

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549
FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-07436

HSBC USA Inc.

(Exact name of registrant as specified in its charter)

Maryland

(State of incorporation)

452 Fifth Avenue, New York, New York

(Address of principal executive offices)

13-2764867

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

10018

(Zip Code)

Registrant's telephone number, including area code (212) 525-5000

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

Title of Each Class	Name of Each Exchange on Which Registered
\$100,000,000 Zero Coupon Callable Accreting Notes due January 15, 2043	New York Stock Exchange
\$50,000,000 Zero Coupon Callable Accreting Notes due January 29, 2043	New York Stock Exchange

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

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

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

(Do not check if a smaller reporting company)

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

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

As of February 16, 2018, there were 714 shares of the registrant's common stock outstanding, all of which are owned by HSBC North America Holdings Inc.

The registrant meets the conditions set forth in General Instruction I(1)(a) and (b) of Form 10-K and has therefore omitted certain items from this report in accordance with the reduced disclosure format under General Instruction I.

DOCUMENTS INCORPORATED BY REFERENCE

None.

TABLE OF CONTENTS

Part/Item No.		Page
Part I		
Item 1.	Business:	
	Organization History and Acquisition by HSBC.....	4
	HSBC North America Operations	4
	HSBC USA Operations	4
	Funding.....	6
	Employees and Customers	7
	Regulation and Competition.....	7
	Corporate Governance and Controls	17
Item 1A.	Risk Factors	18
Item 1B.	Unresolved Staff Comments	34
Item 2.	Properties	34
Item 3.	Legal Proceedings.....	34
Item 4.	Mine Safety Disclosures	34
Part II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.....	34
Item 6.	Selected Financial Data.....	35
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations:	
	Forward-Looking Statements	37
	Executive Overview	39
	Basis of Reporting	42
	Critical Accounting Policies and Estimates.....	44
	Balance Sheet Review	50
	Results of Operations	56
	Segment Results - Group Reporting Basis	64
	Credit Quality	73
	Liquidity and Capital Resources	87
	Off-Balance Sheet Arrangements, Credit Derivatives and Other Contractual Obligations	92
	Fair Value.....	93
	Risk Management.....	96
	Glossary of Terms.....	116
	Consolidated Average Balances and Interest Rates.....	118
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk.....	120
Item 8.	Financial Statements and Supplementary Data.....	120
	Selected Quarterly Financial Data (Unaudited).....	230
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	231
Item 9A.	Controls and Procedures	231
Item 9B.	Other Information	232

Part/Item No.

Part III

Page

Item 10.	Directors, Executive Officers and Corporate Governance.....	234
Item 11.	Executive Compensation	234
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters .	234
Item 13.	Certain Relationships and Related Transactions, and Director Independence	234
Item 14.	Principal Accounting Fees and Services	234

Part II

Item 15.	Exhibits and Financial Statement Schedules	235
Item 16.	Form 10-K Summary	236
Signatures		237

PART I**Item 1. Business**

Organization History and Acquisition by HSBC

HSBC USA Inc. ("HSBC USA"), incorporated under the laws of the State of Maryland in 1973 as Republic New York Corporation, was acquired through a series of transactions by HSBC Holdings plc ("HSBC" and, together with its subsidiaries, "HSBC Group") and changed its name to "HSBC USA Inc." in 2000. HSBC USA is a wholly-owned subsidiary of HSBC North America Holdings Inc. ("HSBC North America"), which is an indirect wholly-owned subsidiary of HSBC. HSBC USA's principal business is to act as a holding company for its subsidiaries. In this Form 10-K, HSBC USA and its subsidiaries are referred to as "HUSI," "we," "us" and "our."

HSBC North America Operations

HSBC North America is the holding company for HSBC Group's operations in the United States. The principal subsidiaries of HSBC North America at December 31, 2017 were HSBC USA, HSBC Markets (USA) Inc. ("HMUS"), a holding company for certain subsidiaries primarily associated with global banking and markets businesses, HSBC Finance Corporation ("HSBC Finance"), a holding company for the run-off consumer finance operations, and HSBC Technology & Services (USA) Inc. ("HTSU"), a provider of information technology and centralized operational and support services including human resources, tax, finance, compliance, legal, corporate affairs and other services shared among the subsidiaries of HSBC North America and the HSBC Group. HSBC USA's principal U.S. banking subsidiary is HSBC Bank USA, National Association (together with its subsidiaries, "HSBC Bank USA"). Under the oversight of HSBC North America, HUSI works with its affiliates to maximize opportunities and efficiencies in HSBC Group's operations in the United States. These affiliates do so by providing each other with, among other things, alternative sources of liquidity to fund operations and expertise in specialized corporate functions and services through the pooling of resources within HTSU to provide shared, allocated support functions to all of HSBC North America's subsidiaries. In addition, clients of HSBC Bank USA and other affiliates are investors in debt issued by HSBC USA and/or HSBC Bank USA, providing significant sources of liquidity and capital to both entities. HSBC Securities (USA) Inc. ("HSI"), a registered broker dealer and a subsidiary of HMUS, generally leads or participates as underwriter of all HUSI domestic issuances of term debt. While neither HSBC USA nor HSBC Bank USA has received advantaged pricing, the underwriting fees and commissions paid to HSI historically have benefited the HSBC Group.

HSBC USA Operations

HSBC's strategy is to be the world's leading international bank, maintaining an international network to connect faster-growing and developed markets. HSBC is a leading provider of transactional banking products which support global economic flows and its network covers more than 90 percent of global gross domestic product, trade and capital flows, providing clients and investors access to what we believe are the most attractive global growth opportunities. In support of HSBC's strategy, our operations are focused on the core activities of our global businesses, as discussed below, and the positioning of our activities towards international connectivity strategies, including what we believe are our unique capabilities to serve clients in the North American Free Trade Agreement trade corridor.

- Our Retail Banking and Wealth Management ("RBWM") business provides a range of banking and wealth products and services to individuals and certain small businesses, focusing on internationally minded customers in large metropolitan centers on the West and East coasts.
- Our Commercial Banking ("CMB") business serves corporate and business banking clients, focused on selected large cities, primarily along the West and East Coasts, with strong international trade ties.
- Our Global Banking and Markets ("GB&M") business serves top-tier multinational clients across the Americas and globally. Global Banking's sector-focused advisory and relationship management teams, as well as product-focused teams, collectively provide U.S. dollar funding along with other investment banking products and services, and Global Markets offers a wide range of products across fixed income, foreign exchange and equities.
- Our Private Bank ("PB") business serves high net worth and ultra-high net worth individuals and their families with a focus on multi-generational families, business executives and entrepreneurs who require sophisticated solutions to help meet their most complex needs domestically and abroad.

- Corporate Center ("CC") business was created in 2017 to centralize certain activities and functions such as Balance Sheet Management ("BSM") and our legacy structured credit products in order to better reflect the way we manage our businesses.

HSBC Bank USA, HSBC USA's principal U.S. banking subsidiary, is a national banking association with its main office in Tysons (formerly known as McLean), Virginia, and its principal executive offices at 452 Fifth Avenue, New York, New York. Through HSBC Bank USA, we offer our customers a full range of commercial and consumer banking products and related financial services. Our customers include individuals, including high net worth and ultra-high net worth individuals, small businesses, corporations, institutions and governments. HSBC Bank USA is also an international dealer in derivative instruments denominated in U.S. dollars and other currencies, focusing on structuring transactions to meet clients' needs.

In 2005, HSBC USA incorporated a nationally chartered limited purpose bank subsidiary, HSBC Trust Company (Delaware), National Association ("HTCD"), the primary activities of which are providing personal trust services. The impact of HTCD's operations on HSBC USA's consolidated balance sheets and results of operations for the years ended December 31, 2017, 2016 and 2015 was not material.

We report financial information to our ultimate parent, HSBC, in accordance with HSBC Group accounting and reporting policies, which apply International Financial Reporting Standards ("IFRSs") as issued by the International Accounting Standards Board ("IASB") and endorsed by the European Union ("EU"). As a result, our segment results are prepared and presented using financial information prepared on the basis of HSBC Group's accounting and reporting policies ("Group Reporting Basis") as operating results are monitored and reviewed, trends are evaluated and decisions about allocating resources, such as employees, are primarily made on this basis. We continue, however, to monitor capital adequacy and report to regulatory agencies in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). For additional financial information relating to our business and operating segments as well as a summary of the significant differences between U.S. GAAP and Group Reporting Basis as they impact our results, see Note 22, "Business Segments," in the accompanying consolidated financial statements.

Retail Banking and Wealth Management Segment Our RBWM segment provides a range of banking and wealth products and services through our branches and on-line channels to individuals and certain small businesses. These services include asset-driven services such as credit and lending, liability-driven services such as deposit taking and account services and fee or commission driven services such as advisory and brokerage. RBWM is focused on growing its wealth and banking business in key urban centers with strong international connectivity across the U.S. including New York City, Los Angeles, San Francisco, Miami and Washington DC. RBWM focuses on two customer propositions: HSBC Premier and HSBC Advance. HSBC Premier, is a comprehensive banking and wealth management proposition for the internationally minded mass affluent client. HSBC Premier clients have access to a full suite of banking and wealth management solutions and also have access to priority services such as 24-hour telephone service and more favorable pricing based on the banking relationship. HSBC Premier clients also receive personalized support through dedicated relationship managers and are serviced through other alternative channels such as on-line banking and a dedicated contact center. HSBC Advance, RBWM's other main customer proposition, is a banking relationship designed to offer holistic financial services and banking products for emerging affluent clients in the initial stage of wealth accumulation or clients who look for more convenience and self-control with respect to their personal finances. In addition to everyday banking solutions, HSBC Advance customers have access to a range of lending and wealth products through HSBC's multi-channel platform, yet primarily through direct channels, including the contact center, secure internet banking and mobile.

With our affiliates, HSI and HSBC Insurance Agency (USA) Inc., HSBC Premier and HSBC Advance provides access to a range of wealth management solutions. RBWM also offers a broad range of financial products and services to all of its retail banking customers, including residential mortgages, home equity lines of credit, credit cards, deposits and branch services.

Commercial Banking Segment CMB's goal is to be the banking partner of choice for international businesses building on our rich heritage, international capabilities and customer relationships to enable global connectivity. CMB strives to execute this vision and strategy by focusing on key markets with high concentrations of international connectivity. Our CMB segment serves the markets through three client groups, notably Large Corporate, Middle Market and Business Banking. We also have a specialized Commercial Real Estate group which focuses on selective business opportunities in markets where we have strong portfolio expertise. This structure allows us to align our resources in order to efficiently deliver suitable products and services based on our clients' needs and abilities. Global Liquidity and Cash Management, Global Trade and Receivables Finance, Lending and Transaction Management, Investment Banking and Global Markets are key product groups that CMB partners with to deliver the global connections and related products and services required by customers. Whether it is through commercial centers, the retail branch network, or via HSBCnet, our online banking channel, CMB provides customers with the products and services needed to grow their businesses internationally and delivers those products and services through its relationship managers who operate within a robust, customer focused compliance and risk culture, and collaborate across HSBC to capture a larger percentage of a relationship.

Global Banking and Markets Segment Our GB&M business segment supports HSBC's global strategy by leveraging the HSBC Group's advantages and scale, strength in developed and emerging markets and product expertise in order to focus on delivering international products to U.S. clients and local products to international clients, with New York as the hub for the Americas business, including Canada and Latin America. GB&M provides tailored financial solutions to major government, corporate and institutional clients as well as private investors worldwide. GB&M clients are served by sector-focused teams that bring together relationship

managers and product specialists to develop financial solutions that meet individual client needs. With a focus on providing client connectivity between the emerging markets and developed markets, GB&M aims to develop a comprehensive understanding of each client's financial requirements with a long-term relationship management approach. In addition to GB&M clients, GB&M also provides financial solutions to RBWM, CMB and PB clients where those clients have needs that require the product set that GB&M has available.

Within client-focused business lines, GB&M offers a full range of capabilities, including:

- Banking and financing advice and solutions for sovereign, corporate and institutional clients, including loans, working capital, trade services, liquidity and cash management, leveraged and acquisition finance, project and infrastructure finance, asset finance, mergers and acquisitions advisory, as well as capital raising in the debt and equity capital markets; and
- A markets business with 24-hour coverage and knowledge of world-wide local markets which provides services in credit and rates, foreign exchange, precious metals trading, equities and securities services.

Private Banking Segment PB provides a broad range of banking and investment products and services to high net worth and ultra-high net worth individuals and families with a focus on multi-generational families, business executives and entrepreneurs who require sophisticated solutions to help meet their most complex needs domestically and abroad, with many clients sourced in collaboration with our other business lines. PB works with its clients to offer tailored, coordinated and innovative ways to manage and preserve wealth while optimizing returns. PB offers a wide range of products and services, including banking, liquidity management, investment services, custody, tailored lending, trust and fiduciary services, insurance, family wealth and philanthropy advisory services. PB also works to ensure that its clients have access to other products and services available throughout the HSBC Group, such as credit cards and investment banking, to deliver total solutions for their financial and wealth needs. Strategically, PB continues to reposition its focus, which includes the exiting of higher-risk markets and ongoing client segmentation. PB's close collaboration with RBWM has resulted in its ability to enhance service to its target clients while ensuring that the financial needs of clients that no longer meet minimum PB requirements continue to be serviced through offerings by RBWM. In support of its focus on the U.S. domestic market and key overseas countries in Latin America, PB continues to onboard new talent and expand its investment product and wealth planning offerings, leveraging both Global Markets and Global Asset Management platforms, allowing it to provide a broad array of domestic and global investment options.

Corporate Center Segment We previously announced that we made the decision to implement changes to our internal management reporting for certain activities and functions and report them within a new CC segment beginning in January 2017. These activities and functions include BSM and our legacy structured credit products which historically were both reported in GB&M, as well as a portfolio of residential mortgage loans previously purchased from HSBC Finance, including certain loan servicing activities performed on behalf of HSBC Finance, which were historically reported in RBWM. In addition, we have reviewed central costs historically reported in the Other segment and have reallocated these costs to the global businesses where appropriate. Remaining residual costs are reported in the CC along with all other remaining items historically reported in the Other segment. As a result, beginning in the first quarter of 2017, we aligned our segment reporting with the changes made to our internal management reporting and are reporting these changes as part of the newly created CC segment for all periods presented.

BSM is included in the CC and is responsible for managing liquidity and funding under the supervision of our Asset and Liability Management Committee. BSM also manages our structural interest rate position within a limit structure. BSM reinvests excess liquidity into highly rated liquid assets. The majority of the liquidity is invested in interest bearing deposits with Federal Reserve banks and U.S. Government and other high quality securities. BSM is permitted to use derivatives as part of its mandate to manage interest rate risk. Derivative activity is predominantly comprised of the use of traditional interest rate swaps which are part of cash flow hedging relationships. Credit risk in BSM is predominantly limited to short-term exposure created by exposure to banks as well as high quality sovereigns or agencies which constitute the majority of BSM's liquidity portfolio. BSM does not and is not mandated to manage the structural credit risk of our balance sheet. BSM only manages interest rate risk.

Funding

We fund our operations using a diversified deposit base, supplemented by issuing short-term and long-term debt, borrowing under unsecured and secured financing facilities, issuing preferred equity, and, as necessary, receiving capital contributions from our parent, HSBC North America. Emphasis is placed on maintaining stable deposit balances. Numerous factors, both internal and external, may impact our access to, and the costs associated with, both retail and wholesale sources of funding. These factors may include our debt ratings, overall economic conditions, overall capital markets volatility, the counterparty credit limits of investors to the HSBC Group, the effectiveness of our compliance remediation efforts and our management of the credit risks inherent in our business and customer base.

In 2017, our primary source of funds continued to be deposits, augmented by issuances of commercial paper and term debt. We focus on deposits where clients have purchased multiple products from us, such as HSBC Premier for retail customers, as well as

operational deposits from commercial clients, as those balances will tend to be significantly more stable than other deposits. We issued a total of \$5,158 million of long-term debt throughout 2017. We also repaid long-term debt of \$8,953 million in 2017. As previously reported, as a result of the adoption of the final rules by the U.S. banking regulators implementing the Basel III regulatory capital and liquidity reforms from the Basel Committee on Banking Supervision (the "Basel Committee"), together with the impact of similar implementation by United Kingdom ("U.K.") banking regulators, we continue to review the composition of our capital structure. A detailed description of our sources and availability of funding are set forth in the "Liquidity and Capital Resources" and "Off-Balance Sheet Arrangements, Credit Derivatives and Other Contractual Obligations" sections of Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A").

We use the cash generated by these funding sources to service our debt obligations, originate new loans, purchase investment securities and pay preferred dividends and, as available and appropriate, common dividends to our parent.

Employees and Customers

At December 31, 2017, we had approximately 5,107 employees, which does not take into account employees of affiliates that provide services to us.

At December 31, 2017, we had approximately 1.4 million customers, some of which are customers of more than one of our businesses. Customers residing in the state of New York and California accounted for 33 percent and 34 percent, respectively, of our total outstanding commercial real estate loans and residential mortgage loans.

Regulation and Competition

Regulation We are subject to, among other things, an extensive statutory and regulatory framework applicable to bank holding companies, financial holding companies and banks. U.S. regulation of banks, bank holding companies and financial holding companies is intended primarily for safety and soundness of banks, and the protection of the interests of depositors, the Federal Deposit Insurance Fund and the banking system as a whole rather than the protection of security holders and creditors. Events since early 2008 affecting the financial services industry and, more generally, the financial markets and the economy have led to a significant number of initiatives regarding reform of the financial services industry and the regulation governing the industry.

Bank Holding Company Supervision As a bank holding company, we are subject to regulation under the Bank Holding Company Act of 1956, as amended ("BHC Act"), and to inspection, examination and supervision by our primary regulator, the Federal Reserve Board ("FRB"). We are also subject to the disclosure and regulatory requirements of the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as administered by the Securities and Exchange Commission (the "SEC").

HSBC USA and its parent bank holding company qualified as financial holding companies pursuant to the amendments to the BHC Act effected by the Gramm-Leach-Bliley Act of 1999 ("GLB Act"). Financial holding companies may engage in a broader range of activities than bank holding companies. Under regulations implemented by the FRB, if any financial holding company, or any depository institution controlled by a financial holding company, ceases to meet certain capital or management standards, the FRB may impose corrective capital and/or managerial requirements on the financial holding company and place limitations on its ability to conduct the broader financial activities permissible for financial holding companies. In addition, the FRB may require divestiture of the holding company's depository institutions or its affiliates engaged in broader financial activities in reliance on the GLB Act if the deficiencies persist. The regulations also provide that if any depository institution controlled by a financial holding company fails to maintain a satisfactory rating under the Community Reinvestment Act of 1977, as amended, the FRB must prohibit the financial holding company and its subsidiaries from engaging in any additional activities other than those permissible for bank holding companies that are not financial holding companies. As reflected in the agreement entered into with the Office of the Comptroller of the Currency ("OCC") in 2012 (the "GLBA Agreement"), the OCC has determined that HSBC Bank USA is not in compliance with the requirements for a national bank and each depository institution affiliate of the national bank to be both well capitalized and well managed in order to own or control a "financial subsidiary." A "financial subsidiary" is a subsidiary of a bank that also may engage in broader activities than subsidiaries of non-qualified banks. As a result, HSBC USA and its parent bank holding company no longer meet the qualification requirements for financial holding company status, and may not engage in any new types of financial activities without the prior approval of the FRB, and HSBC Bank USA may not directly or indirectly acquire control of, or hold an interest in, any new financial subsidiary, nor commence a new activity in its existing financial subsidiary, unless it receives prior approval from the OCC. Unless all of our affiliate depository institutions are in compliance with these requirements within the time periods specified in the GLBA Agreement, as they may be extended, HSBC USA could be required either to divest HSBC Bank USA or to divest or terminate any financial activities conducted in reliance on financial holding company status under the GLB Act. Similar consequences could result for financial subsidiaries of HSBC

Bank USA that engage in activities in reliance on expanded powers provided for in the GLB Act. The GLBA Agreement requires HSBC Bank USA to take all steps necessary to correct the circumstances and conditions resulting in HSBC Bank USA's noncompliance with the requirements referred to above. We continue to take steps to satisfy the requirements of the GLBA Agreement.

