary Impairment on Held-to-Maturity Securities	Net Unrealized Losses on Retirement Plans	Foreign Currency Translation	Total
Balance as of December 31, 2018	$ (89)	$ (175)	$ 16	$ (2)	$ (143)	$ (963)	$ (1,356)
Other comprehensive income (loss) before reclassifications	18	532	21	2	—	(5)	568
Reclassification of certain tax effects[1]	(6)	21	(3)	(1)	(28)	(67)	(84)
Amounts reclassified into (out of) earnings	7	—	—	(1)	(8)	—	(2)
Other comprehensive income (loss)	19	553	18	—	(36)	(72)	482
Balance as of June 30, 2019	$ (70)	$ 378	$ 34	$ (2)	$ (179)	$ (1,035)	$ (874)

[1] Represents the reclassification from accumulated other comprehensive income into retained earnings as a result of our adoption of ASU 2018-02 - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income in the first quarter of 2019.

The following table presents after-tax reclassifications into earnings for the periods indicated:

	Three Months Ended June 30,		
	2020	2019	
(In millions)	Amounts Reclassified into (out of) Earnings		Affected Line Item in Consolidated Statement of Income
Available-for-sale securities:			
Net realized gains from sales of available-for-sale securities, net of related taxes of zero and zero, respectively	**$ —**	$ —	Net gains (losses) from sales of available-for-sale securities
Cash flow hedges:			
Gain reclassified from accumulated other comprehensive income into Income, net of related taxes of $5 and $1	**15**	4	Net interest income reclassified from other comprehensive income
Retirement plans:			
Amortization of actuarial losses, net of related taxes of zero and zero, respectively	**2**	—	Compensation and employee benefits expenses
Total reclassifications into AOCI	**$ 17**	$ 4	

	Six Months Ended June 30,		
	2020	2019	
(In millions)	Amounts Reclassified into (out of) Earnings		Affected Line Item in Consolidated Statement of Income
Available-for-sale securities:			
Net realized gains (losses) from sales of available-for-sale securities, net of related taxes of $1 and zero, respectively	**$ 1**	$ —	Net gains (losses) from sales of available-for-sale securities
Held-to-maturity securities:			
Non-credit impairment on held-to-maturity securities previously identified under ASC 320, net of related taxes of zero and zero, respectively[1]	**—**	(1)	Losses reclassified (from) to other comprehensive income
Cash flow hedges:			
Gain reclassified from accumulated other comprehensive income into Income, net of related taxes of $7 and $3	**20**	7	Net interest income reclassified from other comprehensive income
Retirement plans:			
Amortization of actuarial losses, net of related taxes of $4 and ($4), respectively	**14**	(8)	Compensation and employee benefits expenses
Total reclassifications (into) out of Accumulated other comprehensive loss	**$ 35**	$ (2)	

[1] We adopted ASU 2016-13, Financial Instruments - Credit Losses (ASC 326) : Measurement of Credit Losses on Financial Instruments, on January 1, 2020. Non-credit impairment on HTM securities was previously recognized under ASC 320. Please refer to Note 1 for additional information.

Note 13. Regulatory Capital

For additional information on our regulatory capital, including the regulatory capital requirements administered by federal banking agencies, and to which we are subject, refer to page 162 in Note 16 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

As of June 30, 2020, we and State Street Bank exceeded all regulatory capital adequacy requirements to which we were subject. As of June 30, 2020, State Street Bank was categorized as "well capitalized" under the applicable regulatory capital adequacy framework, and exceeded all "well capitalized" ratio guidelines to which it was subject. Management believes that no conditions or events have occurred since June 30, 2020 that have changed the capital categorization of State Street Bank.

The following table presents the regulatory capital structure, total RWA, related regulatory capital ratios and the minimum required regulatory capital ratios for us and State Street Bank, calculated under the advanced approaches and standardized approach provisions of the Basel III final rule as of the dates indicated:

	State Street Corporation				State Street Bank			
(Dollars in millions)	Basel III Advanced Approaches June 30, 2020	Basel III Standardized Approach June 30, 2020	Basel III Advanced Approaches December 31, 2019	Basel III Standardized Approach December 31, 2019	Basel III Advanced Approaches June 30, 2020	Basel III Standardized Approach June 30, 2020	Basel III Advanced Approaches December 31, 2019	Basel III Standardized Approach December 31, 2019
Common shareholders' equity:								
Common stock and related surplus	**$ 10,683**	**$ 10,683**	$ 10,636	$ 10,636	**$ 12,893**	**$ 12,893**	$ 12,893	$ 12,893
Retained earnings	**22,794**	**22,794**	21,918	21,918	**13,103**	**13,103**	13,218	13,218
Accumulated other comprehensive income (loss)	**(430)**	**(430)**	(870)	(870)	**(174)**	**(174)**	(654)	(654)
Treasury stock, at cost	**(10,645)**	**(10,645)**	(10,209)	(10,209)	**—**	**—**	—	—
Total	**22,402**	**22,402**	21,475	21,475	**25,822**	**25,822**	25,457	25,457
Regulatory capital adjustments:								
Goodwill and other intangible assets, net of associated deferred tax liabilities	**(8,973)**	**(8,973)**	(9,112)	(9,112)	**(8,705)**	**(8,705)**	(8,839)	(8,839)
Other adjustments[1]	**(261)**	**(261)**	(150)	(150)	**(119)**	**(119)**	(1)	(1)
Common equity tier 1 capital	**13,168**	**13,168**	12,213	12,213	**16,998**	**16,998**	16,617	16,617
Preferred stock	**2,471**	**2,471**	2,962	2,962	**—**	**—**	—	—
Tier 1 capital	**15,639**	**15,639**	15,175	15,175	**16,998**	**16,998**	16,617	16,617
Qualifying subordinated long-term debt	**964**	**964**	1,095	1,095	**969**	**969**	1,099	1,099
Allowance for credit losses	**47**	**163**	5	90	**55**	**163**	3	90
Total capital	**$ 16,650**	**$ 16,766**	$ 16,275	$ 16,360	**$ 18,022**	**$ 18,130**	$ 17,719	$ 17,806
Risk-weighted assets:								
Credit risk[2]	**$ 57,975**	**$ 105,276**	$ 54,763	$ 102,367	**$ 54,016**	**$ 101,462**	$ 51,610	$ 98,979
Operational risk[3]	**44,225**	**NA**	47,963	NA	**43,738**	**NA**	44,138	NA
Market risk	**1,563**	**1,563**	1,638	1,638	**1,563**	**1,563**	1,638	1,638
Total risk-weighted assets	**$ 103,763**	**$ 106,839**	$ 104,364	$ 104,005	**$ 99,317**	**$ 103,025**	$ 97,386	$ 100,617
Adjusted quarterly average assets	**$ 256,418**	**$ 256,418**	$ 219,624	$ 219,624	**$ 252,725**	**$ 252,725**	$ 216,397	$ 216,397

Capital Ratios:	2020 Minimum Requirements Including Capital Conservation Buffer and G-SIB Surcharge	2019 Minimum Requirements Including Capital Conservation Buffer and G-SIB Surcharge								
Common equity tier 1 capital	**8.0%**	8.5%	**12.7%**	**12.3%**	11.7%	11.7%	**17.1%**	**16.5%**	17.1%	16.5%
Tier 1 capital	**9.5**	10.0	**15.1**	**14.6**	14.5	14.6	**17.1**	**16.5**	17.1	16.5
Total capital	**11.5**	12.0	**16.0**	**15.7**	15.6	15.7	**18.1**	**17.6**	18.2	17.7

(1) Other adjustments within CET1 primarily include the overfunded portion of the firm's defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, and other required credit risk based deductions.