We are generally prohibited under the BHC Act from acquiring, directly or indirectly, ownership or control of more than five percent of any class of voting shares of, or substantially all the assets of, or exercising control over, any U.S. bank, bank holding company or many other types of depository institutions and/or their holding companies without the prior approval of the FRB and, potentially, other U.S. banking regulatory agencies.

The GLB Act and the regulations issued thereunder contain a number of other provisions that affect our operations and those of our subsidiary banks, including regulations and restrictions on the activities we may conduct and the types of businesses and entities we may acquire. Furthermore, other provisions contain detailed requirements relating to the financial privacy of consumers. In addition, the so-called 'push-out' provisions of the GLB Act removed the blanket exemption from registration for securities and brokerage activities conducted in banks (including HSBC Bank USA) under the Exchange Act. Applicable regulations allow banks to continue to avoid registration as a broker or dealer only if they conduct securities activities that fall within a set of defined exceptions.

On August 3, 2017, the FRB issued a proposal to revise its supervisory rating system for bank holding companies with \$50 billion or more in total consolidated assets, including HSBC USA and HSBC North America. Under the proposal, covered bank holding companies would receive separate ratings from the FRB for (i) capital planning and positions, (ii) liquidity risk management and positions, and (iii) governance and controls. Each of these component areas would receive one of the following four ratings: (i) Satisfactory, (ii) Satisfactory Watch, (iii) Deficient -1, and (iv) Deficient -2. As proposed, a covered bank holding company would have to maintain a rating of "Satisfactory Watch" or better for each of the three components to be considered "well managed."

Consumer Regulation Our consumer lending businesses operate in a highly regulated environment. In addition to the establishment of the Consumer Financial Protection Bureau (the "CFPB") and the other consumer-related provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act" or "Dodd-Frank") described below, these businesses are subject to laws relating to consumer protection including, without limitation, fair lending, fair debt collection practices, mortgage loan origination and servicing obligations, bankruptcy, military service member protections, use of credit reports, privacy matters, and disclosure of credit terms and correction of billing errors. Local, state and national regulatory and enforcement agencies continue efforts to address perceived problems within the mortgage lending and credit card industries through broad or targeted legislative or regulatory initiatives aimed at lenders' operations in consumer lending markets. There continues to be a significant amount of legislative and regulatory activity, nationally, locally and at the state level, designed to limit certain lending practices while mandating certain servicing procedures. Federal bankruptcy and state debtor relief and collection laws, as well as the Servicemembers Civil Relief Act affect the ability of banks, including HSBC Bank USA, to collect outstanding balances.

Due to the turmoil in the mortgage lending markets in prior years, there has also been a significant amount of federal and state legislative and regulatory focus on this industry. Increased regulatory oversight over residential mortgage lenders has occurred, including through state and federal examinations and periodic inquiries from state Attorneys General for information. Several regulators, legislators and other governmental bodies have promoted particular views of appropriate or "model" loan modification programs, suitable loan products and foreclosure and loss mitigation practices. We have a repayment plan and a loan modification program for customers facing financial hardship who express the desire to remain in their homes. We evaluate the results of our customer assistance efforts and we continue to enhance and refine our programs based on performance and industry trends. In certain situations, we offer qualified customers relocation assistance to help avoid foreclosure.

In 2011, HSBC Bank USA entered into a consent cease and desist order with the OCC (the "OCC Servicing Consent Order"), and our affiliate, HSBC Finance, and our parent, HSBC North America, entered into a similar consent order with the FRB (together with the OCC Servicing Consent Order, the "Servicing Consent Orders") following completion of a broad horizontal review of industry foreclosure practices. The OCC Servicing Consent Order required HSBC Bank USA to take prescribed actions to address the foreclosure practices noted in the joint examination and deficiencies described in the consent order.

The Servicing Consent Orders required an independent review of foreclosures (the "Independent Foreclosure Review" or "IFR") pending or completed between 2009 and 2010 to determine if any borrower was financially injured as a result of an error in the foreclosure process.

In January 2017, the OCC terminated the OCC Servicing Consent Order, together with the subsequent amendments thereto, after determining HSBC Bank USA had satisfied the requirements thereunder. In January 2018, the FRB terminated the related consent order against HSBC Finance and HSBC North America.

Foreign Exchange Consent Order In September 2017, HSBC and HSBC North America entered into a consent order with the FRB relating to historic deficiencies in their policies and procedures and internal controls for certain foreign exchange trading activities. HSBC paid a \$175 million civil money penalty to the FRB. The order requires HSBC and HSBC North America to enhance their internal controls, audit functions and risk management compliance programs, but also acknowledges that HSBC has

conducted comprehensive remediation initiatives, including automating certain trading activities, and is committed to remediating the risks identified in the FRB's investigation.

Supervision of Bank Subsidiaries Our subsidiary national banks, HSBC Bank USA and HTCD, are subject to regulation and examination primarily by the OCC. These subsidiary banks are subject to additional regulation and supervision by the Federal Deposit Insurance Corporation ("FDIC"), the FRB and the CFPB. HSBC Bank USA and HTCD are subject to banking laws and regulations that place various restrictions and requirements on their activities, investments, operations and administration, including the establishment and maintenance of branch offices, capital and reserve requirements, deposits and borrowings, investment and lending activities, payment of dividends, transactions with affiliates, overall compliance and risk management and numerous other matters.

Federal law imposes limitations on the payment of dividends by national banks. Dividends payable by HSBC Bank USA and HTCD are limited to the lesser of the amounts calculated under a "recent earnings" test and an "undivided profits" test. Under the recent earnings test, a dividend may not be paid if the total of all dividends declared by a bank in any calendar year is in excess of the current year's net income combined with the retained net income of the two preceding years, unless the national bank obtains the approval of the OCC. Under the undivided profits test, a dividend may not be paid in excess of a bank's undivided profits account. HSBC Bank USA is also required to maintain reserves in the form of vault cash and deposits with the Federal Reserve Bank, as well as maintain appropriate amounts of capital against its assets as discussed further in this Annual Report on Form 10-K.

HSBC Bank USA and HTCD are subject to significant restrictions imposed by federal law on extensions of credit to, and certain other "covered transactions" with HSBC USA or other affiliates. Covered transactions include loans and other extensions of credit, investments and asset purchases, derivatives and certain other transactions involving the transfer of value from, or taking the credit risk by, a subsidiary bank to an affiliate or for the benefit of an affiliate. Unless an exemption applies, or a specific waiver is granted by the FRB, covered transactions by a bank with a single affiliate are limited to 10 percent of the bank's capital and surplus, and all covered transactions with affiliates in the aggregate are limited to 20 percent of a bank's capital and surplus. Loans and extensions of credit to affiliates by a bank generally are to be secured in specified amounts with specific types of collateral. A bank's credit exposure to an affiliate as a result of derivative, securities borrowing/lending or repurchase transactions is also subject to these restrictions. A bank's transactions with its non-bank affiliates are also generally required to be on arm's length terms.

The types of activities in which the non-U.S. branches of HSBC Bank USA may engage are subject to various restrictions imposed by the FRB in addition to those generally applicable to HSBC Bank USA under OCC rules. These branches are also subject to the laws and regulatory authorities of the countries in which they operate.

Under longstanding FRB policy, which Dodd-Frank codified as a statutory requirement, HSBC USA is expected to act as a source of strength to its subsidiary banks and, under appropriate circumstances, to commit resources to support each such subsidiary bank in circumstances where it might not do so absent such policy.

Regulatory Capital and Liquidity Requirements As a bank holding company, we are subject to regulatory capital requirements and guidelines imposed by the FRB, which are substantially similar to those imposed by the OCC and the FDIC on banks such as HSBC Bank USA and HTCD. A bank or bank holding company's failure to meet minimum capital requirements can result in certain mandatory actions and possibly additional discretionary actions by its regulators. Generally, bank holding company regulatory capital compliance is performed at a consolidated level within the United States at HSBC North America, our parent, and also separately for HSBC Bank USA. However, we do present HSBC USA's capital ratios below in "Liquidity and Capital Resources" in our MD&A, as well as, together with HSBC Bank USA's, in Note 23, "Retained Earnings and Regulatory Capital Requirements," of the accompanying consolidated financial statements. Our ultimate parent, HSBC, is also subject to regulatory capital requirements under U.K. law.

Basel III. In 2013, U.S. banking regulators issued a final rule implementing the Basel III capital framework in the United States (the "Basel III rule") which, for banking organizations such as HSBC North America and HSBC Bank USA, became effective in 2014 with certain provisions being phased in over time through the beginning of 2019. The Basel III rule established an integrated regulatory capital framework to improve the quality and quantity of regulatory capital. In addition to phasing in a complete replacement to the general risk-based capital rules for determining risk-weighted assets (the "Standardized Approach"), the Basel III rule builds on the advanced internal ratings approach for credit risk and advanced measurement approach for operational risk (taken together, the "Advanced Approaches") applicable to banking organizations having \$250 billion or more in total consolidated assets or \$10 billion or more of foreign exposures (the "Advanced Approaches thresholds"). As discussed further below, the intermediate holding companies ("IHCs") of non-U.S. banks like HSBC may opt out of the Advanced Approaches with the prior approval of the FRB.

The Basel III rule, among other changes, introduced (i) a new minimum common equity Tier 1 risk-based capital requirement; (ii) a new Standardized Approach for risk-weighted assets; (iii) a supplementary leverage ratio ("SLR") for banking organizations that meet the Advanced Approaches thresholds; and (iv) a capital conservation buffer applicable to all banking organizations and a countercyclical capital buffer requirement applicable to banking organizations that meet the Advanced Approaches thresholds. As

a result, to be categorized as "well capitalized" under the Basel III rule, a banking institution must have the ratios reflected in the table included in Note 23, "Retained Earnings and Regulatory Capital Requirements," of the accompanying consolidated financial statements and must not be subject to a directive, order or written agreement to meet and maintain specific capital levels. The federal bank regulatory agencies may, however, set higher capital requirements for an individual bank or bank holding company when particular circumstances warrant. The FRB is considering a new measure to replace the capital conservation buffer with a "stress capital buffer," which would equal a bank holding company's projected decline in common equity Tier 1 under the supervisory severely adverse stress testing scenario, discussed further below, prior to any planned capital actions, and would be reset each year based on the bank holding company's stress testing results. We are reviewing these possible changes to the capital conservation buffer in anticipation of the formal rulemaking and their potential impact on our capital planning processes specifically and our operations and results generally. We currently target internal capital levels using an approach analogous to the stress capital buffer and, therefore, we do not expect the proposal to have a significant impact on our U.S. operations or change our capital planning processes. On September 27, 2017, the federal banking agencies jointly requested public comment on a proposal that would implement certain changes to the Basel III rule. The proposal would reduce risk weighting (from 150 percent to 130 percent) for high-volatility commercial real estate exposures under the Standardized Approach, while also making certain changes to the definition of such exposures and relabeling such exposures high-volatility acquisition, development or construction exposures. We continue to evaluate the potential effects of this proposal on our operations.

Under the Basel III rule, all banking organizations will continue to be subject to the U.S. regulators' existing minimum Tier 1 leverage ratio of 4 percent. Additionally, banking organizations that meet the Advanced Approaches thresholds, such as HSBC North America and HSBC Bank USA, are subject to the SLR. Full implementation and compliance with the SLR was required by January 1, 2018. For HSBC North America and HSBC Bank USA, the SLR regulatory minimum is 3 percent (calculated as the ratio of Tier 1 capital to total leverage exposure, which includes balance sheet exposures plus certain off-balance sheet items). The SLR is generally consistent with the final Basel leverage framework, but also contains certain modifications, including to the methodology for averaging total leverage exposure.

The FRB requires certain large non-U.S. banks with significant operations in the United States, such as HSBC, to establish a single IHC to hold all of their U.S. bank and non-bank subsidiaries. The HSBC Group operates in the United States through such an IHC structure (i.e., HSBC North America). As previously disclosed, in accordance with FRB rules, HSBC North America and HSBC Bank USA received regulatory approval to opt out of the Advanced Approaches and are calculating their risk-based and leverage capital requirements solely under the Standardized Approach. HSBC Bank USA submits an annual statement to the OCC to maintain this opt out. HSBC North America and HSBC Bank USA, however, remain subject to the other capital requirements applicable to Advanced Approaches banking organizations such as: the SLR, the countercyclical capital buffer, stress testing requirements, enhanced risk management standards, enhanced governance and stress testing requirements for liquidity management, and other applicable prudential standards.

The Basel III rule requires banks to phase in requirements for more capital and a higher quality of capital over a period from 2014 to 2019. When fully phased in on January 1, 2019, HSBC North America and HSBC Bank USA will be required to maintain minimum capital ratios (exclusive of any countercyclical capital buffer) as follows:

	Common Equity Tier 1 Ratio	Tier 1 Capital Ratio	Total Capital Ratio	Tier 1 Leverage Ratio	Supplementary Leverage Ratio
Regulatory minimum ratio	4.5%	6.0%	8.0%	4.0%	3.0%
Plus: Capital conservation buffer requirement...	2.5%	2.5%	2.5%	—	—
Regulatory minimum ratio plus capital conservation buffer.....	7.0%	8.5%	10.5%	4.0%	3.0%

Currently, HSBC North America and HSBC Bank USA hold capital in excess of these regulatory minimums.

In addition, and subject to discretion by the respective regulatory authorities, a countercyclical capital buffer of up to 2.5 percent, consisting of common equity Tier 1 capital, could also be required to be built up by banking organizations in periods of excess credit growth in the economy. The FRB, in consultation with the OCC and FDIC, has affirmed the current countercyclical capital buffer level of 0 percent and noted that any future modifications to the buffer would generally be subject to a 12-month phase-in period.

In December 2017, the Basel Committee adopted a package of revisions to the Basel III framework that aim to increase consistency in risk-weighted asset calculations and improve the comparability of bank's capital ratios (the "Basel IV Revisions"). The Basel IV Revisions include changes to the Standardized Approach and internal ratings-based approach to determining credit risk, revisions to the operational risk framework, a leverage ratio surcharge for global systemically important banks ("G-SIBs"), and an output floor. The revisions to the Standardized Approach include a more detailed risk-weighting approach in place of a flat risk weight for certain retail and corporate exposures. The revisions to the internal ratings-based approach will remove the option to use advanced models-based approaches for exposures to financial institutions and large corporates and for equity exposures. Where

the internal-models based approach is retained, minimum levels are applied on the probability of default and for other inputs. The Basel IV Revisions simplify the operational risk framework by replacing the four current approaches with a single Standardized Approach that determines a bank's operational risk requirement by combining a refined measure of gross income with a bank's own internal loss history over the prior 10 years. The Basel IV Revisions also introduce a leverage ratio buffer for each G-SIB to be set at 50 percent of its risk-based capital surcharge. Changes to the market risk capital framework adopted by the Basel Committee in January 2016 are also considered part of the Basel IV Revisions and are expected to increase market risk capital requirements for many banking organizations. The Basel IV Revisions are not directly applicable to any U.S. banking organization and must first be implemented by the federal banking agencies. The agencies are expected to act before the January 1, 2022 implementation deadline agreed by the Basel Committee, but it is unclear whether they will deviate significantly from the Basel IV Revisions in the direction of greater conservatism as they did with respect to the Basel III framework. The output floor limits the amount of capital benefit a bank can obtain from its use of internal models relative to using the Standardized Approach by requiring that total risk-weighted assets generated under the Advanced Approaches cannot fall below 72.5 percent of the risk-weighted assets calculated under the Standardized Approach. Accordingly, the output floor is not expected to be relevant to IHCs such as HSBC North America which have opted out of the Advanced Approaches and therefore currently calculate and report their total risk-weighted assets under the Standardized Approach only.

As a result of the adoption of the final rules by the U.S. banking regulators implementing the Basel III regulatory capital and liquidity reforms from the Basel Committee, together with the impact of similar implementation by U.K. banking regulators and future implementation of the Basel IV Revisions, we continue to review the composition of our capital structure.

In 2015, the Financial Stability Board ("FSB") issued its final standards for total loss-absorbing capacity ("TLAC") requirements for G-SIBs. In 2016, the FRB adopted final rules implementing the FSB's TLAC standard in the United States. The rules require, among other things, the U.S. IHCs of non U.S. G-SIBs, including HSBC North America, to maintain minimum amounts of TLAC which would include minimum levels of Tier 1 capital and long-term debt satisfying certain eligibility criteria, and a related TLAC buffer commencing January 1, 2019, without the benefit of a phase-in period. The TLAC rules also include 'clean holding company requirements' that impose limitations on the types of financial transactions that HSBC North America could engage in. The FSB's TLAC standard and the FRB's TLAC rules represent a significant expansion of the current regulatory capital framework. To support compliance when the TLAC rules become effective, HSBC North America will be required in future periods to issue additional long-term debt that is TLAC compliant and modify the terms of existing long-term debt in order for that debt to be TLAC compliant.

Capital Planning and Stress Testing. U.S. bank holding companies with \$50 billion or more in total consolidated assets, including HSBC North America, are required to comply with the FRB's capital plan rule and Comprehensive Capital Analysis and Review ("CCAR") program, as well as the annual supervisory stress tests conducted by the FRB, and the semi-annual company-run stress tests as required under the Dodd-Frank Act (collectively, "DFAST"). As part of the CCAR process, the FRB undertakes a supervisory assessment of the capital adequacy of bank holding companies, including HSBC North America, based on a review of a comprehensive capital plan submitted by each participating bank holding company to the FRB that describes the company's planned capital actions during the nine quarter review period, as well as the results of stress tests conducted by both the company and the FRB under different hypothetical macroeconomic scenarios, including a supervisory adverse scenario and severely adverse scenario provided by the FRB. The FRB can object to a capital plan for qualitative or quantitative reasons, in which case the company cannot make capital distributions (with the exception of those that may have already received a non-objection in the previous year) without specific FRB approval.

In evaluating a capital plan, the FRB considers a number of qualitative factors, which have become increasingly important in the CCAR process in recent years. The FRB's supervisory expectations for the capital planning and stress testing processes at large and complex bank holding companies, including HSBC North America, are heightened relative to smaller and less complex bank holding companies. In assessing capital planning and stress testing processes, the FRB considers whether the bank holding company has sound and effective governance to oversee these processes. The FRB's evaluation focuses on whether a bank holding company's capital planning and stress testing processes are supported by a strong risk management framework to identify, measure and assess material risks and to provide a strong foundation to capital planning. The FRB also evaluates a bank holding company's policy guidelines for capital planning and assessing capital adequacy and the comprehensiveness of its internal controls. A bank holding company's scenario design processes and approaches for estimating the impact of stress on its capital position are also comprehensively reviewed to ensure that projections reflect the impact of appropriately stressful conditions on its capital position. Significant deficiencies in a bank holding company's capital planning and stress testing processes may result in a qualitative objection by the FRB to its capital plan. In January 2017, the FRB announced that so-called "large and noncomplex" firms, which are firms with less than \$250 billion in total consolidated assets and less than \$75 billion in total nonbanking assets, are exempt from the CCAR qualitative assessment. HSBC North America does not currently fall into the category of "large and noncomplex" and, therefore, remains subject to the qualitative review in the 2018 CCAR cycle.

From a quantitative perspective, the FRB considers whether under different hypothetical macroeconomic scenarios, including a severely adverse scenario, the company would be able to maintain throughout the nine quarter planning horizon, regulatory risk-based and leverage capital ratios that exceed the minimum requirements after taking into account the company's planned capital

distributions, such as dividends and stock repurchases. Failure to meet a minimum regulatory risk-based or leverage capital requirement on a projected stress basis is grounds for objection to a capital plan.

HSBC North America participates in the CCAR and DFAST programs of the FRB and submitted its latest CCAR capital plan and annual company-run DFAST results in April 2017, and its latest mid-cycle DFAST results in October 2017. HSBC Bank USA is subject to the OCC's DFAST requirements, which require certain banks to conduct annual company-run stress tests, and submitted its latest annual DFAST results in April 2017. The company-run stress tests are forward looking exercises to assess the impact of hypothetical macroeconomic baseline, adverse and severely adverse scenarios provided by the FRB and the OCC for the annual exercise, and internally developed scenarios for both the annual and mid-cycle exercises, on the financial condition and capital adequacy of a bank holding company or bank over a nine quarter planning horizon.

HSBC North America and HSBC Bank USA are required to disclose the results of their annual DFAST under the FRB and OCC's severely adverse stress scenario and HSBC North America is required to disclose the results of its mid-cycle DFAST under its internally developed severely adverse stress scenario. In June 2017, HSBC North America and HSBC Bank USA publicly disclosed their most recent annual DFAST results and the FRB also publicly disclosed its own DFAST and CCAR results. In October 2017, HSBC North America publicly disclosed the results of its mid-cycle DFAST results.

In June 2017, the FRB informed HSBC North America, our parent company, that it did not object to HSBC North America's capital plan or the planned capital distributions included in its 2017 CCAR submission. The FRB's capital plan rule provides that a bank holding company must resubmit a new capital plan prior to the annual submission date if, among other things, there has been or will be a material change in its risk profile, financial condition, or corporate structure since its last capital plan submission.

In December 2017, the FRB finalized changes to the CCAR program that will require certain IHCs of foreign banking organizations, including HSBC North America, to provide information about the effect of a hypothetical global market shock on trading and counterparty exposures. HSBC North America will be required to provide quarterly information about such effects, and such effects will also be incorporated into the FRB's CCAR stress testing applicable to HSBC North America, potentially causing additional projected stress losses under such tests.

Liquidity Risk Management. As previously disclosed, the Basel Committee has adopted two required liquidity metrics: the liquidity coverage ratio ("LCR"), designed to be a short-term measure to ensure banks have sufficient High Quality Liquid Assets ("HQLA") to cover net stressed cash outflows over the next 30 days, and the net stable funding ratio ("NSFR"), which is a longer term measure with a 12-month time horizon to ensure a sustainable maturity structure of assets and liabilities. Under European Commission Delegated Regulation 2015/61, the Basel Committee based LCR became a minimum regulatory standard in 2015. The European calibration of the Basel Committee based NSFR is still pending.

In 2014, the FRB, the OCC and the FDIC issued final regulations to implement the LCR in the United States, applicable to certain large banking institutions, including HSBC North America and HSBC Bank USA. The U.S. LCR rule is generally consistent with the Basel Committee guidelines, but is more stringent in several areas including the range of assets that qualify as HQLA and the assumed rate of outflows of certain kinds of funding. Under the U.S. rule, U.S. institutions, including HSBC North America and HSBC Bank USA, have been required to maintain a minimum LCR of 100 percent since January 1, 2017, two years ahead of the Basel Committee's timeframe for compliance by January 1, 2019, and report LCR to U.S. regulators on a daily basis. The U.S. LCR rule does not address the U.S. NSFR requirement, which is currently in an international observation period. Based on the results of the observation period, the Basel Committee and U.S. banking regulators may make further changes to the NSFR. In April 2016, U.S. regulators issued for public comment a proposal to implement the NSFR in the United States, applicable to certain large banking organizations, including HSBC North America and HSBC Bank USA. The U.S. NSFR proposal is generally consistent with the Basel Committee guidelines, but similar to the U.S. LCR rule, is more stringent in several areas including the required stable funding factors applied to certain assets such as mortgage-backed securities.

Enhanced prudential standard rules issued pursuant to Section 165 of the Dodd-Frank Act complement the LCR, capital planning, resolution planning, and stress testing requirements for U.S. bank holding companies and foreign banking organizations with total global consolidated assets of \$50 billion or more ("Covered Companies"). The rules require Covered Companies, such as HSBC North America, to comply with various liquidity risk management standards and to maintain a liquidity buffer of unencumbered highly liquid assets based on the results of internal liquidity stress testing. Covered Companies are also required to meet heightened liquidity requirements, which include qualitative liquidity standards, cash flow projections, internal liquidity stress tests, and liquidity buffer requirements. HSBC North America has implemented the standard and it does not have a significant impact to our business model.

HSBC North America and HSBC Bank USA have adjusted their liquidity profiles to support compliance with these rules. HSBC North America and HSBC Bank USA may need to make further changes to their liquidity profiles to support compliance with any future final rules.

Non-U.S. Regulatory Capital Requirements. HSBC North America and HSBC USA also continue to support HSBC's implementation of the Basel III framework, as adopted by the U.K. Prudential Regulation Authority. We supply data regarding credit risk, operational risk and market risk to support HSBC's regulatory capital and risk-weighted asset calculations.

General. Our capital resources are summarized under "Liquidity and Capital Resources" in MD&A. Capital amounts and ratios for HSBC USA and HSBC Bank USA are summarized in Note 23, "Retained Earnings and Regulatory Capital Requirements" of the consolidated financial statements. From time to time, bank regulators propose amendments to or issue interpretations of risk-based or leverage capital guidelines. Such proposals or interpretations could, upon implementation, affect reported capital ratios and net risk-weighted assets.

Deposit Insurance Deposits placed at HSBC Bank USA and HTCD are insured by the FDIC, subject to the limitations and conditions of applicable law and the FDIC's regulations. The standard deposit insurance amount is \$250,000 per depositor for each account category. HSBC Bank USA and HTCD are subject to risk based assessments from the FDIC. Such assessments determine the deposit insurance costs paid by HSBC Bank USA and HTCD to the FDIC. While the assessments are generally payable quarterly, the FDIC also has the authority to impose special assessments to prevent the Deposit Insurance Fund from declining to an unacceptable level.

FDIC Assessment The minimum reserve ratio for the Deposit Insurance Fund was increased under the Dodd-Frank Act from 1.15 percent to 1.35 percent, with the target of 1.35 percent to be reached by 2020 and with the incremental cost charged to banks with more than \$10 billion in assets. In order to achieve the 1.35 percent goal, the FDIC adopted a rule that imposes on banks with at least \$10 billion in assets, including HSBC Bank USA, a temporary assessment surcharge of 4.5 cents per \$100 of their assessment base, after making certain adjustments. The FDIC expects this surcharge, which took effect in July 2016, to remain in place for approximately two years. The surcharge has increased deposit insurance costs for HSBC Bank USA. In addition, the FDIC has set the designated reserve ratio at two percent as a long-term goal.

Bank Secrecy Act/Anti-Money Laundering The USA Patriot Act (the "Patriot Act") of 2001, contains significant record keeping and customer identity requirements, expands the government's powers to freeze or confiscate assets and increases the available penalties that may be assessed against financial institutions for violation of the requirements of the Patriot Act intended to detect and deter money laundering. The U.S. Treasury Secretary developed and implemented final regulations with regard to the anti-money laundering ("AML") compliance obligations of financial institutions (a term which includes insured U.S. depository institutions, U.S. branches and agencies of foreign banks, U.S. broker-dealers and numerous other entities). The U.S. Treasury Secretary delegated certain authority to a bureau of the U.S. Treasury Department known as the Financial Crimes Enforcement Network ("FinCEN").

Many of the AML compliance requirements of the Patriot Act, as implemented by FinCEN, are generally consistent with the anti-money laundering compliance obligations that applied to HSBC Bank USA under the Bank Secrecy Act ("BSA") and applicable FRB regulations before the Patriot Act was adopted. These include requirements to adopt and implement an AML program, report suspicious transactions and implement due diligence procedures for certain correspondent and private banking accounts. Certain other specific requirements under the Patriot Act involve compliance obligations. The Patriot Act and other recent events have also resulted in heightened scrutiny of the BSA and AML compliance programs by bank regulators.

In 2010, HSBC Bank USA entered into a consent cease and desist order with the OCC and our parent, HSBC North America, entered into a consent cease and desist order with the FRB. In 2012, HSBC Bank USA further entered into an enterprise-wide compliance consent order (each an "Order" and together, the "Orders"). These Orders required improvements to establish an effective compliance risk management program across our U.S. businesses, including risk management related to BSA and AML compliance. While these Orders remain open, HSBC Bank USA and HSBC North America believe that they have taken appropriate steps to bring themselves into compliance with the requirements of the Orders.

In 2012, HSBC, HSBC North America and HSBC Bank USA entered into agreements with U.S. and U.K. government agencies regarding past inadequate compliance with AML/BSA and sanctions laws. Among those agreements, HSBC and HSBC Bank USA entered into a five-year deferred prosecution agreement with the U.S. Department of Justice ("DOJ"), the U.S. Attorney's Office for the Eastern District of New York, and the U.S. Attorney's Office for the Northern District of West Virginia (the "AML DPA"), and HSBC consented to a cease and desist order and HSBC and HSBC North America consented to a civil money penalty order with the FRB. HSBC also entered into an agreement with the Office of Foreign Assets Control ("OFAC") regarding historical transactions involving parties subject to OFAC sanctions, as well as an undertaking with the U.K. Financial Conduct Authority ("FCA") to comply with certain forward-looking AML and sanctions-related obligations. In addition, HSBC Bank USA entered into a civil money penalty order with FinCEN and a separate civil money penalty order with the OCC.

Under these agreements, HSBC and HSBC Bank USA made payments totaling \$1.921 billion to U.S. authorities, of which \$1.381 billion was attributed to and paid by HSBC Bank USA and undertook various further obligations, including among others, to continue to cooperate fully with the DOJ in any and all investigations, not to commit any crime under U.S. federal law subsequent to the signing of the agreement, and to retain an independent compliance monitor (the "Monitor") to evaluate our progress in fully implementing our obligations and produce regular assessments of the effectiveness of HSBC Group's Compliance function. In December 2017, the AML DPA expired and the charges deferred by the AML DPA were dismissed. The Monitor will continue working in his capacity as a skilled person and independent consultant for a period of time at the FCA's and FRB's discretion.

In February 2018, the Monitor delivered his fourth annual follow-up review report based on various thematic and country reviews he had conducted over the course of 2017. In his report, the Monitor concluded that, in 2017, HSBC Group made significant progress in developing a reasonably effective and sustainable AML and sanctions compliance program and expressed confidence that HSBC Group can achieve its target end state within the next eighteen months if it is able to maintain the concerted effort and focus it has demonstrated in remediating and enhancing its program over the last five years. Nonetheless, the Monitor identified various challenges that HSBC Group faces in achieving this objective, noted deficiencies in HSBC Group's financial crime compliance controls and areas of HSBC Group's program that require further work, and highlighted potential instances of financial crime and certain areas in which he believes that HSBC Group is not adequately managing financial crime risk. The Monitor identified potential AML and sanctions compliance issues that HSBC Group is reviewing further with the DOJ, FRB and/or FCA. See Note 27, "Litigation and Regulatory Matters," for additional discussion.

Additionally, as discussed elsewhere in this Annual Report on Form 10-K, HSBC is the subject of other ongoing investigations and reviews by the DOJ.

Concurrent with entry into the AML DPA, HSBC Bank USA also entered into two consent orders with the OCC. The first, discussed above, required HSBC Bank USA to adopt an enterprise-wide compliance program. The second required HSBC Bank USA to correct the circumstances noted in the OCC's report and imposed restrictions on HSBC Bank USA acquiring control of, or holding an interest in, any new financial subsidiary, or commencing a new activity in its existing financial subsidiary, without the OCC's prior approval.

These settlements with the U.S. and U.K. government agencies have led to private litigation and do not preclude further private litigation relating to, among other things, HSBC Group's compliance with applicable AML/BSA and sanctions laws or other regulatory or law enforcement action for AML/BSA or sanctions matters not covered by the various agreements.

Cybersecurity Regulatory Proposals In October 2016, the FRB, FDIC, and OCC issued a joint advance notice of proposed rulemaking that would impose enhanced cyber risk management standards on banking organizations with \$50 billion or more in total consolidated assets and certain of their service providers. The standards address five categories: (i) cyber risk governance; (ii) cyber risk management; (iii) internal dependency management; (iv) external dependency management; and (v) incident response, cyber resilience, and situational awareness. The agencies are also considering proposing more stringent "Sector Critical Standards" that would apply to systems "deemed critical to the financial sector." The advanced notice of proposed rulemaking leaves open the precise form the enhanced standards would take, and instead lays out possibilities ranging from policy guidance on best practices to specific regulations. We are monitoring future developments in this area and their potential impact on our operations.

Financial Regulatory Reform The Dodd-Frank Act, which was signed into law in 2010, is a sweeping overhaul of the U.S. financial regulatory system. The law is comprehensive and includes many provisions specifically relevant to our businesses and the businesses of our affiliates as follows, many of which have already been described above.

Oversight In order to promote financial stability in the U.S. financial system, the Dodd-Frank Act created a framework for the enhanced prudential regulation and supervision of financial institutions that are deemed to be "systemically important" to the U.S. financial system, including U.S. bank holding companies with consolidated assets of \$50 billion or more, such as HSBC North America. This framework is subject to the general oversight of the Financial Stability Oversight Council ("FSOC"), an interagency coordinating body that has authority, among other things, to recommend stricter regulatory and supervisory requirements for large bank holding companies and to designate bank and non-bank financial companies that pose a risk to financial stability. In turn, the FRB has authority, in consultation with the FSOC, to take certain actions, including to preclude mergers, restrict financial products offered, restrict, terminate or impose conditions on activities or require the sale or transfer of assets against any systemically important bank holding company with assets greater than \$50 billion, such as HSBC North America, that is found to pose a grave threat to financial stability. The FSOC is supported by the Office of Financial Research ("OFR"), which develops standards for data reporting requirements for financial institutions. The cost of operating both the FSOC and OFR is paid for through an assessment on large bank holding companies, which began in 2012.

Increased Prudential Standards In addition to the increased capital, liquidity, stress testing and other enhanced prudential and structural requirements described above, large international banks, such as HSBC (generally with regard to its U.S. operations), and large insured depository institutions, such as HSBC Bank USA, are required to file resolution plans identifying, among other things, material subsidiaries and core business lines and describing what strategy would be followed to resolve the institution in the event of significant financial distress, including identifying how insured bank subsidiaries would be adequately protected from risk created by other affiliates. The failure to cure deficiencies in a resolution plan required by Dodd-Frank to be filed by HSBC would enable the FRB and the FDIC, acting jointly, to impose more stringent capital, leverage or liquidity requirements, or restrictions on growth, activities or operations and, if such failure persists, require the divestiture of assets or operations. Dodd-Frank also requires that single counterparty lending limits applicable to HSBC Bank USA take into account credit exposure arising from derivative transactions, securities borrowing and lending transactions and repurchase and reverse repurchase agreements with counterparties.

In March 2016 the FRB issued its re-proposal to limit credit exposures to single counterparties. The re-proposal would prohibit HSBC North America from having aggregate net credit exposure to a single counterparty in excess of 25 percent of Tier 1 capital. Our ultimate parent, HSBC, would be prohibited from having aggregate net credit exposure to a "Major Counterparty" in its combined U.S. operations (including HSBC North America) in excess of 15 percent of Tier 1 capital. Aggregate net credit exposure of HSBC's combined U.S. operations to any other counterparty would be limited to 25 percent of HSBC's Tier 1 capital. A "major counterparty" is any counterparty that is (i) a U.S. G-SIB; (ii) a foreign banking organization ("FBO"), that has the characteristics of a G-SIB under the Basel Committee's G-SIB methodology; (iii) an FBO with respect to which the FRB determines that the FBO would be a G-SIB or that the U.S. IHC of the FBO would be a G-SIB; or (iv) is a nonbank financial company supervised by the FRB. We continue to evaluate the potential effects of this re-proposal on our operations.

Affiliate Transaction Limits Quantitative and qualitative limits on bank credit transactions with affiliates also include credit exposure related to repurchase agreements, derivatives and securities lending/borrowing transactions. This provision may limit the use of intercompany transactions between us and our affiliates, which may impact our current funding, hedging and overall internal risk management strategies.

Derivatives Regulation Title VII of the Dodd-Frank Act imposes comprehensive regulation on the over-the-counter ("OTC") derivatives markets, including credit default, equity, foreign exchange and interest rate swaps. Implementation of Title VII is the responsibility of the Commodity Futures Trading Commission ("CFTC") (for swaps based on non-securities underliers or broad-based security indices), the SEC (for swaps based on individual securities and narrow-based security indices, known as "security-based swaps") and, to a lesser extent, U.S. banking regulators (for certain rules applicable to banks). The CFTC has adopted final rules implementing many of the most significant provisions of Title VII applicable to swaps, most of which came into effect during 2013 and 2014. In particular, certain swap dealers, including HSBC Bank USA, have provisionally registered with the CFTC and become members of the National Futures Association, subjecting them to an extensive array of corporate governance requirements, business conduct standards, reporting requirements, mandatory clearing and trading of certain swaps and other regulatory standards affecting their derivatives businesses. These requirements have and continue to significantly increase the costs associated with HSBC Bank USA's derivatives businesses.

In addition to these CFTC rules, as a provisionally registered swap dealer that is a national bank, HSBC Bank USA is subject to the final rules establishing margin requirements for non-cleared swaps and security-based swaps adopted in November 2015 by the OCC jointly with other U.S. banking regulators. The final margin rules require HSBC Bank USA to collect and post initial and variation margin for non-cleared swaps and security-based swaps entered into with other swap dealers and certain financial end users that exceed a minimum threshold of transactional activity. For non-cleared swaps and security-based swaps entered into with financial end users that do not meet the minimum transactional activity threshold, HSBC Bank USA is only required to collect and post variation margin (but not initial margin). The U.S. banking regulators' final rules do not impose margin requirements for non-cleared swaps and security-based swaps entered into with non-financial end users, certain treasury affiliates, certain sovereigns and multilateral development banks or qualifying hedging transactions with certain small depository institutions.

The final margin rules also limit the types of assets that are eligible to satisfy initial and variation margin requirements, require initial margin to be segregated at a third-party custodian, impose requirements on internal models used to calculate initial margin requirements and contain specific provisions for cross-border transactions and inter-affiliate transactions. The final margin rules follow a phased implementation schedule, with certain initial margin and variation margin requirements effective as of September 2016. Additional variation margin requirements came into effect in March 2017 and additional initial margin requirements are being phased in on an annual basis from September 2017 through September 2020, with the relevant compliance dates depending on the transactional volume of the parties and their affiliates. These final rules, as well as parallel margin rules from the CFTC, the SEC, and certain non-U.S. regulators will increase the costs and liquidity burden associated with trading non-cleared swaps and security-based swaps and may adversely affect our business in such products. In particular, the imposition of initial margin requirements on inter-affiliate transactions will significantly increase the cost of certain consolidated risk management activities and may adversely affect HSBC to a greater extent than some of our competitors.

Also, HSBC Bank USA engages in equity and credit derivatives businesses that are subject to the SEC's jurisdiction to regulate security-based swaps under Title VII of the Dodd-Frank Act. In 2015 and 2016, the SEC finalized rules regarding registration, business conduct standards and trade acknowledgment and verification requirements for security-based swap dealers and major security-based swap participants. The registration requirements and other rules applicable to security-based swap dealers and major security-based swap participants will not come into effect until the SEC completes further security-based swap rulemakings. Certain HSBC affiliates, including HSBC Bank USA, may be required to register and become subject to these rules when the registration requirement becomes effective. In January 2015 and July 2016, the SEC also finalized rules regarding reporting and public dissemination requirements for security-based swap transaction data. The reporting requirements will not become effective until after the compliance date for security-based swap dealer and major security-based swap participant registration. Because HSBC Bank USA's equity and credit derivatives businesses are also subject to the CFTC's jurisdiction under Title VII, material differences between the final SEC rules and existing CFTC rules could materially increase our costs of compliance with Title VII by requiring the implementation of significant additional policies, procedures, documentation, systems and controls for those businesses.

The "Volcker Rule" In 2013, U.S. regulators finalized the "Volcker Rule," which limits the ability of banking entities, such as HUSI, to sponsor or invest in certain private equity or hedge funds or to engage in certain types of proprietary trading. The conformance period for the Volcker Rule was extended until July 2015. The FRB further extended the conformance period to July 2016 for investments in and relationships with "covered funds" and "foreign funds," each as defined in the Volcker Rule, that were in place prior to 2014 ("legacy covered funds"). In July 2016, the FRB granted an additional one-year extension of the conformance period for legacy covered funds until July 2017. In February 2017, the FRB granted HSBC North America an additional transition period to conform investments in certain illiquid legacy covered funds under the Volcker Rule. On August 7, 2017, the OCC published a request for information on how the final regulations implementing the Volcker Rule could be revised to better accomplish the purposes of the statute. The comment period on the OCC notice closed on September 21, 2017.