(2) Includes a CVA which reflects the risk of potential fair value adjustments for credit risk reflected in our valuation of OTC derivative contracts. We used a simple CVA approach in conformity with the Basel III advanced approaches.

(3) Under the current advanced approaches rules and regulatory guidance concerning operational risk models, RWA attributable to operational risk can vary substantially from period-to-period, without direct correlation to the effects of a particular loss event on our results of operations and financial condition and impacting dates and periods that may differ from the dates and periods as of and during which the loss event is reflected in our financial statements, with the timing and categorization dependent on the processes for model updates and, if applicable, model revalidation and regulatory review and related supervisory processes. An individual loss event can have a significant effect on the output of our operational RWA under the advanced approaches depending on the severity of the loss event and its categorization among the seven Basel-defined UOMs.

NA Not applicable

Note 14. Net Interest Income

The following table presents the components of interest income and interest expense, and related NII, for the periods indicated:

	Three Months Ended June 30,		Six Months Ended June 30,	
(In millions)	2020	2019	2020	2019
Interest income:				
Interest-bearing deposits with banks	$ 4	$ 109	$ 85	$ 228
Investment securities:				
U.S. Treasury and federal agencies	315	360	671	729
State and political subdivisions	9	13	20	25
Other investments	92	126	209	248
Investment securities purchased under money market liquidity facility	70	—	78	—
Total investment securities	486	499	978	1,002
Securities purchased under resale agreements	24	90	89	188
Loans	156	195	340	393
Other interest-earning assets	4	114	50	223
Total interest income	674	1,007	1,542	2,034
Interest expense:				
Interest-bearing deposits	(54)	209	14	380
Investment securities purchased under money market liquidity facility	58	—	64	—
Securities sold under repurchase agreements	1	8	3	20
Other short-term borrowings	5	6	15	10
Long-term debt	95	107	183	213
Other interest-bearing liabilities	10	64	40	125
Total interest expense	115	394	319	748
Net interest income	$ 559	$ 613	$ 1,223	$ 1,286

Note 15. Expenses

The following table presents the components of other expenses for the periods indicated:

	Three Months Ended June 30,		Six Months Ended June 30,	
(In millions)	2020	2019	2020	2019
Professional services	$ 91	$ 85	$ 172	$ 165
Regulatory fees and assessments	17	16	29	36
Securities processing	15	19	30	28
Sales advertising public relations	12	27	30	54
Bank operations	4	10	13	21
Insurance	3	4	8	9
Other	101	113	191	236
Total other expenses	$ 243	$ 274	$ 473	$ 549

Acquisition Costs

We recorded approximately $12 million and $23 million of acquisition costs in the three and six months ended June 30, 2020, respectively, compared to $10 million and $23 million in the same periods in 2019, respectively, related to our acquisition of CRD. As we integrate CRD into our business, we expect to incur approximately $200 million of acquisition costs, including merger and integration costs, through 2021.

Restructuring and Repositioning Charges

The following table presents aggregate activity for repositioning charges and activity related to previous Beacon restructuring charges for the periods indicated:

(In millions)	Employee Related Costs	Real Estate Actions	Asset and Other Write-offs	Total
Accrual Balance at December 31, 2018	$ 303	$ 37	$ 1	$ 341
Accruals for Beacon	(4)	—	—	(4)
Accruals for Repositioning Charges	—	—	—	—
Payments and Other Adjustments	(53)	(25)	—	(78)
Accrual balance at March 31, 2019	$ 246	$ 12	$ 1	$ 259
Accruals for Beacon	2	—	—	2
Payments and Other Adjustments	(51)	(1)	—	(52)
Accrual Balance at June 30, 2019	$ 197	$ 11	$ 1	$ 209
Accrual balance at December 31, 2019	$ 190	$ 7	$ 1	$ 198
Payments and Other Adjustments	(33)	(1)	—	(34)
Accrual Balance at March 31, 2020	$ 157	$ 6	$ 1	$ 164
Payments and Other Adjustments	**(25)**	**(1)**	**—**	**(26)**
Accrual Balance at June 30, 2020	**$ 132**	**$ 5**	**$ 1**	**$ 138**

Note 16. Earnings Per Common Share

For additional information on our earnings per share calculation methodologies, refer to pages 169 to 170 in Note 23 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

The following table presents the computation of basic and diluted earnings per common share for the periods indicated:

	Three Months Ended June 30,		Six Months Ended June 30,	
(Dollars in millions, except per share amounts)	**2020**	**2019**	**2020**	**2019**
Net income	**$ 694**	$ 587	**$ 1,328**	$ 1,095
Less:				
Preferred stock dividends	**(32)**	(50)	**(85)**	(105)
Dividends and undistributed earnings allocated to participating securities[1]	**—**	—	**(1)**	(1)
Net income available to common shareholders	**$ 662**	$ 537	**$ 1,242**	$ 989
Average common shares outstanding (In thousands):				
Basic average common shares	**352,157**	373,773	**352,952**	375,832
Effect of dilutive securities: equity-based awards	**4,256**	3,804	**4,076**	3,633
Diluted average common shares	**356,413**	377,577	**357,028**	379,465
Anti-dilutive securities[2]	**2,989**	3,345	**1,580**	2,665
Earnings per common share:				
Basic	**$ 1.88**	$ 1.44	**$ 3.52**	$ 2.63
Diluted[3]	**1.86**	1.42	**3.48**	2.61

[1] Represents the portion of net income available to common equity allocated to participating securities, composed of unvested and fully vested SERP (Supplemental executive retirement plans) 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.

[2] Represents equity-based awards outstanding but not included in the computation of diluted average common shares, because their effect was anti-dilutive. Additional information about equity-based awards is provided on pages 164 and 165 in Note 18 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

[3] Calculations reflect allocation of earnings to participating securities using the two-class method, as this computation is more dilutive than the treasury stock method.

Note 17. 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. For information about our two lines of business, as well as revenues, expenses and capital allocation methodologies associated with them, refer to pages 170 to 171 in Note 24 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

The following is a summary of our line of business results for the periods indicated. The "Other" columns represent costs incurred that are not allocated to a specific line of business, including certain severance and restructuring costs, acquisition costs and certain provisions for legal contingencies.

	Three Months Ended June 30,							
	Investment Servicing		Investment Management		Other		Total	
(Dollars in millions)	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Servicing fees	**$ 1,272**	$ 1,252	**$ —**	$ —	**$ —**	$ —	**$ 1,272**	$ 1,252
Management fees	**—**	—	**425**	441	**—**	—	**425**	441
Foreign exchange trading services	**312**	240	**32**	33	**—**	—	**344**	273
Securities finance	**88**	122	**4**	4	**—**	—	**92**	126
Software and processing fees	**229**	163	**16**	5	**—**	—	**245**	168
Total fee revenue	**1,901**	1,777	**477**	483	**—**	—	**2,378**	2,260
Net interest income	**571**	623	**(12)**	(10)	**—**	—	**559**	613
Total revenue	**2,472**	2,400	**465**	473	**—**	—	**2,937**	2,873
Provision for loan losses	**52**	1	**—**	—	**—**	—	**52**	1
Total expenses	**1,717**	1,765	**353**	377	**12**	12	**2,082**	2,154
Income before income tax expense	**$ 703**	$ 634	**$ 112**	$ 96	**$ (12)**	$ (12)	**$ 803**	$ 718
Pre-tax margin	**28%**	26%	**24%**	20%			**27%**	25%

	Six Months Ended June 30,							
	Investment Servicing		Investment Management		Other		Total	
(Dollars in millions)	2020	2019	2020	2019	2020	2019	2020	2019
Servicing fees	$ 2,559	$ 2,503	$ —	$ —	$ —	$ —	$ 2,559	$ 2,503
Management fees	—	—	874	861	—	—	874	861
Foreign exchange trading services	746	486	57	67	—	—	803	553
Securities finance	177	239	7	5	—	—	184	244
Software and processing fees	366	343	(9)	16	—	—	357	359
Total fee revenue	3,848	3,571	929	949	—	—	4,777	4,520
Net interest income	1,234	1,302	(11)	(16)	—	—	1,223	1,286
Total other income	2	(1)	—	—	—	—	2	(1)
Total revenue	5,084	4,872	918	933	—	—	6,002	5,805
Provision for credit losses	88	5	—	—	—	—	88	5
Total expenses	3,576	3,629	738	783	23	35	4,337	4,447
Income before income tax expense	$ 1,420	$ 1,238	$ 180	$ 150	$ (23)	$ (35)	$ 1,577	$ 1,353
Pre-tax margin	28%	25%	20%	16%			26%	23%

Note 18. Revenue from Contracts with Customers

For additional information on our revenue from contracts with customers, including revenues associated with both our Investment Servicing and Investment Management lines of business, refer to pages 172 to 173 in Note 25 to the consolidated financial statements included under Item 8, Financial Statements and Supplementary Data, in our 2019 Form 10-K.

Revenue by category

In the following table, revenue is disaggregated by our two lines of business and by revenue stream for which the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

	Three Months Ended June 30, 2020						
	Investment Servicing			Investment Management			Total
(Dollars in millions)	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	2020
Servicing fees	$ 1,272	$ —	$ 1,272	$ —	$ —	$ —	$ 1,272
Management fees	—	—	—	425	—	425	425
Foreign exchange trading services	95	217	312	32	—	32	344
Securities finance	63	25	88	—	4	4	92
Software and processing fees	151	78	229	—	16	16	245
Total fee revenue	1,581	320	1,901	457	20	477	2,378
Net interest income	—	571	571	—	(12)	(12)	559
Total revenue	$ 1,581	$ 891	$ 2,472	$ 457	$ 8	$ 465	$ 2,937

	Six Months Ended June 30, 2020						
	Investment Servicing			Investment Management			Total
(Dollars in millions)	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	2020
Servicing fees	$ 2,559	$ —	$ 2,559	$ —	$ —	$ —	$ 2,559
Management fees	—	—	—	874	—	874	874
Foreign exchange trading services	195	551	746	57	—	57	803
Securities finance	120	57	177	—	7	7	184
Software and processing fees	258	108	366	—	(9)	(9)	357
Total fee revenue	3,132	716	3,848	931	(2)	929	4,777
Net interest income	—	1,234	1,234	—	(11)	(11)	1,223
Total other income	—	2	2	—	—	—	2
Total revenue	$ 3,132	$ 1,952	$ 5,084	$ 931	$ (13)	$ 918	$ 6,002

	Three Months Ended June 30, 2019						
	Investment Servicing			Investment Management			Total
(Dollars in millions)	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	2020
Servicing fees	$ 1,252	$ —	$ 1,252	$ —	$ —	$ —	$ 1,252
Management fees	—	—	—	441	—	441	441
Foreign exchange trading services	82	158	240	33	—	33	273
Securities finance	75	47	122	—	4	4	126
Software and processing fees	104	59	163	—	5	5	168
Total fee revenue	1,513	264	1,777	474	9	483	2,260
Net interest income	—	623	623	—	(10)	(10)	613
Total revenue	$ 1,513	$ 887	$ 2,400	$ 474	$ (1)	$ 473	$ 2,873

	Six Months Ended June 30, 2019						
	Investment Servicing			Investment Management			Total
(Dollars in millions)	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	2019
Servicing fees	$ 2,503	$ —	$ 2,503	$ —	$ —	$ —	$ 2,503
Management fees	—	—	—	861	—	861	861
Foreign exchange trading services	168	318	486	67	—	67	553
Securities finance	145	94	239	—	5	5	244
Software and processing fees	220	123	343	—	16	16	359
Total fee revenue	3,036	535	3,571	928	21	949	4,520
Net interest income	—	1,302	1,302	—	(16)	(16)	1,286
Total other income	—	(1)	(1)	—	—	—	(1)
Total revenue	$ 3,036	$ 1,836	$ 4,872	$ 928	$ 5	$ 933	$ 5,805

Contract balances and contract costs

As of June 30, 2020 and December 31, 2019, net receivables of $2.83 billion and $2.77 billion, respectively, are included in accrued interest and fees receivable, representing amounts billed or currently billable related to revenue from contracts with customers. As performance obligations are satisfied, we have an unconditional right to payment and billing is generally performed monthly; therefore, we do not have significant contract assets or liabilities.

No adjustments are made to the promised amount of consideration for the effects of a significant financing component as the period between when we transfer a promised service to a customer and when the customer pays for that service is expected to be one year or less.

Note 19. Non-U.S. Activities

We define our non-U.S. activities as those revenue-producing business activities that arise from clients which are generally serviced or managed outside the U.S. Due to the integrated nature of our business, precise segregation of our U.S. and non-U.S. activities is not possible.

Subjective estimates, assumptions and other judgments are applied to quantify the financial results and assets related to our non-U.S. activities, including our application of funds transfer pricing, our asset and liability management policies and our allocation of certain indirect corporate expenses. Management periodically reviews and updates its processes for quantifying the financial results and assets related to our non-U.S. activities.