The Volcker Rule restricts proprietary trading as principal for a "trading account" in "financial instruments," each as defined in the Volcker Rule, subject to various exclusions and exemptions. Generally, securities, derivatives, futures and options on all such instruments are covered, while loans, currencies and commodities are not covered. In addition, there are exemptions for activities, among others, that constitute market making, underwriting, hedging, and trading of U.S. government, agency or municipal securities and certain foreign sovereign debt securities. Each of these exemptions, however, is generally subject to its own set of compliance requirements and conditions.

The Volcker Rule also restricts acquiring or retaining an ownership interest in, or sponsoring or having certain relationships with, covered funds. Covered funds generally include entities that would be an investment company under the Investment Company Act of 1940 (the "1940 Act"), but for the exemptions provided in Section 3(c)(1) or Section 3(c)(7) of the 1940 Act, as well as certain commodity pools. The Volcker Rule includes exclusions and exemptions, among others, for certain limited investments in conjunction with asset management activities for customers, for loan securitizations, for asset-backed commercial paper conduits, and for underwriting and market making in covered funds. As with the proprietary trading restrictions, the exemptions are generally subject to a variety of compliance requirements and conditions. Any limited, yet permissible, investments in covered funds are required to be deducted from the Tier 1 capital of U.S. banking entities. Several activities engaged in by HUSI are subject to restrictions under the Volcker Rule.

The Volcker Rule also requires an extensive array of compliance policies, procedures and quantitative metrics reporting to ensure that activities remain within one or more of the exemptions described in the Volcker Rule. In connection with these requirements, we have built the appropriate compliance framework to ensure compliance by the relevant effective dates. HUSI has continued to ensure that relevant training is completed on a regular basis for all affected front office and control personnel, that it has conformance plans for those legacy covered funds to which the extension applies, and that it is in compliance with all material respects of the Volcker Rule.

The Volcker Rule also requires an annual attestation either by the Chief Executive Officer of the top-tier foreign banking organization or the senior management officer in the U.S. as to the implementation of a compliance program reasonably designed to achieve compliance with the Volcker Rule.

Consumer Regulation The Dodd-Frank Act created the CFPB, which has a broad range of powers to administer and enforce a new federal regulatory framework of consumer financial regulation, including the authority to regulate credit, savings, payment and other consumer financial products and services and providers of those products and services. The CFPB has the authority to issue regulations to prevent unfair, deceptive or abusive practices in connection with consumer financial products or services and to ensure features of any consumer financial products or services are fully, accurately and effectively disclosed to consumers. The CFPB also has authority to examine large banks, including HSBC Bank USA, and their affiliates for compliance with those regulations.

With respect to certain state laws governing the provision of consumer financial products by national banks such as HSBC Bank USA, the Dodd-Frank Act codified the current judicial standard of federal preemption with respect to national banks, but added procedural steps to be followed by the OCC when considering preemption determinations after July 2011. Furthermore, the Dodd-Frank Act removed the ability of subsidiaries or agents of a national bank to claim federal preemption of consumer financial laws, although the legislation did not purport to affect existing contracts. These limitations on federal preemption may elevate our costs of compliance, while increasing litigation expenses as a result of potential state Attorney General or plaintiff challenges and the risk of courts not giving deference to the OCC, as well as increasing complexity due to the lack of uniformity in state law. The extent to which the limitations on federal preemption will impact our businesses and those of our competitors remains uncertain. The Dodd-Frank Act contains many other consumer-related provisions, including provisions addressing mortgage reform.

The Dodd-Frank Act has and will continue to have a significant impact on the operations of many financial institutions in the United States, including HUSI and our affiliates. As the legislation calls for extensive regulations to be promulgated to interpret and implement the legislation, we are unable to determine precisely the impact that Dodd-Frank and related regulations will have on financial results at this time. Notwithstanding, the current Administration in the U.S. (the "Administration") has indicated it would like to see changes made to certain financial reform regulations, including Dodd-Frank, to replace certain elements with new policies to encourage economic growth and job creation. The specifics of what might be changed are currently unclear, which has introduced some uncertainty about the regulatory framework that will apply to the financial services industry going forward.

Competition The GLB Act eliminated many of the regulatory restrictions on providing financial services in the United States. The GLB Act allows for financial institutions and other providers of financial products to enter into combinations that permit a single organization to offer a complete line of financial products and services. In addition, the Volcker Rule places new restrictions on bank-affiliated financial companies' trading activities and private equity and hedge fund investments, which may provide a competitive advantage to financial companies that do not have U.S. banking operations and may impact liquidity in the products and activities in which we engage. Therefore, we face intense competition in all of the markets we serve, competing with banks and other financial institutions such as insurance companies, commercial finance providers, brokerage firms and investment companies. The financial services industry has experienced consolidation in recent years as financial institutions involved in a broad range of products and services have merged, been acquired or dispersed. This trend is expected to continue and has resulted in, among other things, greater concentrations of deposits and other resources. Competition is expected to continue to be intense given the multiple banks and other financial services companies which offer products and services in our markets, noting that we compete with different banks and financial services companies in different markets, given our global strategy.

Corporate Governance and Controls

We maintain a website at www.us.hsbc.com on which we make available, as soon as reasonably practicable after filing with or furnishing to the SEC, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to these reports. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website. Our website also contains our Corporate Governance Standards and Charters of standing Board of Director Committees, including the Audit Committee, the Compliance and Conduct Committee, the Risk Committee and the Chairman's Committee. We have a Statement of Business Principles and Code of Ethics that expresses the principles upon which we operate our businesses. Integrity is the foundation of all our business endeavors and is the result of continued dedication and commitment to high ethical standards in our relationships with each other, with other organizations and with those individuals who are our customers. Our Statement of Business Principles and Code of Ethics can be found on our corporate website. Printed copies of this information can be requested at no charge. Requests should be made to HSBC USA Inc., 452 Fifth Avenue, New York, NY 10018, Attention: Corporate Secretary.

Certifications In addition to certifications from our Chief Executive Officer and Chief Financial Officer pursuant to Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 (attached to this report on Form 10-K as Exhibits 31 and 32), we also file a written affirmation of an authorized officer with the New York Stock Exchange (the "NYSE") certifying that such officer is not aware of any violation by HSBC USA of the applicable NYSE corporate governance listing standards in effect as of February 20, 2018.

Item 1A. Risk Factors

The following discussion provides a description of the most significant risk factors that could affect our businesses, results of operations and financial condition and could cause our results to differ materially from those expressed in public statements or documents. Some of these risk factors are inherent in the financial services industry and others are more specific to our own businesses. There are also other factors besides those discussed below or elsewhere in this Annual Report on Form 10-K that could affect our businesses, results of operations and financial condition and, therefore, the risk factors below should not be considered a complete list of all potential risks that we may face.

Macroeconomic Risk

Market and economic conditions will continue to affect our businesses, results of operations and financial condition. Our business and earnings are affected by general business, economic and market conditions in the United States and abroad. Uncertainties concerning the outlook and the future economic environment exist despite continued improvements in many segments of the global economy. There can be no assurance that the global economy as a whole will continue to improve. Given our concentration of business activities in the United States, we are particularly exposed to downturns in the economy, including housing, high unemployment, tighter credit conditions and reduced economic growth. While the U.S. economy continued to grow during 2017, we also have a significant number of customers in Latin America and in particular Brazil, which continues to experience economic challenges. General business, economic and market conditions that could continue to affect us include:

- level of economic growth, including the pace and magnitude of such growth;
- pressure on and changes in consumer confidence, spending and behavior;
- fiscal policy;
- volatility in energy prices, including oil and gas prices;
- volatility in credit markets;
- unemployment levels;
- trends in corporate earnings;
- wage income levels and declines in wealth;
- market value of residential and commercial real estate throughout the United States;
- inflation;
- monetary supply and monetary policy;
- fluctuations in both debt and equity capital markets in which we fund our operations;
- consequences of unexpected geopolitical events, natural disasters, pandemics or acts of war or terrorism;
- trade policy;
- fluctuations in the value of the U.S. dollar;
- movements in short-term and long-term interest rates or a change in the shape of the yield curve;
- increases in interest rates, which may lead to increased delinquencies and loan impairment charges;
- availability of liquidity;
- tight consumer credit conditions;
- heightened scrutiny by various U.S. bankruptcy trustees of proofs of claim and other documents filed by creditors in consumer bankruptcy cases; and
- new laws, regulations or regulatory and law enforcement initiatives.

Although the U.S. economy in general continued to improve in 2017, if businesses were again to become cautious to hire, lay-off employees or reduce hours for employees, losses could be significant in all types of our consumer loans due to decreased consumer income. Despite the improvement of the U.S. economy, we are vulnerable to many economies outside of the U.S. and economic uncertainty remains in many economies outside the U.S., including China as well as Latin America and in particular Brazil, where economic activity continues to be slow. In addition, on-going geopolitical events, such as the threat of hostilities between countries and the decision by the United Kingdom ("U.K.") to exit the EU and the implications of those events could potentially impact the capital markets and trade as well as corporate earnings which would significantly impact our commercial loan performance. The sustainability of the economic recovery will be determined by numerous variables including consumer sentiment, energy prices, credit market volatility, employment levels and housing market conditions which will impact corporate earnings and the capital markets. In the event economic conditions stop improving or become depressed and lead to a recession, there would be a significant negative impact on delinquencies, charge-offs and losses in all loan portfolios with a corresponding impact on our results of operations.

A deterioration in business and economic conditions, which may erode consumer and investor confidence levels or increased volatility of financial markets, also could adversely affect financial results for our fee-based businesses, including our financial planning products and services.

Macro-prudential, regulatory and legal risks to our business model

Federal, state, local and other similar international measures to regulate the financial industry may significantly impact our operations. We operate in a highly regulated environment. Changes in federal, state and local laws and regulations affecting banking, derivatives, capital, liquidity, consumer credit, bankruptcy, privacy, consumer protection or other matters, could materially impact our operations and performance.

Attempts by local, state and federal regulatory agencies to address perceived problems with the mortgage lending and credit card industries could affect us in substantial and unpredictable ways, including limiting the types of products we can offer, how these products may be originated, the fees and charges that may be applied to accounts and how accounts may be collected or security interests enforced. Any one or more of these effects could negatively impact our results. There is also significant focus on loss mitigation and foreclosure activity for real estate loans. We cannot fully anticipate the response by national regulatory agencies, state Attorneys General, or certain legislators, nor can we anticipate whether significant changes to our operations and practices will be required as a result.

The Dodd-Frank Act established the CFPB which has broad authority to regulate providers of credit, payment and other consumer financial products and services. In addition, provisions of the Dodd-Frank Act may also narrow the scope of federal preemption of state consumer laws and expand the authority of state Attorneys General to bring actions to enforce federal consumer protection legislation. As a result of the Dodd-Frank Act's potential expansion of the authority of state Attorneys General to bring actions to enforce federal consumer protection legislation, we could potentially be subject to additional state lawsuits and enforcement actions, thereby further increasing our legal and compliance costs.

Under the Dodd-Frank Act, certain of our affiliates and subsidiaries, including HSBC Bank USA, have registered as swap dealers and are now subject to extensive oversight by the CFTC. Regulation of swap dealers by the CFTC imposes numerous corporate governance, business conduct, capital, margin, reporting, clearing, execution and other regulatory requirements on HSBC Bank USA. Additionally, certain of our affiliates and subsidiaries, including HSBC Bank USA, may in the future be required to register as security-based swap dealers and become subject to extensive oversight by the SEC, including the imposition of parallel corporate governance, business conduct, reporting and other regulatory requirements for security-based swaps. Imposition of these requirements may adversely affect our derivatives business and make us less competitive or make certain derivative products less profitable to undertake. Although many significant regulations applicable to swap dealers are already in effect and have imposed significant costs on our derivatives business, we continue to assess current regulation, proposed or expected changes to existing requirements, and the potential impact of future security-based swap requirements.

In 2013, U.S. regulatory agencies finalized the Volcker Rule, which limits the ability of banking entities such as HUSI to sponsor or invest in certain private equity or hedge funds or engage in certain types of proprietary trading. In February 2017, following certain prior extensions, the FRB granted HSBC North America an additional transition period to conform investments in certain illiquid investments in and relationships with "covered funds" and "foreign funds," each as defined in the Volcker Rule, that were in place prior to 2014. The Volcker Rule requires extensive regulatory interpretation and subjects HUSI to further supervisory oversight by U.S. regulatory agencies. While the Volcker Rule contains exemptions for market-making, underwriting, risk-mitigating hedging, and certain transactions on behalf of customers and activities in certain asset classes, clearly defining all the parameters of these exemptions and requirements requires additional guidance and clarification from the U.S. regulatory agencies. The Volcker Rule also requires an extensive array of compliance policies, procedures and quantitative metrics reporting to ensure that activities remain within one or more of the exemptions described in the Volcker Rule. In connection with these requirements, we have built a compliance framework designed to ensure compliance with the Volcker Rule.

The Volcker Rule restricts proprietary trading as principal for a "trading account" in "financial instruments," each as defined in the Volcker Rule, subject to various exclusions and exemptions, each generally subject to its own set of compliance requirements and conditions. Generally, securities, derivatives, futures and options on all such instruments are covered, while loans, currencies and commodities are not covered. In addition, there are exemptions for activities, among others, that constitute market making, underwriting, hedging, and trading of U.S. government, agency or municipal securities and certain foreign sovereign debt securities.

The Volcker Rule also restricts acquiring or retaining an ownership interest in, or sponsoring or having certain relationships with, covered funds. Covered funds generally include entities that would be an investment company under the 1940 Act, but for the exemptions provided in Section 3(c)(1) or Section 3(c)(7) of the 1940 Act, as well as certain commodity pools. The Volcker Rule includes exclusions and exemptions, among others, for certain limited investments in conjunction with asset management activities for customers, for loan securitizations, for asset-backed commercial paper conduits, and for underwriting and market making in covered funds. As with the proprietary trading restrictions, the exemptions are generally subject to a variety of compliance requirements and conditions. Any limited, yet permissible, investments in covered funds are required to be deducted from the Tier 1 capital of U.S. banking entities. Several activities engaged in by HUSI are subject to the restrictions under the Volcker Rule.

The FRB has also adopted rules to implement certain enhanced supervisory and prudential requirements and the early remediation requirements established under the Dodd-Frank Act. The FRB adopted enhanced standards relating to risk-based capital and leverage requirements, liquidity standards, requirements for overall risk management and stress test requirements. The FRB has also issued final rules requiring covered entities to undergo annual stress tests conducted by the FRB and conduct their own "company-run" stress tests twice a year in conjunction with the CCAR program.

Our parent, HSBC North America, is subject to assessment by the FRB as part of the CCAR program, which includes annual supervisory stress tests conducted by the FRB and both HSBC North America and HSBC Bank USA must conduct company-run stress tests as required under the DFAST. CCAR is an annual exercise by the FRB to ensure that institutions have forward-looking capital planning processes that account for their risks and sufficient capital to continue operations throughout times of economic and financial stress. We cannot be certain that the FRB will have no objections to our 2018 or future capital plans submitted through the CCAR program, which is assessed by the FRB on both a quantitative and qualitative basis. If the FRB objects to our capital plan because we fail to meet either the quantitative or qualitative requirements, this could adversely affect our ability to make distributions, including dividends on our preferred stock, or to enter into acquisitions. We may fail to meet the requirements of regulatory stress tests. If our stress testing projections differ significantly from our peers or the FRB objects to HSBC North America's capital plan, this could have a material adverse effect on our reputation since CCAR and DFAST results are made public. See also "Our reputation has a direct impact on our financial results and ongoing operations" below.

The total impact of the Dodd-Frank Act cannot be fully assessed without taking into consideration how non-U.S. policymakers and regulators will implement the Dodd-Frank Act through the promulgation of new regulations and revisions to existing regulations and how the cumulative effects of both U.S. and non-U.S. laws and regulations will affect our businesses and operations. Additional legislative or regulatory actions in the United States, the EU and in other countries could result in a significant loss of revenue, limit our ability to pursue business opportunities in which we might otherwise consider engaging, affect the value of assets that we hold, require us to increase our prices and therefore reduce demand for our products, impose additional costs on us, or otherwise adversely affect our businesses. Accordingly, any such new or additional legislation or regulations could have an adverse effect on our businesses, results of operations or financial condition. Regulators in the EU and in the United Kingdom are in the midst of negotiating and implementing far-reaching programs of financial regulatory reform. Key areas in which reforms are in progress or under consideration include enhanced capital, leverage, and liquidity requirements, changes in compensation practices (including tax levies), separation of retail and wholesale banking, the recovery and resolution of EU financial institutions, and measures to address systemic risk. Furthermore, certain large G-SIBs, including HSBC, have in recent years become subject to capital surcharges and other enhanced prudential requirements. The FSB has identified HSBC as one of four G-SIBs that will be subject to a 2 percent surcharge which became effective on January 1, 2018. The FRB's rules implementing the G-SIB surcharge in the United States would not impose additional capital requirements on us because the U.S. G-SIB surcharge will only apply to the eight largest U.S. banking organizations.

Notwithstanding the above, the current Administration has indicated it would like to see changes made to certain financial reform regulations, including Dodd-Frank, to replace certain elements with new policies to encourage economic growth and job creation. The specifics of what might be changed are currently unclear, which has introduced some uncertainty about the regulatory framework that will apply to the financial services industry going forward.

In 2015, the FSB issued its final standards for TLAC requirements for G-SIBs, which will apply to our ultimate parent HSBC once implemented in the United Kingdom. The new standard also permits authorities in host jurisdictions to require "internal" TLAC to be prepositioned (i.e., issued by local entities to either parent entities or third parties). The purpose of this new standard is to ensure that G-SIBs have sufficient loss-absorbing and recapitalization capacity available to implement an orderly resolution with continuity of critical functions and minimal impact on financial stability, and to ensure cooperation between home and host authorities during resolution. The new standard calls for all G-SIBs to be subject to TLAC requirements starting January 1, 2019, and to be fully phased in by January 1, 2022. The FRB adopted final rules implementing the FSB's TLAC standard in the United States in December 2016. The rules require, among other things, the U.S. IHCs of non U.S. G-SIBs, including HSBC North America, to maintain minimum amounts of TLAC which would include minimum levels of Tier 1 capital and long-term debt satisfying certain eligibility criteria, and a related TLAC buffer commencing January 1, 2019, without the benefit of a phase-in period. The TLAC rules also include 'clean holding company requirements' that impose limitations on the types of financial transactions that HSBC North America could engage in. The FSB's TLAC standard and the FRB's TLAC rules represent a significant expansion of the current regulatory capital framework. To support compliance when the TLAC rules become effective, HSBC North America has issued long-term debt and will be required to issue additional long-term debt in future periods.

The implementation of regulations and rules promulgated by these bodies could result in additional costs or limit or restrict the way HSBC conducts its businesses in the EU and in the U.K. Furthermore, the potentially far-reaching effects of future changes in laws, rules or regulations, or in their interpretation or enforcement as a result of EU or U.K. legislation and regulation are difficult to predict and could adversely affect our operations.

Failure to comply with the GLBA Agreement would have an adverse material effect on our results and operations. As reflected in the GLBA Agreement entered into with the OCC in 2012, the OCC has determined that HSBC Bank USA is not in

compliance with the requirements set forth in 12 U.S.C. § 24a(a)(2)(c) and 12 C.F.R. § 5.39(g)(1), which provide that a national bank and each depository institution affiliate of the national bank must be both well capitalized and well managed in order to own or control a financial subsidiary. As a result, HSBC USA and its parent bank holding company no longer meet the qualification requirements for financial holding company status and may not engage in any new types of financial activities without the prior approval of the FRB. In addition, HSBC Bank USA may not directly or indirectly acquire control of, or hold an interest in, any new financial subsidiary, nor commence a new activity in its existing financial subsidiary, unless it receives prior approval from the OCC. If all of our affiliate depository institutions are not in compliance with these requirements within the time periods specified in the GLBA Agreement, as they may be extended, HSBC USA could be required either to divest HSBC Bank USA or to divest or terminate any financial activities conducted in reliance on the GLB Act. Similar consequences could result for subsidiaries of HSBC Bank USA that engage in financial activities in reliance on expanded powers provided for in the GLB Act. Any such divestiture or termination of activities would have an adverse material effect on our business, prospects, financial condition and results and operation.