The following table presents our U.S. and non-U.S. financial results for the periods indicated:

	Three Months Ended June 30,					
	2020			2019		
(In millions)	Non-U.S.(1)	U.S.	Total	Non-U.S.(1)	U.S.	Total
Total revenue	**$ 1,269**	**$ 1,668**	**$ 2,937**	$ 1,290	$ 1,583	$ 2,873
Income before income tax expense	**244**	**559**	**803**	314	404	718

	Six Months Ended June 30,					
	2020			2019		
(In millions)	Non-U.S.(1)	U.S.	Total	Non-U.S.(1)	U.S.	Total
Total revenue	**$ 2,629**	**$ 3,373**	**$ 6,002**	$ 2,623	$ 3,182	$ 5,805
Income before income tax expense	**514**	**1,063**	**1,577**	616	737	1,353

(1) Geographic mix is generally based on the domicile of the entity servicing the funds and is not necessarily representative of the underlying asset mix.

Non-U.S. assets were $94.29 billion and $85.94 billion as of June 30, 2020 and 2019, respectively.

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Shareholders and Board of Directors of State Street Corporation

Results of Review of Interim Financial Statements

We have reviewed the accompanying consolidated statement of condition of State Street Corporation (the “Corporation”) as of June 30, 2020, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity for the three- and six-month periods ended June 30, 2020 and 2019, cash flows for the six-month periods ended June 30, 2020 and 2019, and the related condensed notes (collectively referred to as the “condensed consolidated interim financial statements”). Based on our reviews, we are not aware of any material modifications that should be made to the condensed consolidated interim financial statements for them to be in conformity with U.S. generally accepted accounting principles.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated statement of condition of the Corporation as of December 31, 2019, the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and the related notes (not presented herein); and in our report dated February 20, 2020, we expressed an unqualified audit opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated statement of condition as of December 31, 2019, is fairly stated, in all material respects, in relation to the consolidated statement of condition from which it has been derived.

Basis for Review Results

These financial statements are the responsibility of the Corporation’s management. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Corporation in accordance with the U.S. federal securities laws and the applicable rules and regulations of the SEC and the PCAOB. We conducted our review in accordance with the standards of the PCAOB. A review of interim financial statements consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ Ernst & Young LLP

Boston, Massachusetts
July 27, 2020

ACRONYMS

ABS	Asset-backed securities
AFS	Available-for-sale
AOCI	Accumulated other comprehensive income (loss)
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
AUC/A	Assets under custody and/or administration
AUM	Assets under management
bps	Basis points
CCAR	Comprehensive Capital Analysis and Review
CRD	Charles River Development
CECL	Current Expected Credit Loss
CET1[1]	Common equity tier 1
CVA	Credit valuation adjustment
DOJ	Department of Justice
DOL	Department of Labor
EGRRCPA	Economic Growth, Regulatory Relief, Consumer Protection Act
EPS	Earnings per share
ETF	Exchange-Traded Fund
EVE	Economic value of equity
FDIC	Federal Deposit Insurance Corporation
FHLB	Federal Home Loan Bank of Boston
FICC	Fixed Income Clearing Corporation
FTE	Fully taxable-equivalent
FX	Foreign exchange
GAAP	Generally accepted accounting principles
G-SIB	Global systemically important bank
HQLA[1]	High-quality liquid assets
HTM	Held-to-maturity
ICI	Investment Company Institute
LCR[1]	Liquidity coverage ratio
LIBOR	London Interbank Offered Rate
LTD	Long-term debt
MBS	Mortgage-backed securities
MMLF	Money Market Mutual Fund Liquidity Facility
NII	Net interest income
NIM	Net interest margin
PCAOB	Public Company Accounting Oversight Board
RWA[1]	Risk-weighted asset
SCB	Stress Capital Buffer
SEC	Securities and Exchange Commission
SLR[1]	Supplementary leverage ratio
SPDR	Spider; Standard and Poor's depository receipt
SPOE Strategy	Single Point of Entry Strategy
SSIF	State Street Intermediate Funding, LLC
TLAC[1]	Total loss-absorbing capacity
VaR	Value-at-Risk
VIE	Variable interest entity

[1] As defined by the applicable U.S. regulations.

GLOSSARY

Asset-backed securities: A financial security backed by collateralized assets, other than real estate or mortgage backed securities.

Assets under custody and/or administration: Assets that we hold directly or indirectly on behalf of clients under a safekeeping or custody arrangement or for which we provide administrative services for clients. To the extent that we provide more than one AUC/A service (including back and middle office services) for a client's assets, the value of the asset is only counted once in the total amount of AUC/A.

Assets under management: The total market value of client assets for which we provide investment management strategy services, advisory services and/or distribution services generating management fees based on a percentage of the assets' market values. These client assets are not included on our balance sheet. Assets under management include 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.

Beacon: A multi-year program, announced in October 2015, to create cost efficiencies through changes in our operational processes and to further digitize our processes and interfaces with our clients.

Certificates of deposit: A savings certificate with a fixed maturity date, specified fixed interest rate and can be issued in any denomination aside from minimum investment requirements. A CD restricts access to the funds until the maturity date of the investment.

Collateralized loan obligations: A security backed by a pool of debt, primarily senior secured leveraged loans. CLOs are similar to collateralized mortgage obligations, except for the different type of underlying loan. With a CLO, the investor receives scheduled debt payments from the underlying loans, assuming most of the risk in the event borrowers default, but is offered greater diversity and the potential for higher-than-average returns.

Commercial real estate: Property intended to generate profit from capital gains or rental income. CRE loans are term loans secured by commercial and multifamily properties. We seek CRE loans with strong competitive positions in major domestic markets, stable cash flows, modest leverage and experienced institutional ownership.

Deposit beta: A measure of how much of an interest rate increase is expected to be passed on to client interest-bearing accounts, on average.

Depot bank: A German term, specified by the country's law on investment companies, which essentially corresponds to 'custodian'.

Doubtful: Doubtful loans and leases meet the same definition of substandard loans and leases (i.e., well-defined weaknesses that jeopardize repayment with the possibility that we will sustain some loss) with the added characteristic that the weaknesses make collection or liquidation in full highly questionable and improbable.

Economic value of equity: A measure designed to estimate the fair value of assets, liabilities and off-balance sheet instruments based on a discounted cash flow model.

Exchange-Traded Fund: A type of exchange-traded investment product that offer investors a way to pool their money in a fund that makes investments in stocks, bonds, or other assets and, in return, to receive an interest in that investment pool. ETF shares are traded on a national stock exchange and at market prices that may or may not be the same as the net asset value.

Exposure-at-default: A measure used in the calculation of regulatory capital under Basel III. It can be defined as the expected amount of loss a bank may be exposed to upon default of an obligor.

Global systemically important bank: A financial institution whose distress or disorderly failure, because of its size, complexity and systemic interconnectedness, would cause significant disruption to the wider financial system and economic activity, which will be subject to additional capital requirements.

Held-to-maturity investment securities: We classify investments in debt securities as held-to-maturity only if we have the positive intent and ability to hold those securities to maturity. Investments in debt securities classified as held-to-maturity are measured subsequently at amortized cost in the statement of financial position.