The delivery of our regulatory priorities is subject to execution risk. The financial services industry is currently facing an unprecedented period of scrutiny. Additionally, we are subject to a number of consent orders with our regulators. Regulatory requests, legal matters and business initiatives all require a significant amount of time and resources to implement. The magnitude and complexity of projects required to meet these demands has resulted in heightened execution risk. Organizational change and external factors, including the challenging macroeconomic environment and the extent and pace of regulatory change also contribute to execution risk. These factors could adversely affect the successful delivery of our regulatory priorities.

Uncertainty surrounding the potential legal, regulatory and policy changes by the current Administration that may directly impact financial institutions and the global economy. The current Administration has indicated that it would like to see changes made to certain financial reform regulations, including Dodd-Frank, which has resulted in increased regulatory uncertainty, and we are assessing the potential impact this may have on financial and economic markets and on our business. Changes in federal policy and regulatory agencies are expected to occur over time through policy and personnel changes, which could lead to changes involving the level of oversight and focus on the financial services industry. The nature, timing and economic and political effects of potential changes to the current legal and regulatory framework affecting financial institutions remain highly uncertain. At this time, it is unclear what laws, regulations and policies may change and whether future changes or uncertainty surrounding future changes will adversely affect our operating environment and therefore our results of operations and financial condition.

Lawsuits and regulatory investigations and proceedings may continue and increase in the current economic and regulatory environment. In the ordinary course of business, HSBC USA and its affiliates are routinely named as defendants in, or as parties to, various legal actions and proceedings relating to our current and/or former operations and are subject to governmental and regulatory examinations, information-gathering requests, investigations and formal and informal proceedings, as described in Note 27, "Litigation and Regulatory Matters" in the accompanying consolidated financial statements, certain of which may result in adverse judgments, settlements, fines, penalties, remediation payments, injunctions and other relief. There is no certainty that the litigation will decrease in the near future, especially in the event of a resurgent recession or additional regulatory and law enforcement investigations and proceedings by federal and state governmental agencies.

Financial service providers are at risk of regulatory sanctions or fines related to conduct of business and financial crime. The incidence of regulatory proceedings and other adversarial proceedings against financial service firms is increasing, with a corresponding increase also in civil litigation arising from or relating to issues which are subject to regulatory investigations, sanctions or fines. In the current environment of heightened regulatory scrutiny, particularly in the financial services industry, there may be additional regulatory investigations and reviews conducted by banking and other regulators, including the CFPB, CFTC, state Attorneys General or state regulatory and law enforcement agencies that, if determined adversely, may result in judgments, settlements, substantial fines, penalties, remediation payments or other results, including additional compliance requirements, which could materially adversely affect our businesses, financial condition or results of operations, or cause serious reputational harm. In addition, HSBC's extensive global operations also increase our compliance and regulatory risks and costs. For example, operations in emerging markets, including facilitating cross-border transactions on behalf of its clients, subjects it to higher compliance risks under U.S. regulations primarily focused on various aspects of global corporate activities, including the FCPA and AML. These risks can be more acute in less developed markets and thus require substantial investment in compliance infrastructure or could result in a reduction in certain of our affiliates' business activities. Criminal prosecutions of financial institutions for, among other alleged conduct, breaches of AML, sanctions and FCPA regulations, antitrust violations, market manipulation, aiding and abetting tax evasion, and providing unlicensed cross-border banking services, have become more commonplace and may increase in frequency due to increased media attention and higher expectations from prosecutors and the public. Any such prosecution or investigation of, or legal proceeding or regulatory action brought against, HSBC or one or more of its subsidiaries could result in substantial fines, penalties and/or forfeitures and could have a material adverse effect on our results, business and prospects, including the potential loss of key licenses, requirement to exit certain businesses and withdrawal of funding from depositors and other stakeholders.

We establish reserves for legal claims when payments associated with the claims become probable and the costs can be reasonably estimated. Notwithstanding, we may incur legal costs for a matter even if we have not established a reserve. In addition, the actual

cost of resolving a legal claim may be substantially higher than any amounts reserved for that matter. It is inherently difficult to predict the outcome of many of the legal, regulatory and other adversarial proceedings involving our businesses, particularly those cases in which matters are brought on behalf of various classes of claimants, those which seek unspecified damages or those which involve novel legal claims. The ultimate resolution of a pending legal proceeding, depending on the remedy sought and granted, could materially adversely affect our results of operations and financial condition.

Third parties may use us as a conduit for illegal activities without our knowledge, which could have a material adverse effect on us. We are required to comply with applicable AML laws and regulations and have adopted various policies and procedures, including internal controls and 'Know Your Customer' procedures, aimed at preventing the use of our products and services for the purpose of committing or concealing financial crime. A major focus of U.S. and U.K. government policy relating to financial institutions in recent years has been combating money laundering and enforcing compliance with U.S. and EU economic sanctions, and this prioritization is evidenced by our agreements with U.S. and U.K. authorities relating to various investigations regarding past inadequate compliance with AML and sanctions laws. We and certain of our affiliates have entered into a consent cease and desist order with the OCC and a similar consent order with the FRB which require the implementation of improvements to compliance procedures regarding obligations under the BSA and AML rules. While HSBC Bank USA and HSBC North America have taken appropriate steps to comply with the requirements of the consent orders, these orders do not preclude additional enforcement actions by bank regulatory, governmental or law enforcement agencies or private litigation.

A number of remedial actions have been taken as a result of the matters to which the AML DPA related, which are intended to ensure that our businesses are better protected in respect of these risks. However, there can be no assurance that these will be completely effective.

In relevant situations, and where permitted by regulation, we may rely upon certain counterparties, including our affiliates, to maintain and properly apply their own appropriate AML procedures. Such reliance may not always be effective in preventing third parties from using us (and our relevant counterparties) as a conduit for money laundering, including illegal cash operations without our knowledge (and that of our relevant counterparties). Becoming a party to money laundering, association with, or even accusations of being associated, with money laundering would damage our reputation and could make us subject to fines, sanctions and/or legal enforcement. Any one of these outcomes could have a material adverse effect on our business, prospects, financial condition and results of operations.

Regulatory requirements in the U.S. and in non-U.S. jurisdictions to facilitate the future orderly resolution of large financial institutions could negatively impact our business structures, activities and practices. The Dodd-Frank Act requires HSBC as a foreign bank holding company and our ultimate parent to prepare and submit annually a plan for the orderly resolution of the U.S. businesses under the U.S. Bankruptcy Code in the event of future material financial distress or failure (the Systemically Important Financial Institution Plan or "SIFI Plan"). The Dodd-Frank Act focuses on reducing risks to the U.S. financial system, requiring a plan to demonstrate how the relevant entities can be resolved in a "rapid and orderly" fashion in a manner that avoids systemic risks. Similarly, HSBC Bank USA must prepare and submit an annual resolution plan under the Federal Deposit Insurance Act (the Insured Depository Institution Plan or "IDI Plan"). HSBC Bank USA is required to regularly provide a plan to the FDIC that is executable for resolving the bank in the event of its failure that protects depositors, maximizes the net present value return on assets and minimizes the amount of any losses to creditors, including the FDIC's Deposit Insurance Fund. These plans must include information on resolution strategy, agreements with major counterparties and "interdependencies," among other things. Resolution planning requires substantial effort, time and cost across all of our businesses and geographies. The HSBC SIFI Plan is subject to review by both the FRB and the FDIC and the HSBC Bank USA IDI Plan is subject to review by the FDIC. In 2015, HSBC and HSBC Bank USA submitted their 2015 plans. In June 2017, HSBC Bank USA received feedback from the FDIC regarding its IDI Plan which will be addressed in HSBC Bank USA's next plan submission. In January 2018, the FRB and the FDIC in a public correspondence acknowledged their review of the 2015 SIFI Plan and provided clarifying expectations for HSBC's 2018 SIFI Plan. HSBC and HSBC Bank USA have been advised that the next submission dates for the IDI Plan and SIFI Plan are extended to July 1, 2018 and December 31, 2018, respectively.

If the FRB and the FDIC both determine that a SIFI Plan is not "credible" (which, although not defined, is generally believed to mean the regulators do not believe the plans are feasible or would otherwise allow resolution of a financial institution's U.S. businesses in a way that protects systemically important functions without severe systemic disruption and without exposing taxpayers to loss), and the deficiencies are not remedied within the required time period, an institution, including HSBC, could be required to restructure or reorganize businesses, legal entities, or operational systems and intra-company transactions in ways that could negatively impact operations, or be subject to restrictions on growth. HSBC could also eventually be subjected to more stringent capital, leverage or liquidity requirements, or be required to divest certain assets or operations.

The transition to the new requirements under Basel III, as amended by the Basel IV Revisions, will continue to put additional pressure on regulatory capital and liquidity. HSBC North America is required to meet consolidated regulatory capital and liquidity requirements, including new or modified regulations and related regulatory guidance, in accordance with current regulatory timelines. In 2013, U.S. banking regulators issued a final rule implementing the Basel III capital framework in the United States (the "Basel III rule"). The Basel III rule established new minimum capital and buffer requirements to be phased in by 2019 and

also requires the deduction of certain assets from capital, within prescribed limitations, and the inclusion of accumulated other comprehensive loss ("AOCI") in capital. The Basel III rule also increases capital requirements for counterparty credit risk and introduces a SLR with full implementation and compliance required by January 1, 2018. HSBC North America and HSBC Bank USA began complying with the effective portions of the Basel III rule in 2014. The Basel III rule will increase our regulatory capital requirements over the next year as capital deductions, adjustments and buffers are phased in until full implementation on January 1, 2019.

In addition to the Basel III rule, the Basel IV Revisions and other future regulatory or legislative proposals could significantly impact the regulatory capital standards and requirements applicable to financial institutions such as HSBC North America, as well as our ability to meet these requirements. The Basel IV Revisions include changes to the standardized approach and internal ratings-based approach to determining credit risk, revisions to the operational risk framework and a leverage ratio surcharge for G-SIBs. The revisions to the standardized approach include a more detailed risk-weighting approach in place of a flat risk weight for certain retail and corporate exposures, and the revisions to the internal ratings-based approach will remove the option to use advanced models-based approaches for exposures to financial institutions and large corporates and for equity exposures. Where the internal-models based approach is retained, minimum levels are applied on the probability of default and for other inputs. The Basel IV Revisions simplify the operational risk framework by replacing the four current approaches with a single standardized approach that determines a bank's operational risk requirement by combining a refined measure of gross income with a bank's own internal loss history over the prior 10 years. The Basel IV Revisions also introduce a leverage ratio buffer for each G-SIB to be set at 50 percent of its risk-based capital surcharge. Changes to the market risk framework adopted by the Basel Committee in January 2016 are also considered part of the Basel IV Revisions and are expected to increase market risk capital requirements for many banking organizations. The Basel IV Revisions are not directly applicable to any U.S. banking organization and must first be implemented by the federal banking agencies. The agencies are expected act before the January 1, 2022 implementation deadline agreed by the Basel Committee but it is unclear whether they will deviate significantly from the Basel IV Revisions in the direction of greater conservatism as they did with respect to the Basel III framework.

We are still assessing what impact the Basel IV Revisions would have on our capital requirements to the extent the revisions are implemented by the federal banking agencies.

Further increases in regulatory capital may also be required in response to other U.S. supervisory requirements relating to capital. The exact amount, however, will depend upon our prevailing risk profile and that of our North America affiliates under various stress scenarios. Participation by HSBC North America in the FRB's CCAR stress test process also requires that HSBC North America maintain sufficient capital to meet minimum regulatory ratios over a nine-quarter forward-looking planning horizon, which could also require increased capital to withstand the application of the stress scenarios over the planning horizon. The FRB has also indicated that it is considering a new measure to replace the capital conservation buffer with a "stress capital buffer," which would equal a bank holding company's projected decline in common equity Tier 1 under the supervisory severely adverse scenario, prior to any planned capital actions, and would be reset each year based on the bank holding company's DFAST results. We are reviewing these possible changes to the capital conservation buffer in anticipation of the formal rulemaking and their potential impact on our capital planning processes specifically and our operations and results generally. We currently target internal capital levels using an approach analogous to the stress capital buffer and, therefore, we do not expect the proposal to have a significant impact on our U.S. operations or change our capital planning processes.

HSBC Bank USA is also required to participate in the OCC's DFAST. These stress testing requirements will influence our regulatory capital and liquidity planning process, and may impose additional operational and compliance costs on us.

The Basel Committee has adopted two minimum liquidity risk measures which are applicable to certain large banking institutions, including HSBC North America and HSBC Bank USA. The LCR measures the amount of a financial institution's unencumbered, HQLA relative to the net cash outflows the institution could encounter under a significant 30-day stress scenario. The NSFR measures the amount of longer-term, stable sources of funding employed by a financial institution relative to the liquidity profiles of the assets funded and the potential for contingent calls on funding liquidity arising from off-balance sheet commitments and obligations over a one-year period. The FRB, the OCC and the FDIC have adopted rules to implement the LCR with stricter requirements and a faster implementation timeline than the Basel Committee has established. Under the rules, certain large banking institutions, such as HSBC North America and HSBC Bank USA, were required to be fully compliant by January 1, 2017, two years ahead of the Basel Committee's timeframe for compliance by January 1, 2019. In April 2016, U.S. regulators issued for public comment a proposal to implement the NSFR in the United States, applicable to certain large banking organizations, including HSBC North America and HSBC Bank USA. The U.S. NSFR proposal is generally consistent with the Basel Committee guidelines, but similar to the U.S. LCR final rule, is more stringent in several areas. HSBC North America and HSBC Bank USA have adjusted their liquidity profiles to support compliance with these rules and may need to change their liquidity profiles to support compliance with any future final rules.

Preparation for Basel III has influenced and is likely to continue to influence our regulatory capital and liquidity planning process, and is expected to impose additional operational and compliance costs on us. We are unable at this time to determine the extent of changes we will need to make to our liquidity or capital position, if any, and what effect, if any, such changes will have on our

results of operations or financial condition. New regulatory capital and liquidity requirements may limit or otherwise restrict how we utilize our capital and may require us to increase our capital or liquidity. Any requirement that we increase our regulatory capital, regulatory capital ratios or liquidity could require us to liquidate assets or otherwise change our business and/or investment plans, which may negatively affect our financial results.

Our interpretation or application of the tax laws to which we are subject could differ from those of the relevant governmental authorities, which could result in the payment of additional taxes and penalties. The Tax Cuts and Jobs Act ("Tax Legislation"), which was recently signed into law, will be subject to clarification and interpretation through additional regulatory and administrative guidance. Additionally, it is not clear how the Tax Legislation will impact our clients. We are subject to the various tax laws of the U.S. and its states and municipalities in which we operate. These tax laws are inherently complex and we must make judgments and interpretations about the application of these laws to its entities, operations and businesses. Our interpretations and application of the tax laws could differ from that of the relevant governmental taxing authority, which could result in the potential for the payment of additional taxes, penalties or interest, which could be material. For example, the Tax Legislation contains certain complex provisions such as the Base Erosion and Anti-Abuse Tax which may have a material impact in future periods on income tax expense for the HSBC North America consolidated tax group of which we are a member, depending upon, among other things, future regulatory guidelines and other interpretive guidance which may be issued. It is also not yet clear how the Tax Legislation will impact our clients and there is a risk that the Tax Legislation could have a material impact on our commercial relationship with those clients.

We may incur additional costs and expenses in ensuring that we satisfy requirements relating to our mortgage foreclosure processes. As previously reported, HSBC Bank USA entered into the OCC Servicing Consent Order with the OCC and our affiliate, HSBC Finance, and our parent, HSBC North America entered into a similar consent order with the FRB following completion of a broad horizontal review of industry foreclosure practices.

The Servicing Consent Orders required an independent review of foreclosures pending or completed between 2009 and 2010 to determine if any borrower was financially injured as a result of an error in the foreclosure process. We refer to this as the Independent Foreclosure Review or IFR. In 2013, HSBC Bank USA entered into an agreement with the OCC, and HSBC Finance and HSBC North America entered into an agreement with the FRB, which we refer to as the "IFR Settlement Agreements," to amend the Servicing Consent Orders, pursuant to which the Independent Foreclosure Review ceased and HSBC North America made a cash payment for the benefit of certain borrowers and provided other assistance (e.g., loan modifications) to help eligible borrowers.

In 2017, the OCC terminated the OCC Servicing Consent Order, together with the 2013 and 2015 amendments thereto and in January 2018, the FRB terminated the related consent order against HSBC Finance and HSBC North America.

Compliance related costs have permanently increased to higher levels due to the remediation requirements of the Servicing Consent Orders. In addition, the issuance of the Servicing Consent Orders, as well as the termination of the OCC Servicing Consent Order does not preclude additional enforcement actions against HSBC Bank USA or our affiliates by bank regulatory, governmental or law enforcement agencies, which could include the imposition of civil money penalties and other sanctions relating to the activities addressed by the Servicing Consent Orders.

Further, the settlement related to the Independent Foreclosure Review does not preclude future private litigation concerning these practices. Separate from the Servicing Consent Orders and the settlement related to the Independent Foreclosure Review discussed above, in 2012, the DOJ, U.S. Department of Housing and Urban Development and state Attorneys General of 49 states announced a settlement with the five largest U.S. mortgage servicers with respect to foreclosure and other mortgage servicing practices. In 2016, HSBC Bank USA, HSBC Finance, HSBC Mortgage Services Inc. and HSBC North America entered into an agreement with the DOJ, the U.S. Department of Housing and Urban Development, the CFPB, other federal agencies and the Attorneys General of 49 states and the District of Columbia to resolve civil claims related to past residential mortgage loan origination and servicing practices. The national mortgage settlement, may not, however, completely preclude other enforcement actions by state or federal agencies, regulators or law enforcement agencies related to foreclosure and other mortgage servicing practices, including, but not limited to, matters relating to the securitization of mortgages for investors, including the imposition of civil money penalties, criminal fines or other sanctions. In addition, these practices have in the past resulted in private litigation and such a settlement would not preclude further private litigation concerning foreclosure and other mortgage servicing practices.

While the housing market in the U.S. continues to recover, the strength of recovery varies by market. Certain courts and state legislatures have issued rules or statutes relating to foreclosures and scrutiny of foreclosure documentation has increased in some courts. Also in some areas, officials are requiring additional verification of information filed prior to the foreclosure proceeding. The combination of these factors has led to increased delays in several jurisdictions which will continue to take time to resolve.

We may incur additional costs and expenses as a result of foreign exchange-related investigations. Regulatory and law enforcement agencies globally are currently investigating HSBC Group in connection with alleged misconduct relating to manipulation of foreign exchange rates. The extent of our financial exposure to these matters could be material, and our reputation may suffer material harm as a result.

Risks related to our business, business operations, governance and internal control systems

Our reputation may have a direct impact on our financial results and ongoing operations. Our ability to attract and retain customers and employees, and conduct business transactions with our counterparties could be adversely affected to the extent our reputation, or the reputation of affiliates operating under the HSBC brand, is damaged. Reputational risk relates to stakeholders' perceptions, whether fact-based or otherwise. Stakeholders' expectations change constantly and so reputational risk is dynamic and varies between geographical regions, groups and individuals. Any material lapse in standards of integrity, compliance, customer service or operating efficiency may represent a potential reputational risk.

Our failure to address, or to appear to fail to address, various issues that could give rise to reputational risk could cause harm to us and our business prospects. Reputational issues include, but are not limited to:

- negative news about us, HSBC, our affiliates or the financial services industry generally;
- ethical issues, including potential conflicts of interest and the acceptance or receipt of gifts and entertainment, as well as potential violations under the Foreign Corrupt Practices Act ("FCPA");
- legal and regulatory requirements;
- alleged deceptive or unfair lending or pricing practices;
- AML and economic sanctions programs;
- fraud and misappropriation of assets;
- privacy and data security intrusions related to our customers or employees;
- cybersecurity issues and cyber incidents, whether actual, threatened, or perceived;
- recordkeeping;
- sales and trading practices;
- customer service;
- actions of a vendor or other third party, including a subcontractor, we do business with;
- the proper identification of the legal, credit, liquidity, operational and market risks inherent in our businesses;
- alleged irregularities in servicing, foreclosure, consumer collections, mortgage lending practices and loan modifications;
- a downgrade of or negative watch warning on any of our credit ratings; and
- general company performance.