High-quality liquid assets: Cash or assets that can be converted into cash at little or no loss of value in private markets and are considered unencumbered.

Investment grade: A rating of loans and leases to counterparties with strong credit quality and low expected credit risk and probability of default. It applies to counterparties with a strong capacity to support the timely repayment of any financial commitment.

Liquidity coverage ratio: The ratio of encumbered high-quality liquid assets divided by expected total net cash outflows over a 30-day stress period. A Basel III framework requirement for banks and bank holding companies to measure liquidity, it is designed to ensure that certain banking institutions, including us, maintain a minimum amount of unencumbered HQLA sufficient to withstand the net cash outflow under a hypothetical standardized acute liquidity stress scenario for a 30-day stress period.

Net asset value: The amount of net assets attributable to each share/unit of the fund at a specific date or time.

Net stable funding ratio: The ratio of the amount of available stable funding relative to the amount of required stable funding. This ratio should be equal to at least 100% on an ongoing basis.

Other-than-temporary-impairment: Impairment charge taken on a security whose fair value has fallen below its carrying value on balance sheet and its value is not expected to recover through the holding period of the security.

Probability of default: A measure of the likelihood that a credit obligor will enter into default status.

Qualified financial contracts: Securities contracts, commodity contracts, forward contracts, repurchase agreements, swap agreements and any other contract determined by the FDIC to be a qualified financial contract.

Risk-weighted assets: A measurement used to quantify risk inherent in our on and off-balance sheet assets by adjusting the asset value for risk. RWA is used in the calculation of our risk-based capital ratios.

Special mention: Loans and leases that consist of counterparties with potential weaknesses that, if uncorrected, may result in deterioration of repayment prospects.

Speculative: Loans and leases that consist of counterparties that face ongoing uncertainties or exposure to business, financial, or economic downturns. However, these counterparties may have financial flexibility or access to financial alternatives, which allow for financial commitments to be met.

Substandard: Loans and leases that consist of counterparties with well-defined weakness that jeopardizes repayment with the possibility we will sustain some loss.

Supplementary leverage ratio: The ratio of our tier 1 capital to our total leverage exposure, which measures our capital adequacy relative to our on and off-balance sheet assets.

Total loss-absorbing capacity: The sum of our tier 1 regulatory capital plus eligible external long-term debt issued by us.

Value-at-Risk: Statistical model used to measure the potential loss in value of a portfolio that could occur in normal markets condition, over a defined holding period, within a certain confidence level.

Variable interest entity: An entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb or the right to receive the entity's losses or return.

PART II. OTHER INFORMATION

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

In June 2019, our Board approved a common stock purchase program authorizing the purchase of up to $2.0 billion of our common stock from July 1, 2019 through June 30, 2020 (the 2019 Program). On March 16, 2020, we, along with the other U.S. G-SIBs, suspended common share repurchases through the second quarter of 2020, amidst the COVID-19 pandemic. As a result, we had no repurchases of our common stock in the second quarter of 2020.

In June 2020, the Federal Reserve released results from the CCAR 2020 submission, which included limitations on all CCAR banks' ability to distribute capital during the third quarter of 2020, beyond common stock dividends at their current levels. In addition, all CCAR banks are required to resubmit their capital plan and stress test results based on a new scenario to be provided by the Federal Reserve. It is unclear at this time when the results of the new stress test will be available, whether they will impact our calculated SCB and our ability to execute a common share repurchase program in the fourth quarter of 2020.

ITEM 5. OTHER INFORMATION

As previously disclosed, Jeffrey N. Carp, who served as our Executive Vice President and Chief Legal Officer until July 1, 2020, is retiring as an employee effective July 31, 2020. On July 26, 2020, the Human Resources Committee of our Board of Directors approved a consulting arrangement and transition agreement with Mr. Carp under which he will provide us, at our option, with transition services for a period ending no later than January 31, 2021, subject to termination at will by either party. It is the intention of us and Mr. Carp that the services will not exceed 8 hours in any week. The arrangement will provide for Mr. Carp to receive $1,600 per hour for his services and will be administered by a third party firm receiving its customary fees. In addition, we will agree to indemnify Mr. Carp for any direct or indirect liability, claim, damage or cost, including expenses, by reason of the provision of and/or arising as a result of the consulting services and to advance expenses to Mr. Carp in connection with any of the same. Mr. Carp will agree to be bound by obligations relating to confidentiality and the return of our property.

ITEM 6. EXHIBITS

	Exhibit No.	Exhibit Description
	10.1†	Deferred Compensation Plan for Directors of State Street Corporation, Restated January 1, 2021
	15	Acknowledgment Letter of Ernst & Young LLP, Independent Registered Public Accounting Firm
	31.1	Rule 13a-14(a)/15d-14(a) Certification of Chairman, President and Chief Executive Officer
	31.2	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer
	32	Section 1350 Certifications
	101.INS	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document
*	101.SCH	Inline XBRL Taxonomy Extension Schema Document
*	101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document
*	101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
*	101.LAB	Inline XBRL Taxonomy Label Linkbase Document
*	101.PRE	Inline XBRL Taxonomy Presentation Linkbase Document
*	104	Cover Page Interactive Data File (formatted as Inline XBRL and included within the Exhibit 101 attachments)

† Denotes management contract or compensatory plan or arrangement

* Submitted electronically herewith

Attached as Exhibit 101 to this report are the following formatted in Inline XBRL (Extensible Business Reporting Language): (i) consolidated statement of income for the three and six months ended June 30, 2020 and 2019, (ii) consolidated statement of comprehensive income for the three and six months ended June 30, 2020 and 2019, (iii) consolidated statement of condition as of June 30, 2020 and December 31, 2019, (iv) consolidated statement of changes in shareholders' equity for the three and six months ended June 30, 2020 and 2019, (v) consolidated statement of cash flows for the six months ended June 30, 2020 and 2019, and (vi) notes to consolidated financial statements.

SIGNATURES

Pursuant to the requirement of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

STATE STREET CORPORATION
(Registrant)

Date: July 27, 2020

By: /s/ ERIC W. ABOAF
Eric W. Aboaf,
Executive Vice President and Chief Financial Officer (Principal Financial Officer)

Date: July 27, 2020

By: /s/ IAN W. APPLEYARD
Ian W. Appleyard,
Executive Vice President, Global Controller and Chief Accounting Officer (Principal Accounting Officer)

Exhibit 10.1

STATE STREET CORPORATION
DEFERRED COMPENSATION PLAN FOR DIRECTORS
(January 1, 2021 Restatement)

ARTICLE I
NAME AND PURPOSE OF PLAN AND DEFINITIONS

1.1 Name and Effective Date. The Plan set forth herein is an amendment, restatement and continuation of the State Street Corporation Deferred Compensation Plan for Directors, originally established effective June 19, 1975. Except as otherwise provided, this restatement shall have effect with respect to amounts earned for services during Plan Years commencing on or after January 1, 2021.