The proliferation of social media websites as well as the personal use of social media by our employees and others, including personal blogs and social network profiles, facilitates communication with large audiences in short time frames. These social media websites, also may increase the risk that negative, inappropriate or unauthorized information may be posted or released publicly that could harm our reputation or have other negative consequences, including as a result of our employees interacting with our customers in an unauthorized manner in various social media outlets.

The failure to address, or the perception that we have failed to address any of these issues appropriately could make our customers unwilling to do business with us or give rise to increased regulatory action, which could have a material adverse effect on our business, prospects, financial condition and results of operations.

Our risk management measures may not be successful. The management of risk is an integral part of all our activities. Managing risk effectively is fundamental to the delivery of our strategic priorities. While we are subject to a number of legal and regulatory actions and investigations, our risk management framework has been designed to provide robust controls and ongoing monitoring of our principal risks. Risks have the potential to affect the results of our operations or financial condition. Specifically, risk equates to the adverse effect on profitability or financial condition arising from different sources of uncertainty including retail and wholesale credit risk, market risk, interest rate risk, operational risk including legal, financial crime compliance, regulatory compliance, accounting, tax, fiduciary, information security, security fraud, people, systems, political contingency, projects, and operations risks, liquidity and funding risk, reputational risk, strategic risk, model risk, sustainability risk, and pension obligation risk. To manage risk, we employ a risk management framework at all levels and across all risk types. The framework fosters the continuous monitoring of the risk environment and an integrated evaluation of risks and their interactions. It also strives to ensure that we have a robust and consistent approach to risk management across all of our activities. While our risk management framework employs a broad and diversified set of risk monitoring and risk mitigation techniques, such techniques and the judgments that accompany their application cannot anticipate every unfavorable event or the specifics and timing of every outcome. Failure to manage risks appropriately could have a material adverse effect on our business, prospects, financial condition and results of operations.

Our risk management measures may face particularly significant challenges in the following three broad areas:

(a) Macroeconomic and geo-political risks: Current economic and market conditions may adversely affect our results.

(b) Risks related to our businesses, business operations, governance, and internal systems: The delivery of our strategic priorities is subject to execution risk and we may not achieve all the expected benefits of our strategic initiatives. Our operations are subject to the threat of fraudulent activity and disruption from the external environment. We are highly dependent on our information technology systems. We could incur losses or be required to hold additional capital as a result of model limitations or failure. Issues with the quality of data or effectiveness of our data aggregation and validation procedures could result in ineffective risk management practices or inaccurate risk reporting.

(c) Regulatory and legal risks to our businesses: We are subject to a number of legal and regulatory actions and investigations, the outcomes of which are inherently difficult to predict, but unfavorable outcomes could have a material adverse effect on our operating results and brand. Unfavorable legislative or regulatory developments, or changes in the policy of regulators or governments, could have a material adverse effect on our operations, financial condition and prospects.

Failure to implement our business strategies may adversely affect our financial performance. Our strategies for business growth includes focusing our sales efforts on international connectivity strategies with high quality internationally minded clients as well as augmenting our returns through increased cross-selling and cost optimization. The development and implementation of our strategy requires difficult, subjective and complex judgments, including forecasts of economic conditions in various parts of the world. We may fail to correctly identify the trends we seek to exploit and the relevant factors in making decisions as to capital deployment and cost reduction, and our ability to execute our strategy may also be limited by our operational capacity and the increasing complexity of the regulatory environment in which we operate. Further, we may fail to attract internationally mobile clients or cross-sell our services to them. See "—Our "cross-selling" efforts to increase the number of products our customers buy from us and offer them all of the financial products that fulfill their needs is a key part of our growth strategy, and our failure to execute this strategy effectively could have a material adverse effect on our revenue growth and financial results." The work required to execute on our growth strategies is substantial. Alongside the strategic actions, we continue to implement a number of externally driven regulatory remediation programs. The magnitude and complexity of the projects required to meet these demands has resulted in heightened execution risk. Additionally, we may be unable to fully realize the cost optimization efforts and the other anticipated benefits from those efforts and we may not be able to realize them in the currently anticipated timeframes.

The cumulative impact of the collective change initiatives underway is significant and has direct implications on resourcing and our people. Our ability to execute our strategy may also be limited by our operational capacity and the increasing complexity of the regulatory environment in which we operate. In addition, factors beyond our control, including but not limited to, the economic and market conditions and other challenges discussed in detail above, could limit our ability to achieve all of the expected benefits of these initiatives. Failure to successfully implement our business strategies may have a material adverse effect on our businesses, prospects, financial condition and results of operations.

Our "cross-selling" efforts to increase the number of products our customers buy from us and offer them all of the financial products that fulfill their needs is a key part of our growth strategy, and our failure to execute this strategy effectively could have a material adverse effect on our revenue growth and financial results. Selling more products to our customers - "cross-selling" - is very important to our business model and key to our ability to grow revenue and earnings, especially during the current environment of slow economic growth and regulatory reform initiatives. Key among these cross-sell opportunities is the collaboration between CMB and GB&M as well as referrals to PB from the other business lines, which is an area where many of our competitors also focus. In the retail banking sector, many of our competitors also focus on cross-selling, especially in retail banking and mortgage lending. In both instances, this competition within the industry can limit our ability to sell more products to our customers or influence us to sell our products at lower prices, reducing our net interest income and revenue from our fee-based products. It could also affect our ability to keep existing customers. New technologies could require us to spend more to modify or adapt our products to attract and retain customers. Our cross-sell strategy also is dependent on earning more business from our customers, and increasing our cross-sell ratio - or the average number of products sold to existing customers - which may become more challenging.

Operational risks are inherent in our businesses and may adversely impact our businesses and reputation. We are exposed to many types of operational risks that are inherent in banking operations, including fraudulent and other criminal activities (both internal and external), breakdowns in processes or procedures and systems failure or non-availability. For example, fraudsters may target any of our products, services and delivery channels including lending, internet banking, payments, bank accounts and cards. These risks apply equally when we rely on outside suppliers, outsourcing vendors and our affiliates to provide services to us and our customers. These operational risks may result in financial loss to us, an adverse customer experience, reputational damage and potential regulatory action depending on the circumstances of the event, which could have a material adverse effect on our businesses, prospects, financial condition and results of operation. Further, there is a risk that our operating system controls as well as business continuity and data security systems could prove to be inadequate. Any such failure could affect our operations and could have a material adverse effect on our results of operations by requiring us to expend significant resources to correct the defect, as well as exposing us to litigation or losses not covered by insurance.

Our operations are subject to disruption from the external environment. We may be subject to disruptions of our operating systems infrastructure arising from events that are wholly or partially beyond our control, which may include:

- computer viruses, electrical, telecommunications, or other essential utility outages;
- natural disasters, such as hurricanes or other severe weather conditions and earthquakes;
- events arising from local, regional or international politics, including terrorist acts or acts of war; or
- absence of operating systems personnel due to global pandemics or otherwise, which could have a significant effect on our business operations as well as on HSBC affiliates world-wide.

Such disruptions may give rise to losses in service or disruption to customers, an inability to collect our receivables in affected areas, physical damage or loss of life and other loss or liability to us, which could have a material adverse effect on our businesses, prospects, financial condition and results of operation.

A failure in or a breach of our operational or security systems or infrastructure, or those of our third party vendors and other service providers, including as a result of cyberattacks, could disrupt our businesses, result in the disclosure or misuse of confidential or proprietary information, and may adversely impact our businesses and reputation. Data quality and integrity are critical for decision making, enterprise risk management and operational processes, as well as for complying with applicable regulation. Our businesses are dependent on our ability to process a large number of complex transactions, most of which involve, in some fashion, networked computing devices. If any of our financial, accounting, data processing or other recordkeeping systems and management controls fail, or are subject to cyberattack that could compromise integrity, availability or confidentiality of our systems or data, we could be materially adversely affected.

Cyber vulnerability continues to be leveraged by cyber criminals to perpetrate crimes at an increasing rate, often exceeding traditional offense, and poses a significant threat to economic, social and geopolitical stability for private firms and countries. HSBC faces sophisticated cyber threats from state-sponsored attackers, hackers for hire, organized cyber syndicates, and other threat actors seeking our critical corporate and customer information.

In recent years, distributed denial of service ("DDoS") attacks, spearphishing campaigns, advanced malware, ransomware attacks, social engineering and insider threats have grown in volume and level of sophistication each with the intent to obtain personal customer financial information or proprietary corporate information, disrupt availability of services and to commit fraud. Such acts can affect our business by:

- compromising the confidentiality or integrity of our customers' data, potentially impacting our customers' ability to repay loan balances and negatively impacting their credit ratings;
- compromising the security of and confidence in our payment channels;
- putting our customers at risk for identity theft, account takeover and credit abuse;
- causing us to incur remediation and other costs related to liability for customer or third parties for losses, repairs to remedy systems flaws, or incentives to customers and business partners to maintain and rebuild business relationships after the attack;
- increasing our costs to respond to such threats and to enhance our processes and systems to ensure security of data;
- damaging our reputation as a result of public disclosure of a breach of our systems or a loss of data event;
- resulting in unauthorized disclosure or alteration of our corporate confidential information and confidential information of employees, customers and counterparties;
- disrupting our customers' or third parties' business operations; and
- resulting in violations of applicable privacy laws and other laws or regulatory fines, penalties or intervention.

The threat from cyberattacks, on us and on third party vendors on which we rely, is a concern for our organization and failure to protect our operations from internet crime or cyberattacks may result in financial loss and loss of customer data or other sensitive information which could undermine our reputation and our ability to attract and keep customers. We face various cyber risks in line with other multinational financial organizations. We and other multinational financial organizations have been, and will continue to be subject to an increasing risk of cyber incidents from these activities due to the proliferation of new technologies and the increasing use of the Internet and customers' use of personal smartphones, PCs and other computing devices, tablet PCs and other mobile devices to access products and services to conduct financial transactions and the increased sophistication and activities of organized crime for seeking financial gain, hacktivists (geopolitical designated groups), cyber terrorists (attacks against critical infrastructure) and state sponsored advanced persistent threats, sometimes referred to as APTs, for corporate espionage. Our risk and exposure to these matters remains heightened because of, among other things, HSBC Group's prominent size and scale, geographical span and role in the financial services industry, and our offering of Internet banking and mobile banking platforms that seek to serve our customers when and how they want to be served. In addition, the consolidation of clearing agents, exchanges and clearing houses and increased interconnectivity of financial institutions with such central agents, exchanges and clearing houses increases the exposure of cyberattacks on critical parties that may affect us. Evaluating and monitoring the cyber threat landscape in comparison to our existing capabilities, and adjusting our programs in order to respond to these threats, may require additional capital expenses for human resources and technology.

In April 2017, we experienced a DDoS attack. The attack, which focused on U.S. Personal Internet Banking at one of our data centers, resulted in minimal call volumes and generated no known customer complaints. The attack was systemically and successfully mitigated via internal and external vendor mitigation controls. We have also been the subject of these types of attacks in prior years.

Our businesses are increasingly subject to laws and regulations relating to surveillance, encryption and data on-shoring in the jurisdictions in which we operate. Compliance with these laws and regulations may require us to change our policies, procedures and technology for information security (including cybersecurity) from time to time.

Concentrations of credit and market risk, including exposure to Latin American corporate clients and the oil and gas markets, could increase the potential for significant losses. We have exposure to increased levels of risk when customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions. While we regularly monitor various segments of our portfolio exposures to assess potential concentration risks, our efforts to diversify or hedge our credit portfolio against concentration risks may not be successful. We have exposure to commercial customers domiciled outside of the United States and or in sectors that can be materially affected by changing economic conditions such as customers in the commodity sector. In addition, disruptions in the liquidity or transparency of the financial markets may result in our inability to sell, syndicate or realize the value of our positions, thereby leading to increased concentrations.

Due to our strategy to serve the banking needs of an international customer base, a number of the loans with our owned mortgage loan portfolio was comprised of loans to borrowers without traditional U.S. credit. Despite risk management mitigation, there is inherently higher uncertainty around loss rates due to the lack of detailed historic credit information on each borrower.

Our inability to meet funding requirements due to deposit attrition or access to the capital markets. HSBC USA is a holding company without operations of its own and therefore relies on dividends and other distributions for a portion of its funding and liquidity. Federal and state laws limit the amount of dividends and distributions that our bank and nonbank subsidiaries may pay. Our primary source of funding is deposits, augmented by issuance of commercial paper and term debt. Adequate liquidity is critical to our ability to operate our businesses.

We also access wholesale markets in order to provide funding for entities that do not accept deposits, to align asset and liability maturities and currencies and to maintain a market presence. We issued a total of \$5,158 million of long-term debt at various points in 2017. An inability to obtain financing in the unsecured long-term or short-term debt capital markets because of market factors or factors in our businesses could have a substantial adverse effect on our liquidity. Unfavorable macroeconomic developments, market disruptions or regulatory developments may increase our funding costs or challenge our ability to raise funds to support our businesses, materially adversely affecting our businesses, prospects, financial condition and/or results of operations.

Despite the apparent improvements in overall market liquidity and our liquidity position, future conditions that could negatively affect our liquidity include:

- an inability to maintain stable deposit balances because customers may invest in other financial instruments as an alternative;
- diminished access to capital markets because of market factors or factors in our businesses;
- an increased interest rate environment for our commercial paper, deposits or term debt;
- unforeseen cash or capital requirements;
- an inability to sell assets; and
- an inability to obtain expected funding from HSBC Group subsidiaries and through deposits.

These conditions could be caused by a number of factors, including internal and external factors, such as, among others:

- financial and credit market disruption;
- volatility or lack of market or customer confidence in financial markets;
- lack of market or customer confidence in HSBC or negative news about HSBC or the financial services industry generally; and
- other conditions and factors over which we have little or no control including economic conditions in the U.S. and abroad and concerns over potential government defaults and related policy initiatives.

HSBC has provided us with capital support in the past and has indicated its commitment and capacity to fund the needs of our businesses in the future. Notwithstanding, if we are unable to maintain stable deposit balances and/or raise funds in the capital markets, our liquidity position could be adversely affected and we might be unable to meet deposit withdrawals on demand or at their contractual maturity, to repay borrowings as they mature, or to fund new loans, investments and businesses. We may need to liquidate unencumbered assets to meet our liabilities. In a time of reduced liquidity, we may be unable to sell some of our assets, or we may need to sell assets at depressed prices, which in either case could materially adversely affect our businesses, prospects, results of operations and/or financial condition.

Adverse changes in our credit ratings could have a material adverse effect on our liquidity and cost of funding. Our credit ratings are an important part of maintaining our liquidity. We depend on access to the securities market for a portion of our funding. We issued a total of \$5,158 million of long-term debt in 2017. Our credit ratings are subject to ongoing review by the rating agencies, which consider a number of factors including their assessment of our relative financial strength and results of operations, including our strategy and our management's capability, as well as factors affecting the financial services industry generally, including legal and regulatory frameworks affecting our business activities and the rights of our creditors. There can be no assurance that downgrades will not occur. Any downgrade in our credit ratings could potentially increase our borrowing costs, impact our ability to issue commercial paper and, depending on the severity of the downgrade, substantially limit our access to capital markets, require us to make cash payments or post collateral and permit termination by counterparties of certain significant contracts. Downgrades in our credit ratings also may trigger additional collateral or funding obligations which could negatively affect our liquidity, including as a result of credit-related contingent features in certain of our derivative contracts.

Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices and litigation matters, all of which may lead to adverse ratings actions. Although we closely monitor and strive to manage factors influencing our credit ratings, there is no assurance that our credit ratings will not change in the future. At December 31, 2017, there were no pending actions in terms of changes to ratings on the debt of HSBC USA or HSBC Bank USA from any of the rating agencies.

We may suffer losses due to employee negligence, fraud or misconduct. Non-compliance with policies, employee misconduct, negligence and fraud could result in regulatory sanctions and serious reputational or financial harm. We are dependent on our employees and could be materially adversely affected if an employee or employees, acting alone or in concert with non-affiliated third parties, causes a significant operational break-down or failure, either as a result of human error or where an individual purposefully sabotages or fraudulently manipulates our operations or systems. In recent years, a number of multinational financial institutions have suffered material losses due to the actions of 'rogue traders' or other employees. It is not always possible to deter employee misconduct and the precautions we take to prevent and detect this activity may not always be effective. Employee misconduct could have a material adverse effect on our business, prospects, financial condition and results of operations.

We may suffer losses due to negligence, fraud or misconduct by third parties. We depend on third party suppliers, outsourcing vendors and our affiliates for a variety of services. Third parties with which we do business with could be sources of operational risk to us, including risks relating to break-downs or failures of such parties' own systems or employees. The OCC and FRB require financial institutions to maintain third party and service provider risk management programs, which include due diligence requirements for third parties and service providers as well as for our affiliates who may perform services for us. Under FRB guidance "service providers" is broadly defined to include all entities that have entered into a contractual relationship with a financial institution to provide business functions or activities. If our third party risk and service provider management and due diligence program is not sufficiently robust, this could lead to regulatory intervention. Any of these occurrences could diminish our ability to operate one or more of our businesses, and may result in potential liability to clients, reputational damage or regulatory intervention, all of which could materially adversely affect us.

Failure to successfully change our operational practices may have a material impact on our businesses. Changes to operational practices from time to time could materially impact our performance and results. Such changes may include:

- our determining to sell residential mortgage loans and other loans;
- changes to our customer account management and risk management/collection policies and practices;
- our investment choices in technology, business infrastructure and specialized personnel;
- changes to our AML and sanctions policies and the related operations practices; or
- our outsourcing of various operations, including our mortgage servicing business.

Further, in order to react quickly to or meet newly-implemented regulatory requirements, we may need to change or enhance systems within very tight time frames, which would increase operational risk. Failure to implement changes to our operational practices successfully and efficiently may diminish our ability to operate one or more of our businesses and could result in reputational damage and regulatory intervention, all of which could materially adversely affect us.

Federal Reserve Board policies can significantly affect business and economic conditions and, as a result, our financial results and condition. The FRB regulates the supply of money and credit in the United States. Its policies determine in large part our cost of funds for lending and investing and the return we earn on those loans and investments, both of which affect our net interest margin. They also can materially affect the value of financial instruments we hold, such as debt securities and derivative instruments. The FRB's policies also can affect our borrowers, potentially increasing the risk that such borrowers may fail to repay their loans. Changes in FRB policies are beyond our control and can be hard to predict.

Our data management and policies and processes may not be sufficiently robust. Critical business processes across the HSBC Group rely on large volumes of data from a number of different systems and sources. If data governance, data quality and data architecture policies and procedures are not sufficiently robust, manual intervention, adjustments and reconciliations may be

required to reduce the risk of error in reporting to senior management or regulators. Inadequate policies and processes may also affect our ability to use data to service customers more effectively and/or improve our product offering. This could have a material adverse effect on our business, prospects and results of operations.

Moreover, financial institutions that fail to comply with regulatory reporting requirements established by their regulators or with the principles for effective risk data aggregation and risk reporting as set out by the Basel Committee may face supervisory measures. Any of these failures could have a material adverse effect on our business, prospects, financial condition and results of operations.

We face significant and increasing competition in the rapidly evolving financial services industry. We compete with other financial institutions in a highly competitive industry that continues to undergo significant change as a result of financial regulatory reform and increased public scrutiny stemming from the financial crisis and continued challenging economic conditions. We target internationally mobile clients who need sophisticated global solutions and we generally compete on the basis of the quality of our customer service, the wide variety of products and services that we can offer our customers and the ability of those products and services to satisfy our customers' needs, the extensive distribution channels available for our customers, our innovation, and our reputation. Continued or increased competition in any one or all of these areas may negatively affect our market share and results of operations and/or cause us to increase our capital investment in our businesses in order to remain competitive. Additionally, if our products and services are not accepted by our targeted clients, this may have a material adverse effect on our businesses, financial condition and results of operations.

Given the current economic, regulatory, and political environment for large financial institutions such as us, and possible public backlash to bank fees, there is increased competitive pressure to provide products and services at current or lower prices. Consequently, our ability to reposition or reprice our products and services from time to time may be limited and could be influenced significantly by the actions of our competitors who may or may not charge similar fees for their products and services. Any changes in the types of products and services that we offer our customers and/or the pricing for those products and services could result in a loss of customers and market share and could materially adversely affect our results of operations. Further, new technologies could require us to spend more to modify or adapt our products to attract and retain customers. Continued technological advances and the growth of e-commerce have made it possible for non-depository institutions to offer products and services that traditionally were banking products, and for financial institutions and other companies to provide electronic and Internet-based financial solutions, including electronic payment solutions. We may not respond effectively to these competitive threats from existing and new competitors and may be forced to increase our investment in our businesses to modify or adapt our existing products and services or develop new products and services to respond to our customers' needs. Any of these factors may have a material adverse effect on our businesses, prospects, financial condition and results of operations.

We have significant exposure to counterparty risk. We are exposed to counterparties that are involved in virtually all major industries, and we routinely execute transactions with counterparties in financial services, including brokers and dealers, central clearing counterparties, commercial banks, investment banks, mutual and hedge funds, and other institutional clients. Many of these transactions expose us to credit risk in the event of default by our counterparty or client. Our ability to engage in routine transactions to fund our operations and manage our risks could be materially adversely affected by the actions and commercial soundness of other financial services institutions. Financial institutions are necessarily interdependent because of trading, clearing, counterparty or other relationships. As a consequence, a default by, or decline in market confidence in, individual institutions, or anxiety about the financial services industry generally, can lead to further individual and/or systemic difficulties, defaults and losses.

Mandatory central clearing of over the counter derivatives, including under the Dodd-Frank Act, brings new risks to us. As a clearing member, we have financial exposure for losses incurred at a Central Counterparty ("CCP") by the default of other clearing members. Hence increased moves toward central clearing brings with it a further element of interconnectedness between clearing members and clients that we believe may increase rather than reduce our exposure to systemic risk. At the same time, our ability to manage such risk ourselves will be reduced because risk controls are largely managed by the CCPs themselves and it is unclear at present how, at a time of stress, regulators and resolution authorities would intervene.

In situations in which we strive to mitigate counterparty risk by taking collateral, our credit risk may remain high if the collateral we hold cannot be realized or must be liquidated at prices insufficient to recover the full amount of our exposure to the respective counterparty. There is a risk that collateral cannot be realized, including situations where this arises by change of law that may influence our ability to foreclose on collateral or otherwise enforce contractual rights.

We also have credit exposure arising from risk defeasance products such as credit default swaps ("CDSs"), and other credit derivatives, each of which is carried at fair value. The risk of default by counterparties to CDSs and other credit derivatives used as mitigants affects the fair value of these instruments depending on the valuation and the perceived credit risk of the underlying instrument against which protection has been purchased. Any such adjustments or fair value changes may have a material adverse effect on our financial condition and results of operations.

The financial condition of our clients and counterparties, including other financial institutions, could adversely affect us. A significant deterioration in the credit quality of one of our counterparties could lead to concerns in the market about the credit

quality of other counterparties in the same industry, thereby exacerbating our credit risk exposure, and increasing the losses (including mark-to-market losses) that we could incur in our market-making and clearing businesses.

Financial services institutions are interrelated as a result of market-making, trading, clearing, counterparty, or other relationships. As a consequence, a default by, or decline in market confidence in, individual institutions, or anxiety about the financial services industry generally, can lead to further individual and/or systemic difficulties, defaults and losses. HSBC routinely executes transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds, and other institutional clients. Many of these transactions expose us to credit risk in the event of a default by the counterparty or client. When such a counterparty or client becomes bankrupt or insolvent, we may become involved in significant disputes or litigation with the counterparty's or client's bankruptcy estate and other creditors, or involved in regulatory investigations, each of which could increase our operational and litigation costs.

Significant or prolonged periods of market stress or illiquidity could further decrease our ability to realize the fair value of collateral held by us or make it more likely that we would liquidate collateral at prices insufficient to recover the full amount of our exposure to the respective counterparty or client. Further, disputes with counterparties as to the valuation of collateral significantly increase in times of market stress and illiquidity.

Increased credit risk, including as a result of a deterioration in economic conditions, could require us to increase our provision for credit losses and allowance for credit losses and could have a material adverse effect on our results of operations and financial condition. When we loan money or commit to loan money we incur credit risk, or the risk of losses if our borrowers do not repay their loans. The credit performance of our loan portfolios significantly affects our financial results and condition. If the current economic environment were to deteriorate, more of our customers may have difficulty in repaying their loans or other obligations which could result in a higher level of credit losses and provision for credit losses. We reserve for credit losses by establishing an allowance through a charge to earnings. The amount of this allowance is based on our assessment of credit losses inherent in our loan portfolio (including unfunded credit commitments). The process for determining the amount of the allowance is critical to our financial results and condition. It requires difficult, subjective and complex judgments about the future, including forecasts of economic or market conditions that might impair the ability of our borrowers to repay their loans. We might increase the allowance because of changing economic conditions, including falling home prices and higher unemployment, or other factors. For example, changes in borrower behavior or the regulatory environment also could influence recognition of credit losses in the portfolio and our allowance for credit losses.

While we believe that our allowance for credit losses was appropriate at December 31, 2017, there is no assurance that it will be sufficient to cover future credit losses. In the event of a deterioration in economic conditions, we may be required to build reserves in future periods, which would reduce our earnings.

Financial difficulties or credit downgrades of mortgage and bond insurers may negatively affect our servicing and investment portfolios. Our servicing portfolio includes certain mortgage loans that carry some level of insurance from one or more mortgage insurance companies. To the extent that any of these companies experience financial difficulties or credit downgrades, we may be required, as servicer of the insured loan on behalf of the investor, to obtain replacement coverage with another provider, possibly at a higher cost than the coverage we would replace. We may be responsible for some or all of the incremental cost of the new coverage for certain loans depending on the terms of our servicing agreement with the investor and other circumstances, although we do not have an additional risk of repurchase loss associated with claim amounts for loans sold to third-party investors. Similarly, some of the mortgage loans we hold for investment or for sale carry mortgage insurance. If a mortgage insurer is unable to meet its credit obligations with respect to an insured loan, we might incur higher credit losses if replacement coverage is not obtained. We also have investments in municipal bonds that are guaranteed against loss by bond insurers. The value of these bonds and the payment of principal and interest on them may be negatively affected by financial difficulties or credit downgrades experienced by the bond insurers.

The manner in which we hold, service and enforce residential mortgage loans in our portfolio may be challenged. We are subject to certain legal and contractual requirements for how we hold, transfer, use or enforce promissory notes, security instruments and other documents for residential mortgage loans that we service. In recent years, challenges have been raised to whether we have adhered to these requirements, and whether, as a result in some instances, the loans can be enforced as local law otherwise would permit. Additionally, we currently use the Mortgage Electronic Registration Systems, Inc. (MERS) system for approximately half of the residential mortgage loans that remain in our servicing portfolio. Individual borrowers and certain local governments have contended that the use of MERS is improper or otherwise adversely affects the security interest. If documentation requirements were not met, or if the use of MERS or the MERS system is found not valid or effective, we could be obligated to, or choose to, take remedial actions and may be subject to additional costs or losses.

We may incur additional costs and expenses relating to mortgage loan repurchases and other mortgage loan securitization-related activities. In connection with our loan sale and securitization activities with Federal National Mortgage Association ("Fannie Mae") and Federal Home Loan Mortgage Corporation ("Freddie Mac"), the government sponsored enterprises ("GSEs"), and loan sale and private-label securitization transactions, HUSI has made representations and warranties that the loans sold meet certain requirements. For transactions with the GSEs, these representations include type of collateral, underwriting standards,

validity of certain borrower representations in connection with the loan, that primary mortgage insurance is in force for any mortgage loan with a loan-to-value ratio ("LTV") greater than 80 percent, and the use of the GSEs' standard legal documentation. We may be, and have been, required to repurchase loans and/or indemnify the GSEs and other private investors for losses due to breaches of representations and warranties.

In estimating our repurchase liability arising from breaches of representations and warranties, we consider several factors, including the level of outstanding repurchase demands in inventory and our historical defense rate, the level of outstanding requests for loan files and the related historical repurchase request conversion rate and defense rate, the level of potential future demands based on historical conversion rates of loans for which we have not received a loan file request but are two or more payments delinquent or expected to become delinquent at an estimated conversion rate, and any settlements reached with our counterparties. While we believe that our current repurchase liability reserves are adequate, the factors referred to above are dependent on economic factors, investor demand strategies, housing market trends and other circumstances, which are beyond our control and, accordingly, there can be no assurance that such reserves will not need to be increased in the future.

We have also been involved as a sponsor/seller of loans used to facilitate whole loan securitizations underwritten by our affiliate, HSI, and serve as trustee of various securitization trusts. Participants in the U.S. mortgage securitization market that purchased and repackaged whole loans have been the subject of lawsuits and governmental and regulatory investigations and inquiries, which have been directed at groups within the U.S. mortgage market, such as servicers, originators, underwriters, trustees or sponsors of securitizations, and at particular participants within these groups. As the industry's residential foreclosure issues continue, HSBC Bank USA has taken title to an increasing number of foreclosed homes as trustee on behalf of various securitization trusts. As nominal record owner of these properties, HSBC Bank USA has been sued by municipalities and tenants alleging various obligations of law, including laws regarding property upkeep and tenants' rights. While we believe and continue to maintain that the obligations at issue and any related liability are properly those of the servicer of each trust, we continue to receive significant and adverse publicity in connection with these and similar matters, including foreclosures that are serviced by others in the name of "HSBC, as trustee." As a result, we may be subject to additional litigation and governmental and regulatory scrutiny related to our participation in the U.S. mortgage securitization market, either individually or as a member of a group.

Failure to meet regulatory requirements and expectations in the U.S. regarding sales practices and incentive compensation programs could negatively impact our customers, our business and reputation. Our remuneration practices and performance management framework are designed to prevent and deter conflicts of interest and inappropriate sales incentives. Additionally, our other sales controls, including our framework for handling customer and employee complaints regarding sales practices, are designed to ensure customers receive products that they have authorized and meet their needs. Failure to execute our sales controls could result in the sale of, or upgrade to, products and services that fail to meet the needs of, or are unsuitable for, customers and clients, and can lead to financial harm to our customers, regulatory sanctions, financial loss and reputational damage.

We may not manage risks associated with the replacement of benchmark indices effectively. The expected replacement of the key London Interbank Offered Rate ("LIBOR") with alternative benchmark rates introduces a number of risks for us, our clients, and the financial services industry more widely. This includes, but is not limited to:

- Legal risks, as changes required to documentation for new and existing transactions may be required;
- Financial risks, arising from any changes in the valuation of financial instruments linked to benchmark rates;
- Pricing risks, as changes to benchmark indices could impact pricing mechanisms on some instruments;
- Operational risks, due to the potential requirement to adapt IT systems, trade reporting infrastructure and operational processes; and
- Conduct risks, relating to communication with potential impact on customers, and engagement during the transition period.

The replacement of benchmarks together with the timetable and mechanisms for implementation have not yet been confirmed by central banks. Accordingly, it is not currently possible to determine whether, or to what extent, any such changes would affect us. However, the implementation of alternative benchmark rates may have a material adverse effect on our financial condition, customers and operations.

We could incur losses or be required to hold additional capital as a result of model limitations or failure. We use models for a range of purposes in managing our businesses, including regulatory capital calculations, stress testing, credit approvals, financial crime and fraud risk management and financial reporting. We could face adverse consequences as a result of decisions, which may lead to actions by management, based on models that are poorly developed, implemented or used, or as a result of the modeled outcome being misunderstood or the use of such information for purposes for which it was not designed. We hold capital for known risks and limitations of our models as appropriate. If additional weakness in a model is discovered or if a model is shown to have failed, we may be required to hold more capital. Risks arising from use of models could have a material adverse effect on our businesses, financial condition and/or results of operations, minimum capital requirements and reputation.

Regulatory scrutiny and supervisory concerns over the use by banks of models is considerable, particularly the internal models and assumptions used by banks in the application of the stress testing exercise and in the calculation of regulatory capital.

Management projections, estimates and judgments based on historical performance may not be indicative of our future performance. Our management is required to use certain estimates in preparing our financial statements, including accounting estimates to determine loan loss reserves, reserves related to litigation, deferred tax assets and the fair market value of certain assets and liabilities, including goodwill and intangibles, among other items. In particular, loan loss reserve estimates and certain asset and liability valuations are subject to management's judgment and actual results are influenced by factors outside our control. To the extent historical averages of the progression of loans into stages of delinquency or the amount of loss realized upon charge-off are not predictive of future losses and management is unable to accurately evaluate the portfolio risk factors not fully reflected in historical models, unexpected additional losses could result. Similarly, to the extent assumptions employed in measuring fair value of assets and liabilities not supported by market prices or other observable parameters do not sufficiently capture their inherent risk, unexpected additional losses could result.

We are required to establish a valuation allowance for deferred tax assets and record a charge to income or equity if we determine, based on available evidence at the time the determination is made, that it is more likely than not that some portion or all of the deferred tax assets will not be realized. In evaluating the need for a valuation allowance, we estimate future taxable income based on management approved business plans, future capital requirements and ongoing tax planning strategies. This evaluation process involves significant management judgment about assumptions that are subject to change from period to period. The recognition of deferred tax assets requires management to make significant judgments about future earnings, the periods in which items will impact taxable income, future corporate tax rates and the application of inherently complex tax laws. The use of different estimates can result in changes in the amounts of deferred tax items recognized, which can result in equity and earnings volatility because such changes are reported in current period earnings. See Note 16, "Income Taxes," in the accompanying consolidated financial statements for additional discussion of our deferred tax assets.

Our financial statements depend on our internal controls over financial reporting. The Sarbanes-Oxley Act of 2002 requires our management to evaluate our disclosure controls and procedures and internal control over financial reporting. We are required to disclose, in our annual report on Form 10-K, the existence of any "material weaknesses" in our internal control over financial reporting. In a company as large and complex as ours, lapses or deficiencies, including significant deficiencies, in internal control over financial reporting may occur from time to time and we cannot assure you that we will not find one or more material weaknesses as of the end of any given year.

Changes in accounting standards are beyond our control and may have a material impact on how we report our financial results and condition. Our accounting policies and methods are fundamental to how we record and report our financial condition and results of operations. From time to time, the Financial Accounting Standards Board ("FASB"), the IASB, the SEC and our bank regulators, including the OCC and the FRB, change the financial accounting and reporting standards, or the interpretation thereof, and guidance that govern the preparation and disclosure of external financial statements. These changes are beyond our control, can be hard to predict and could materially impact how we report and disclose our financial results and condition, including our segment results. For example, the FASB's new guidance on expected credit losses will likely, among other things, significantly change how we measure credit impairment on our loan portfolios, which will also affect the level of deferred tax assets that we recognize. We could be required to apply a new or revised standard retroactively, resulting in our restating prior period financial statements in material amounts. We may, in certain instances, change a business practice in order to comply with new or revised standards.

Key employees may be difficult to attract or retain due to contraction of the business and limits on promotional activities. Our employees are our most important resource and, in many areas of the financial services industry, competition for qualified personnel is intense. Employee fatigue, relocations, hiring freezes and external competition targeting top talent could have impacts on attrition. If we were unable to continue to attract, develop and retain qualified key employees to support the various functions of our businesses, our performance, including our competitive position, could be materially adversely affected. Our financial performance, expense reduction initiatives, and reductions in variable compensation and other benefits could raise concerns about key employees' future compensation and opportunities for promotion. Any future limitations on executive compensation imposed by legislation or regulation could adversely affect our ability to attract and maintain qualified employees. As economic conditions continue to improve, we may face increased difficulty in retaining top performers and critical skilled employees. Severe and unrelenting demands continue to be placed on our employees. The cumulative workload arising from a regulatory reform program that is often extra-territorial and still evolving is hugely consumptive of human resources, placing increasingly complex and conflicting demands on a workforce where the required expert capabilities are in short supply and globally mobile. If key personnel were to leave us and equally knowledgeable or skilled personnel are unavailable within the HSBC Group or could not be sourced in the market, our ability to manage our businesses, in particular through any future difficult economic environment may be hindered or impaired.

Significant reductions in pension assets may require additional financial contributions from us. Certain employees are eligible to participate in the HSBC North America qualified defined benefit pension plan, which has been frozen. At December 31, 2017, plan assets were lower than projected plan liabilities resulting in an under-funded status. The accumulated benefit obligation

exceeded the fair value of the plan assets by approximately \$265 million. As these obligations relate to the HSBC North America pension plan, only a portion of this deficit could be considered our responsibility. We and other HSBC North America affiliates with employees participating in this plan will be required to make up this shortfall over a number of years as specified under the Pension Protection Act. This can be accomplished through direct contributions, appreciation in plan assets and/or increases in interest rates resulting in lower liability valuations. See Note 20, "Pension and Other Postretirement Benefits," in the accompanying consolidated financial statements for further information concerning the HSBC North America defined benefit plan.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The principal executive offices of HSBC USA and HSBC Bank USA are located at 452 Fifth Avenue, New York, New York 10018. The main office of HSBC Bank USA is located at 1800 Tysons Blvd., Suite 50, Tysons (formerly known as McLean), Virginia 22102. HSBC Bank USA has 145 branches in New York, 35 branches in California, 17 branches in Florida, 9 branches in New Jersey, 7 branches in Virginia, 4 branches in Washington, 3 branches in Connecticut, 3 branches in Maryland, 2 branches in the District of Columbia, 2 branches in Pennsylvania and 1 branch in Delaware at December 31, 2017. We also have 11 representative offices in New York, 6 in California, 3 in Florida, 2 each in Texas, New Jersey and Massachusetts, and 1 in each of Colorado, the District of Columbia, Delaware, Georgia, Illinois, North Carolina, Oregon, Pennsylvania and Washington.

Item 3. Legal Proceedings

See Note 27, "Litigation and Regulatory Matters," in the accompanying consolidated financial statements for our legal proceedings disclosure, which is incorporated herein by reference.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

HSBC USA's common stock is not publicly traded. As of the date of this filing, HSBC North America was the sole holder of HSBC USA's common stock. No dividends were paid on the common stock outstanding during either 2017 or 2016.