1.2 Deferrals Prior to 2005. Deferrals of amounts earned in respect of services prior to January 1, 2005, as to which the applicable terms and conditions have not been materially modified on or after October 4, 2004, shall remain subject to their original terms and to the State Street Corporation Deferred Compensation Plan for Directors in effect prior to October 4, 2004.

1.3 Deferrals Prior to 2008. Deferrals not described in Section 1.2 made prior to January 1, 2008 shall be subject to the terms of the Plan as set forth herein. With respect to such deferrals, the Plan Administrator shall honor the original terms of payment, except that any reference therein to termination of employment shall be deemed to require a Separation from Service, and shall also honor any changes in time or form of payment made pursuant to available transition relief; provided, however, that any change in time or form of payment after December 31, 2008 will be subject to Section 5.4.

1.4 Deferral Prior to 2021. Deferrals of amounts earned in respect of services on or after January 1, 2008 and up through the first Plan Year commencing on or after January 1, 2020, shall remain subject to their original terms and to the State Street Corporation Deferred Compensation Plan for Directors in effect prior to this amendment and restatement.

1.5 Definitions. Capitalized terms have the meaning set forth below unless a different meaning is required by the context:

(a) *"Account"* means an account established for a Participant's benefit under Section 3.4.

(b) *"Annual Stock Award"* means the annual award of shares of Stock to Directors.

(c) *"Beneficiary"* means the person or persons designated by a Participant in writing, subject to such rules as the Plan Administrator may prescribe, to

receive benefits under the Plan in the event of the Participant's death. In the absence of an effective designation at the time of a Participant's death, the Participant's Beneficiary shall be his or her surviving spouse or domestic partner, or if none, his or her issue per stirpes, or if none, his or her surviving parents, or if none, his or her estate.

(d) *"Board"* means the Board of Directors of the Corporation.

(e) *"Code"* means the Internal Revenue Code of 1986, as amended from time to time.

(f) *"Compensation"* means a Director's Retainer Fees, Meeting Fees, and Annual Stock Award.

(g) *"Corporation"* means State Street Corporation and any successor thereto.

(h) *"Deferred Compensation Agreement"* means a written agreement described in Section 3.1. Each Deferred Compensation Agreement shall be in a form approved by or acceptable to the Plan Administrator.

(i) *"Director"* means a director of the Corporation who is not an employee of the Corporation or of any of its subsidiaries or affiliates.

(j) *"Disabled"* and *"Disability,"* with respect to a Participant, mean that the Participant is unable to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, or that the Participant has been determined to be totally disabled by the Social Security Administration.

(k) *"Entry Date"* means each January 1; provided, however, in the case of a new Director, the initial Entry Date for said new Director shall be such date as determined by the Plan Administrator consistent with Section 409A regulation 1.409A-2(a) (7).

(l) *"ERISA"* means the Employee Retirement Income Security Act of 1974, as amended.

(m) *"Meeting Fees"* means the fees payable in cash to Directors for attendance at Board and Board committee meetings.

(n) *"Participant"* means a Director who elects to participate in the Plan or who has an Account under the Plan.

(o) *"Plan"* means the State Street Corporation Deferred Compensation Plan for Directors, as from time to time amended and in effect.

(p) *"Plan Administrator"* means the Plan Administrator appointed pursuant to Section 6.1

(q) *"Plan Year"* means the one-year period commencing in each calendar year, as specified in the applicable Deferred Compensation Agreement, during which the applicable deferral election will apply. Each Plan Year shall be associated with the immediately preceding Entry Date as set forth in the Deferred Compensation Agreement.

(r) *"Retainer Fees"* means any annual retainer payable to a Director, whether payable in cash or Stock.

(s) *"Section 409A"* means Section 409A of the Code, including the regulations and other applicable Internal Revenue Service guidance thereunder.

(t) "Separation from Service" means a "separation from service" (as defined at Section 1.409A-1(h) of the Treasury Regulations) from State Street and all other corporations and trades or businesses, if any, that would be treated as a single "service recipient" with State Street under Section 1.409A-1(h)(3) of the Treasury Regulations; and correlative terms shall be construed to have a corresponding meaning.

(u) *"Stock"* means the common stock of the Corporation.

ARTICLE II
ELIGIBILITY AND PARTICIPATION

2.1 Commencement of Participation. Except as the Board otherwise determines (consistent with the requirements of Section 409A), a Director may elect, prior to any Entry Date commensurate with or following his or her election to the Board, to commence participation for the Plan Year.

2.2 Termination of Participation. A Director shall remain a Participant until his or her Accounts have been fully distributed.

ARTICLE III
ELECTION TO DEFER

3.1 Deferred Compensation Agreement. Prior to any Entry Date commensurate with or following his or her election to the Board, a Director may elect to defer a portion of his or her Compensation in respect of services performed in such Plan Year by entering into a Deferred Compensation Agreement with respect to such Compensation. The Plan Year will be designated by the Plan Administrator in the Deferred Compensation Agreement. Compensation that is

deferred shall be credited to one or more Accounts of the Participant as soon as practicable after the Compensation would otherwise have been paid.

3.2 Election Procedures.

(a) Advance elections required. A Deferred Compensation Agreement must be entered into, if at all, irrevocably prior to the applicable Entry Date for the Plan Year in which the services to which the Compensation relates is to be performed (or by such earlier date or later date as the Plan Administrator may prescribe consistent with the requirements of Section 409A). Once a Deferred Compensation Agreement becomes effective for a Plan Year, it may not be modified or revoked by the Participant.

(b) Other requirements. Except as otherwise determined by the Plan Administrator, a new Deferred Compensation Agreement must be timely executed for each Plan Year.

3.3 Compensation to be Deferred. A Director may elect to defer 0% or 100% (50% or 100% with respect to Entry dates prior to January 1, 2013), but no other or different portion or percentage, of each type of Compensation (i.e., Annual Stock Award, Meeting Fees, and Retainer Fees) which may become payable to him or her currently with respect to services as a Director during any Plan Year by entering into a Deferred Compensation Agreement with respect to 0% or 100% (50% or 100% with respect to Entry dates prior to January 1, 2013), as the case may be, of any such Compensation.

3.4 Accounts. The Plan Administrator shall establish an Account or Accounts for each Participant reflecting elective deferrals and any adjustments under this Section 3.4.

(a) Stock deferrals. An Account established for a Participant in connection with the deferral of an award otherwise payable in shares of Stock shall be denominated in Stock units (each representing a share of Stock). An Account described in the immediately preceding sentence shall be equitably adjusted by the Plan Administrator to reflect any stock dividends, stock splits or combinations of shares (including a reverse stock split), recapitalizations or other changes in the Corporation's capital structure, and shall be adjusted in connection with the payment of any dividend or other distribution on the Stock to reflect the notional (hypothetical) reinvestment of the amount of the dividend or distribution in additional shares of Stock, such additional shares being treated thereafter (including with respect to subsequent dividends and distributions) in the same manner as the shares initially deferred. Any notional reinvestment shall be deemed to have been

made using the closing price of the Stock on the date the dividend or other distribution was paid.

(b) Cash deferrals. All Accounts not described in Section 3.4(a) shall be adjusted for notional (hypothetical) investment experience as described in this Section 3.4(b). The Plan Administrator shall designate for purposes of the Plan one or more investment alternatives (each, a "tracking option"), including, if the Plan Administrator so determines, a tracking option that offers a return of notional interest and including, solely with respect to Plan Years commencing prior to January 1, 2013, a tracking option notionally invested in shares of Stock. Each Participant shall have the opportunity to allocate Accounts not described in Section 3.4(a) and/or additional cash deferrals among the available tracking options. Amounts allocated under the Plan to a tracking option shall be treated as notionally invested in that tracking option. In the absence of an affirmative allocation by a Participant, the Plan Administrator may designate a default tracking option and treat the Accounts and/or deferrals (or such portions thereof as shall not have been affirmatively allocated) as being notionally invested in the default tracking option. The Plan Administrator shall periodically adjust Accounts to reflect increases or decreases attributable to these notional investments, and with respect to any Account invested in a tracking option notionally invested in Stock, shall also adjust such Account in the manner described in Section 3.4(a). Except as otherwise determined by the Plan Administrator and subject to such rules as the Plan Administrator may prescribe, a Participant may make notional investment changes at any time with respect to existing deferrals and/or future deferrals. The Plan Administrator may, at the direction of the Board, at any time and from time to time, eliminate or add tracking options or substitute a new for an existing tracking option, including with respect to balances already notionally invested under the Plan. The Corporation may, but need not, purchase securities or other investments with characteristics similar to the tracking options from time to time offered under the Plan, but any such securities or other investments shall remain part of the Corporation's general assets.

3.5 Miscellaneous. The Plan Administrator shall maintain such records and prepare such reports as it considers necessary or appropriate to carry out the purposes of the Plan. In addition to the adjustments to Accounts referred to in Section 3.4 above, the Plan Administrator shall increase each Account to reflect additional deferrals and shall decrease the Account to reflect distributions.

ARTICLE IV
VESTING

4.1 Vesting of Accounts. All Accounts are fully vested at all times. However, the fact that an Account is fully vested shall not give a Participant or Beneficiary or any other person any right to receive the value of such Account except in accordance with the terms of the Plan.

ARTICLE V
PLAN DISTRIBUTIONS

5.1 Time of Payment; In General. Subject to the below, each Participant shall elect, not later than the date of each Deferred Compensation Agreement entered into, for the portion of his or her Accounts under the Plan attributable to the Compensation so deferred is to be paid, or commence to be paid, in accordance with Section 5.2 below, either:

(a) at Separation from Service whenever occurring, or

(b) at the earlier or (i) a specified date not earlier than the date five years after the effective date of such Deferred Compensation Agreement or (ii) Separation from Service (for Plan Years commencing prior to January 1, 2013, limited to a specified date not earlier than the date five years after the effective date of such Deferred Compensation Agreement).

In the absence of an affirmative election, the Participant shall be deemed to have elected payment upon Separation from Service.

Notwithstanding anything in the Plan to the contrary, a Participant must make the same election for all Deferred Compensation Agreements entered into with respect to Compensation earned in the same Plan Year.

Notwithstanding the above, all elections to defer Compensation attributable to Plan Years beginning after January 1, 2021 shall automatically be paid at Separation from Service, subject to the terms of Section 5.4 below.

5.2 Payment Rules.

(a) Time of Payment. The Corporation shall pay or commence to pay the applicable portion of a Participant's Accounts under the Plan on or as soon as practicable following triggering event under Section 5.1 above (i.e., either Separation from Service or, if so specified, a specified date) entitling the Participant or his or her Beneficiaries to a distribution; provided, that a payment shall be made in all events not

later than the end of the calendar year in which the triggering event occurs or, if later, the 15th day of the third month following the date on which the triggering event occurs.

(b) Death. If a Participant should die before the specified distribution triggering event, his or her Accounts shall be paid in a single payment to his or her Beneficiaries as soon as practicable following the Participant's death, and in all events not later than the end of the calendar year in which the Participant dies or, if later, the 15th day of the third month following the date on which the Participant dies.

(c) Disability. If a Participant becomes Disabled before the specified distribution date, his or her Accounts shall be paid in a single payment to the Participant as soon as practicable following the event of Disability, and in all events not later than the end of the calendar year in which the Participant becomes Disabled or, if later, the 15th day of the third month following the date on which the Participant becomes Disabled.

5.3 Amount and Form of Payment.

(a) Amount of Payment. The amount payable to any Participant or Beneficiary shall be all or a portion of the balance of the Participant's Accounts to the extent subject to the applicable election, adjusted as described below in the case of installment payments.

(b) Form of Payment. (i) Except as specified in Sections 5.2(b) and 5.2(c), payment of all or a portion a Participant's Accounts shall be made in a single payment or in annual installments over a period of two to 5 years as elected by means of the respective Deferred Compensation Agreement. Where payment is to be made in installments, the amount of each installment shall be determined by dividing the total amount standing to the Participant's credit under each Account that is subject to the election immediately prior to the installment by the number of installments remaining to be paid. In the absence of an affirmative election, a Participant shall be deemed to have elected to receive a single payment. Notwithstanding anything in the Plan to the contrary, a Participant must make the same election for all Deferred Compensation Agreements entered into with respect to Compensation earned in the same Plan Year. (ii) Notwithstanding Section 5.3(b)(i) hereof, with respect to elections applicable to Plan Years commencing prior to January 1, 2013, payment of all or a portion a Participant's Accounts shall be made in a single payment or in annual installments over a period of two to 10 years as elected by means of the respective Deferred Compensation Agreement. Where payment is to be made in installments, the amount of each installment

shall be determined by dividing the total amount standing to the Participant's credit under each Account that is subject to the election immediately prior to the installment by the number of installments remaining to be paid. In the absence of an affirmative election, a Participant shall be deemed to have elected to receive a single payment.

(c) Medium of Payment. Deferrals of Compensation otherwise payable in cash, and related notional earnings, shall be paid in cash. Deferrals of Compensation otherwise payable in shares of Stock, together with notionally reinvested dividends, shall be paid by delivery of shares of Stock.

5.4 Changes to Distribution Elections. Subject to Section 5.5 below, a Participant may not change the form or payment commencement date for payment of his or her Accounts except in accordance with the following rules:

(a) Change in commencement date. At any time prior to a date that is at least 12 months preceding the calendar year in which an Account or portion thereof would otherwise have been paid (if payable in a single payment rather than in installments) or in which payment would have commenced (if payable in installments), a Participant may elect to defer the payment or payment commencement date to a specified date at least five years following the date on which the amount would otherwise be paid or commence to be paid.

(b) Change in form of payment. A Participant who has elected (or is deemed to have elected) to receive his or her benefit in a single payment may instead elect installments, and a Participant who has elected installment payments may instead elect a single payment, provided in each case that the change is elected in accordance with the requirements of subsection (a) above.

(c) Effectiveness of change. No change to an election as to the time or form of payment will take effect until at least 12 months after the date on which the election is made.

5.5 Special Rule for 2007 and 2008. Notwithstanding any provision herein to the contrary, the Plan Administrator may permit Participants or Beneficiaries with an Account under the Plan to elect a new form and time of distribution, not later than December 31, 2008, in a manner consistent with transition guidance under Section 409A, subject to such limitations and restrictions as the Plan Administrator may impose. Such an election made in 2007 may apply only to amounts that would not otherwise be payable in 2007 and may not cause an amount to be paid in 2007 that would not otherwise be payable in 2007, and such an election made in 2008 may apply only to amounts that would not

otherwise be payable in 2008 and may not cause an amount to be paid in 2008 that would not otherwise be payable in 2008.

ARTICLE VI
ADMINISTRATION OF THE PLAN

6.1 Plan Administrator. Except as the Board may otherwise determine, the Plan Administrator shall be the Executive Vice President-Global Human Resources as from time to time in office, or his or her delegate. The Plan Administrator shall have complete discretionary authority to interpret the Plan and to decide all matters under the Plan. Such interpretations and decisions shall be final, conclusive and binding on all Participants and any person claiming under or through any Participant, in the absence of clear and convincing evidence that the Plan Administrator acted arbitrarily and capriciously. No individual acting as Plan Administrator may determine his or her own rights or entitlements under the Plan, if any.

6.2 Outside Services. The Plan Administrator may engage counsel and such clerical, financial, investment, accounting, and other specialized services as the Plan Administrator may deem necessary or appropriate for the administration of the Plan. The Plan Administrator shall be entitled to rely upon any opinions, reports, or other advice furnished by counsel or other specialists engaged for that purpose and, in so relying, shall be fully protected in any action, determination, or omission made in good faith.

6.3 Indemnification. To the extent permitted by law and not prohibited by its charter or by-laws, the Corporation will indemnify and hold harmless every person who serves or who has served (directly or by delegation) as Plan Administrator and his or her estate if he or she is deceased from and against all claims, loss, damages, liability and reasonable costs and expenses incurred in carrying out his or her responsibilities as Plan Administrator, unless due to the gross negligence, bad faith or willful misconduct of such individual; provided, that counsel fees and amounts paid in settlement must be approved by the Corporation, and provided further that this Section 6.3 will not apply to any claims, loss, damages, liability or costs and expenses which are covered by a liability insurance policy maintained by the Corporation or by the individual. The provisions of the preceding sentence shall not apply to any corporate trustee, insurance company, investment manager or outside service provider (or to any employee of any of the foregoing) except as the Corporation specifies in writing.

ARTICLE VII
AMENDMENT AND TERMINATION

7.1 Amendment; Termination. By action of the Board, the Corporation reserves the absolute right at any time and from time to time to amend any or all provisions of the Plan or to terminate the Plan.

7.2 Effect of Amendment or Termination. No action under Section 7.1 shall operate to reduce the balance of a Participant's Accounts other than through a distribution to the Participant or his or her Beneficiaries. No Plan amendment or instrument of termination will accelerate or defer distributions under the Plan or otherwise alter the availability of elections or other rights under the Plan except as permitted by Section 409A and applicable guidance thereunder.

ARTICLE VIII
MISCELLANEOUS PROVISIONS

8.1 Source of Payments. All amounts payable hereunder to Participants and their Beneficiaries shall be paid from the general assets of the Corporation.

8.2 No Warranties. The Corporation does not warrant or represent in any way that the value of a Participant's Accounts will increase or not decrease. Each Participant and his or her Beneficiaries assume all risk in connection with any change in such value.

8.3 Inalienability of Benefits. Except as required by law, no benefit under, or interest in, the Plan or any Account shall be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance, or charge, and any attempt to do so shall be void.

8.4 Expenses. The Corporation shall pay all costs and expenses incurred in operating and administering the Plan.

8.5 Headings. The headings of the sections in the Plan are placed herein for convenience of reference, and, in the case of any conflict, the text of the Plan, rather than such heading, shall control.

8.6 Acceptance of Plan Terms. By executing a Deferred Compensation Agreement, a Participant agrees, for himself or herself and on behalf of his or her Beneficiaries, to abide by the terms of the Plan and the determinations of the Plan Administrator with respect thereto.

8.7 Section 409A. The Plan and all related instruments shall be construed and administered consistent with the objective that all deferrals and payments under the Plan will comply with the requirements of Section 409A. Notwithstanding the foregoing, deferrals of amounts earned and vested prior to January 1, 2005

(including any earnings thereon determined in accordance with Section 409A) shall be administered consistent with the objective that such deferrals will remain exempt from the requirements of Section 409A.

8.8 Construction. The Plan shall be construed, regulated, and administered in accordance with applicable federal laws and the laws of the Commonwealth of Massachusetts without giving effect to any choice or conflict of law provision or rule that would cause the application of the laws of any other jurisdiction.

Executed this 20th day of July, 2020.

STATE STREET CORPORATION

By: /s/ Kathryn M. Horgan

Name: Kathryn M. Horgan
Title: EVP, Chief Human Resources Officer

Exhibit 15

Acknowledgment letter of Ernst & Young LLP, Independent Registered Public Accounting Firm

July 27, 2020

The Shareholders and Board of Directors of State Street Corporation

We are aware of the incorporation by reference in the Registration Statements (Form S-3 No. 333-238861, and Form S-8: Nos. 333-100001, 333-99989, 333-46678, 333-36793, 333-36409, 333-135696, 333-160171, 333-183656, 333-218048 and 333-233874) of State Street Corporation of our report dated July 27, 2020 relating to the unaudited condensed consolidated interim financial statements of State Street Corporation that are included in its Form 10-Q for the quarter ended June 30, 2020.

Under Rule 436(c) of the 1933 Act, our report is not part of the registration statements prepared or certified by accountants within the meaning of Section 7 or 11 of the 1933 Act.

/s/ Ernst & Young LLP

Boston, Massachusetts

EXHIBIT 31.1

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Ronald P. O'Hanley, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of State Street Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present, in all material respects, the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 27, 2020

By: /s/ RONALD P. O'HANLEY

Ronald P. O'Hanley,

Chairman, President and Chief Executive Officer

EXHIBIT 31.2

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Eric W. Aboaf, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of State Street Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present, in all material respects, the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 27, 2020

By: /s/ ERIC W. ABOAF

Eric W. Aboaf,

Executive Vice President and Chief Financial Officer

EXHIBIT 32

SECTION 1350 CERTIFICATIONS

To my knowledge, this Report on Form 10-Q for the period ended June 30, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in this Report fairly presents, in all material respects, the financial condition and results of operations of State Street Corporation.

Date: July 27, 2020 By: /s/ RONALD P. O'HANLEY

Ronald P. O'Hanley,

Chairman, President and Chief Executive Officer

Date: July 27, 2020 By: /s/ ERIC W. ABOAF

Eric W. Aboaf,

Executive Vice President and Chief Financial Officer