Item 6. Selected Financial Data

Year Ended December 31,	2017	2016	2015	2014	2013
	(dollars are in millions)				
Statement of Income (Loss) Data:					
Net interest income	\$ 2,273	\$ 2,484	\$ 2,470	\$ 2,304	\$ 2,041
Provision for credit losses	(165)	372	361	188	193
Total other revenues ⁽¹⁾	2,002	1,404	1,735	1,657	1,899
Operating expenses excluding goodwill impairment ⁽¹⁾	3,391	3,298	3,284	3,475	3,313
Goodwill impairment	—	—	—	—	616
Income (loss) before income tax	1,049	218	560	298	(182)
Income tax expense (benefit)	1,228	89	230	(56)	156
Net income (loss)	\$ (179)	\$ 129	\$ 330	\$ 354	\$ (338)
Balance Sheet Data at December 31:					
Loans:					
Real estate, including construction	\$ 10,533	\$ 10,890	\$ 10,000	\$ 10,300	\$ 9,034
Business and corporate banking	12,504	14,080	14,365	13,878	11,016
Global banking ⁽²⁾	20,088	23,481	29,905	25,507	19,727
Other commercial ⁽²⁾	9,910	5,765	8,183	8,402	8,717
Total commercial	53,035	54,216	62,453	58,087	48,494
Residential mortgages	17,273	17,181	17,758	16,661	15,826
Home equity mortgages	1,191	1,408	1,600	1,784	2,011
Credit card	721	688	699	720	854
Other consumer	343	382	407	489	510
Total consumer	19,528	19,659	20,464	19,654	19,201
Total loans	72,563	73,875	82,917	77,741	67,695
Loans held for sale	715	1,809	2,185	612	230
Total assets	187,235	201,301	188,278	185,539	185,487
Total tangible assets	185,600	199,655	186,625	183,880	183,817
Total deposits	118,702	129,248	118,579	116,118	112,608
Long-term debt	34,966	37,739	33,509	27,524	22,847
Preferred stock	1,265	1,265	1,265	1,565	1,565
Common equity	18,829	19,090	19,260	15,402	14,899
Total equity	20,094	20,355	20,525	16,967	16,464
Tangible common equity	17,625	18,062	18,014	13,744	13,388

Year Ended December 31,	2017	2016	2015	2014	2013
Selected Financial Ratios:					
Rate of return on average:					
Total assets.....	(.1)%	.1%	.2%	.2%	(.2)%
Total risk-weighted assets.....	(.1)	.1	.2	.3	(.3)
Total common equity.....	(1.3)	.3	1.4	1.8	(2.6)
Total equity.....	(.9)	.6	1.7	2.1	(1.9)
Net interest margin.....	1.28	1.28	1.35	1.43	1.29
Loans to deposits ratio ⁽³⁾	73.70	75.67	93.07	91.94	78.45
Efficiency ratio ⁽¹⁾	79.3	84.8	78.1	87.7	99.7
Allowance as a percent of loans ⁽⁴⁾94	1.38	1.10	.87	.90
Commercial allowance as a percent of loans ⁽⁴⁾	1.15	1.72	1.25	.85	.64
Commercial net charge-off ratio ⁽⁴⁾30	.34	.10	.06	.15
Consumer allowance as a percent of loans ⁽⁴⁾37	.44	.65	.96	1.55
Consumer two-months-and-over contractual delinquency.....	2.48	4.05	4.56	5.59	6.80
Consumer net charge-off ratio ⁽⁴⁾11	.33	.32	.43	.85
Common equity Tier 1 capital to risk-weighted assets ⁽⁵⁾	14.2	13.7	12.0	10.3	9.9
Tier 1 capital to risk-weighted assets.....	15.3	14.5	12.6	11.4	11.7
Total capital to risk-weighted assets.....	18.4	18.3	16.5	15.8	16.4
Tier 1 leverage ratio.....	9.9	9.2	9.5	8.5	7.9
Total equity to total assets.....	10.7	10.1	10.9	9.1	8.9
Tangible common equity to total tangible assets.....	9.5	9.0	9.7	7.5	7.3

⁽¹⁾ In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. As a result, we have reclassified prior year amounts in order to conform to the current year presentation, which increased both total other revenues and total operating expenses \$72 million, \$63 million, \$51 million and \$42 million during the years ended December 31, 2016, 2015, 2014 and 2013, respectively. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information.

⁽²⁾ During 2017, in conjunction with the creation of the new Corporate Center segment as discussed further in Note 22, "Business Segments," in the accompanying consolidated financial statements we reclassified loans to HSBC affiliates from global banking to other commercial and revised prior periods to conform with the current year presentation. As a result, other commercial includes loans to HSBC affiliates totaling \$6.8 billion, \$3.3 billion, \$4.8 billion, \$4.8 billion and \$5.3 billion at December 31, 2017, 2016, 2015, 2014 and 2013, respectively.

⁽³⁾ Represents period end loans, net of allowance for loan losses, as a percentage of core deposits as calculated in accordance with Federal Financial Institutions Examination Council guidelines which generally include all domestic demand, money market and other savings accounts, as well as time deposits with balances not exceeding \$250,000.

⁽⁴⁾ Excludes loans held for sale.

⁽⁵⁾ Basel III introduced the common equity Tier 1 ratio. For 2013, the ratio presented is the Tier 1 common ratio calculated under Basel I.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

Certain matters discussed throughout this Form 10-K are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In addition, we may make or approve certain statements in future filings with the United States Securities and Exchange Commission ("SEC"), in press releases, or oral or written presentations by representatives of HSBC USA Inc. ("HSBC USA" and, together with its subsidiaries, "HUSI") that are not statements of historical fact and may also constitute forward-looking statements. Words such as "may," "will," "should," "would," "could," "appears," "believe," "intends," "expects," "estimates," "targeted," "plans," "anticipates," "goal," and similar expressions are intended to identify forward-looking statements but should not be considered as the only means through which these statements may be made. These matters or statements will relate to our future financial condition, economic forecast, results of operations, plans, objectives, performance or business developments and will involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from that which was expressed or implied by such forward-looking statements.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond our control. Our actual future results may differ materially from those set forth in our forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ materially from those in the forward-looking statements:

- uncertain market and economic conditions in the United States and abroad, including but not limited to, a decline in housing prices, a decline in energy prices, unemployment levels, tighter credit conditions, changes in interest rates, the availability of liquidity, changes in consumer confidence and consumer spending and behavior, consumer perception as to the continuing availability of credit and price competition in the market segments we serve and the consequences of unexpected geopolitical events, such as the outbreak of hostilities between countries and the decision by the United Kingdom ("U.K.") to exit the European Union ("EU");
- changes in laws and regulatory requirements;
- the potential impact of any legal, regulatory and policy changes effecting financial institutions and the global economy as a result of the current Administration in the U.S. (the "Administration");
- the ability to deliver on our regulatory priorities;
- extraordinary government actions as a result of market turmoil;
- capital and liquidity requirements under Basel III, the Federal Reserve Board's ("FRB") Comprehensive Capital Analysis and Review ("CCAR") program, and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank Act") stress testing ("DFAST"), including the U.S. FRB requirements for U.S. global systemically important banks ("G-SIBs") and U.S. intermediate holding companies ("IHCs") owned by non-U.S. G-SIBs to issue total loss-absorbing capacity ("TLAC") instruments;
- regulatory requirements in the U.S. and in non-U.S. jurisdictions to facilitate the future orderly resolution of large financial institutions;
- changes in central banks' policies with respect to the provision of liquidity support to financial markets;
- the ability of HSBC Holdings plc ("HSBC" and, together with its subsidiaries, "HSBC Group") and HSBC Bank USA, National Association ("HSBC Bank USA") to fulfill the requirements imposed by our consent orders as well as guidance from regulators generally;
- the use of us as a conduit for illegal activities without our knowledge by third parties;
- the ability to successfully manage our risks;
- the possibility of the inadequacy of our data management and policies and processes;
- the financial condition of our clients and counterparties and our ability to manage counterparty risk;
- concentrations of credit and market risk, including exposure to Latin American corporate clients and the oil and gas markets;
- increases in our allowance for credit losses and changes in our assessment of our loan portfolios;
- the ability to implement our business strategies;
- the ability to successfully implement changes to our operational practices as needed and/or required from time to time;
- damage to our reputation;

- the ability to attract and retain customers and to attract and retain key employees;
- the effects of competition in the markets where we operate including increased competition from non-bank financial services companies, including securities firms;
- the effects of operational risks that are inherent in banking operations, including fraudulent and other criminal activities, breakdowns in processes or procedures and systems failure or non-availability;
- disruption in our operations from the external environment arising from events such as natural disasters, global pandemics, acts of war, terrorist attacks, or essential utility outages;
- a failure in or a breach of our operation or security systems or infrastructure, or those of third party servicers or vendors, including as a result of cyberattacks;
- the ability of third party suppliers, outsourcing vendors, off-shored functions and our affiliates to provide adequate services;
- losses suffered due to the negligence, fraud or misconduct of our employees or the negligence, fraud or misconduct on the part of third parties;
- a failure in our internal controls;
- our ability to meet our funding requirements;
- adverse changes to our credit ratings;
- financial difficulties or credit downgrades of mortgage bond insurers;
- our ability to cross-sell our products to existing customers;
- changes in Financial Accounting Standards Board ("FASB") and International Accounting Standards Board ("IASB") accounting standards and their interpretation;
- heightened regulatory and government enforcement scrutiny of financial institutions, including in connection with product governance and sales practices, account opening and closing procedures, customer and employee complaints and sales compensation structures related to such practices;
- continued heightened regulatory scrutiny with respect to existing and future residential mortgage servicing and foreclosure practices, with particular focus on loss mitigation, foreclosure prevention and outsourcing;
- possible negative impact of regulatory investigations and legal proceedings related to alleged foreign exchange manipulation;
- changes in the methodology for determining benchmark rates;
- heightened regulatory and government enforcement scrutiny of financial markets, with a particular focus on traded asset classes, including foreign exchange;
- the possibility of incorrect assumptions or estimates in our financial statements, including reserves related to litigation, deferred tax assets and the fair value of certain assets and liabilities;
- model limitations or failure;
- the possibility of incorrect interpretations, application of or changes in tax laws to which we and our clients are subject;
- changes in bankruptcy laws to allow for principal reductions or other modifications to mortgage loan terms;
- additional financial contribution requirements to the HSBC North America Holdings Inc. ("HSBC North America") pension plan;
- unexpected and/or increased expenses relating to, among other things, litigation and regulatory matters, remediation efforts, penalties and fines; and
- the other risk factors and uncertainties described under Item 1A, "Risk Factors," in this Annual Report on Form 10-K.

Forward-looking statements are based on our current views and assumptions and speak only as of the date they are made. We undertake no obligation to update any forward-looking statement to reflect subsequent circumstances or events. For more information about factors that could cause actual results to differ materially from those in the forward-looking statements, see Item 1A, "Risk Factors," in this Annual Report on Form 10-K.

Executive Overview

Organization and Basis of Reporting HSBC USA is a wholly-owned subsidiary of HSBC North America which is an indirect wholly-owned subsidiary of HSBC. HUSI may also be referred to in Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") as "we," "us" or "our."

Through our subsidiaries, we offer a comprehensive range of consumer and commercial banking products and related financial services. HSBC Bank USA, our principal U.S. banking subsidiary, is a national banking association with banking branch offices and/or representative offices in 17 states and the District of Columbia. In addition to our domestic offices, we currently maintain foreign branch offices, subsidiaries and/or representative offices in Europe, Asia and Latin America. Our customers include individuals, including high net worth and ultra-high net worth individuals, small businesses, corporations, institutions and governments. We also engage in mortgage banking and serve as an international dealer in derivative instruments denominated in U.S. dollars and other currencies, focusing on structuring of transactions to meet clients' needs.

2017 Economic Environment The U.S. economy continued to grow during 2017. U.S. Gross Domestic Product ("GDP") grew at an estimated annual rate of 2.3 percent in 2017, higher than 2016's GDP annual growth rate, while inflation in 2017 remained subdued. In December 2017, the FRB increased short-term interest rates by 25 basis points, the third such rate increase this year, and many believe the FRB will increase short-term interest rates further during 2018. During the fourth quarter of 2017, the FRB also began reducing its holdings of U.S. Treasury bonds and mortgage-backed securities. These actions by the FRB will likely cause longer term interest rates to rise over time. The U.S. economy added approximately 2.2 million jobs during 2017 and the total unemployment rate fell to 4.1 percent at December 2017 as compared with 4.7 percent at December 2016.

While the U.S. economy continued to grow in 2017, economic uncertainty concerning the outlook and the future economic environment exists despite continued improvements in many segments of the global economy. In addition, on-going geopolitical events and the implications of those events could potentially impact the capital markets and trade further adding to global uncertainty. We also have a significant number of customers in Latin America and in particular Brazil, which continues to experience economic challenges. The sustainability of the economic recovery will be determined by numerous variables including consumer sentiment, energy prices, credit market volatility, employment levels and housing market conditions which will impact corporate earnings and the capital markets. These conditions in combination with global economic conditions, fiscal and monetary policy, geopolitical concerns and the level of regulatory and government scrutiny of financial institutions will continue to impact our results in 2018 and beyond.

2017 Events

- On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Legislation") was signed into law which reduced the Federal corporate income tax rate from 35 percent to 21 percent effective January 1, 2018. During the fourth quarter of 2017, we increased our income tax provision by \$865 million as a result of the Federal corporate tax rate change, due to a lower carrying value of our net deferred tax asset. After the initial revaluation of the deferred tax asset at December 31, 2017, the rate reduction is expected to have a positive impact on future earnings. The Tax Legislation also contained other complex provisions, such as the Base Erosion and Anti-Abuse Tax ("BEAT"), which may have a material impact in future periods on income tax expense and taxes payable for the HSBC North America consolidated tax group, of which HUSI is a member. We are currently evaluating the BEAT provisions and their potential impact, which is currently uncertain and will depend on future tax regulatory guidance, actions HSBC North America or its affiliates may take as a result of the Tax Legislation and the future earnings of HUSI and other subsidiaries of HSBC North America. Although our analysis is ongoing and could change depending upon the factors discussed above, we currently do not anticipate a material impact on our financial position or results of operations from the BEAT.
- During the first half of 2017, we sold substantially all of our remaining Visa Inc. ("Visa") Class B common shares ("Class B Shares") to a third party resulting in a net pre-tax gain of approximately \$312 million which was recorded as a component of other income (loss) in the consolidated statement of income (loss). Consistent with the Visa Class B Shares that were sold in 2016, under the terms of the sale agreements, we entered into swap agreements with the purchaser to retain the litigation risk associated with the Class B Shares sold until the related litigation is settled and the Class B Shares can be converted into Class A common shares. The swaps related to the sales during the first half of 2017 had a carrying value of \$36 million at December 31, 2017. See Note 14, "Derivative Financial Instruments," and Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," in the accompanying consolidated financial statements for additional information about these transactions.
- Certain employees participate in the HSBC North America qualified defined benefit pension plan (either the "HSBC North America Pension Plan" or the "Plan") which was previously frozen. During the fourth quarter of 2017, HSBC North America completed a limited-time offer to former vested Plan employees who had not yet commenced receiving payment of their annuity benefit to elect a) an immediate lump sum payment; b) an immediate annuity (reduced for early payment under the terms of the Plan); or c) to retain their existing benefit in an annuity to be paid under the original terms of the

Plan. Payments to former employees who elected to participate in an early distribution were made by HSBC North America in December. As a result, we recorded a pre-tax settlement loss to our allocated pension expense in the fourth quarter of 2017 of approximately \$35 million due primarily to an acceleration of a portion of the Plan's actuarial losses which had been reflected in HSBC North America's accumulated other comprehensive income.

- In August 2017, our Private Banking business entered into an agreement to refer parts of its Latin America portfolio, consisting primarily of clients based in areas where we do not have a corporate presence, including Central America and the Andean Pact, to UBS Wealth Management Americas ("UBS"). Our Private Banking business has made a decision to no longer service clients based in those markets and renew focus on clients and prospects based in markets where we can leverage HSBC's global connectivity, including the United States, Argentina, Brazil, Chile and Mexico. These markets are consistent with HSBC's global strategy and allow us to better serve clients through collaboration with other HSBC businesses based in these markets. Under the terms of the agreement, we facilitate the referral of these client relationships to UBS for a fee, including the transfer of client assets, consisting of client investments and deposits, as well as the transfer of the relationship managers and client service employees that support these clients. Loans associated with these client relationships were not included in the agreement. As a result of entering into the agreement, we recognized a pre-tax gain on sale, net of allocated goodwill and transaction costs, of \$8 million during the third quarter of 2017. See Note 10, "Sale of Certain Private Banking Client Relationships," in the accompanying consolidated financial statements for further discussion.
- During 2017, we completed the sale of the portfolio of residential mortgage loans that we previously purchased from HSBC Finance Corporation ("HSBC Finance") and transferred to held for sale during 2016 to third parties. These residential mortgage loans had an unpaid principal balance of \$581 million (aggregate carrying value of \$536 million) at the time of sale and we recognized a gain on sale of approximately \$50 million, including transaction costs.

In addition to the residential mortgage loan sales discussed above, in March 2017 we completed the sale of certain residential mortgage loans which previously had been written down to the lower of amortized cost or fair value of the collateral less cost to sell (generally 180 days past due) in accordance with our existing charge-off policies and were transferred to held for sale during 2016 to a third party. These residential mortgage loans had an unpaid principal balance of \$364 million (aggregate carrying value of \$276 million) at the time of sale and we recognized a loss on sale of approximately \$2 million, largely reflecting transaction costs.

- During 2016, PHH Mortgage Corporation ("PHH Mortgage") announced their decision to exit certain business platforms by the end of the first quarter of 2018. As a result of this decision, we evaluated various options for our mortgage fulfillment operations and have decided to insource these operations, effective with applications starting January 2, 2018. While we continue to sell agency eligible mortgage loan originations on a servicing released basis, beginning with January 2018 applications, PHH Mortgage is no longer obligated to purchase these loans from us directly upon origination and instead we now market these loans for sale to other third parties. We currently do not anticipate these changes will have a material impact on our financial position or results of operations.
- Throughout 2017, our operations were focused on the core activities of our global businesses and the positioning of our activities towards international connectivity strategies, including what we believe are our unique capabilities to serve clients in the North American Free Trade Agreement trade corridor in order to improve profitability. We also continued to focus on cost optimization efforts and incurred costs throughout 2017 in order to achieve cost efficiencies. Over the last few years, we have identified and implemented various opportunities to reduce costs through organizational structure redesign, vendor spending, discretionary spending and other general efficiency initiatives which have resulted in workforce reductions. We continue to evaluate our overall operations as we seek to optimize our risk profile and cost efficiencies as well as our liquidity, capital and funding requirements.

Performance, Developments and Trends Net income (loss) was a loss of \$179 million during 2017 compared with income of \$129 million and \$330 million during 2016 and 2015, respectively. Our net loss in 2017 reflects the impact of the Tax Legislation enacted in December 2017 which lowered the Federal corporate income tax rate to 21 percent effective January 1, 2018 and resulted in an increase to our income tax provision of approximately \$865 million due to a lower carrying value of our net deferred tax asset.

Income before income tax was \$1,049 million during 2017 compared with \$218 million and \$560 million during 2016 and 2015, respectively. The increase in income before income tax in 2017 compared with 2016 reflects higher other revenues driven by higher gains on sales of Visa Class B Shares and a lower provision for credit losses, partially offset by lower net interest income and higher operating expenses. The decrease in income before income tax in 2016 compared with 2015 was due primarily to lower other revenues.

Our reported results in all periods were impacted by certain items management believes to be significant, which distort comparability between periods. Significant items are excluded to arrive at adjusted performance because management would ordinarily identify and consider them separately to better understand underlying business trends. The following table summarizes the impact of these significant items for all periods presented:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Income before income tax, as reported.....	\$ 1,049	\$ 218	\$ 560
Fair value movement on own fair value option debt attributable to our own credit spread ⁽¹⁾ .	—	3	(194)
Costs to achieve ⁽²⁾	222	113	21
Gains on sales of Visa Inc. Class B common shares to a third party, net ⁽³⁾	(308)	(71)	—
Loss on partial settlement of HSBC North America pension obligation.....	35	—	—
Adjusted performance ⁽⁴⁾	<u>\$ 998</u>	<u>\$ 263</u>	<u>\$ 387</u>

⁽¹⁾ As discussed more fully in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements, beginning January 1, 2017, the fair value movement on fair value option liabilities attributable to our own credit spread is recorded in common equity as a component of other comprehensive income (loss).

⁽²⁾ Reflects transformation costs to deliver the cost reduction and productivity outcomes outlined in the HSBC Investor Update in June 2015.

⁽³⁾ Also includes expense of \$4 million during 2017 related to subsequent fair value movements on the swap agreements to retain litigation risk prior to completion of the final VISA Class B common share sale.

⁽⁴⁾ Represents a non-U.S. GAAP financial measure.

Excluding the collective impact of the items in the table above, our adjusted performance during 2017 increased \$735 million, compared with 2016 due primarily to a lower provision for credit losses, higher other revenues driven by higher trading revenue, higher fair value option revenue and higher other income, and lower operating expenses, partially offset by lower net interest income. Excluding the collective impact of the items in the table above, our adjusted performance for 2016 declined 124 million compared with 2015 due primarily to lower other revenues driven by lower other income and lower fair value option revenue, partially offset by lower operating expenses which reflects the favorable impact of our cost management efforts.

See "Results of Operations" for a more detailed discussion of our operating trends. In addition, see "Balance Sheet Review" for further discussion on our asset and liability trends, "Liquidity and Capital Resources" for further discussion on funding and capital and "Credit Quality" for additional discussion on our credit trends.

Future Prospects Our operations are dependent upon our ability to maintain stable deposit balances and, to a lesser extent, access the global capital markets. Numerous factors, both internal and external, may impact our access to, and the costs associated with, both retail and wholesale sources of funding. These factors may include our debt ratings, overall economic conditions, overall market volatility, the counterparty credit limits of investors to the HSBC Group as a whole and the effectiveness of our management of credit risks inherent in our customer base.

Our results are also impacted by general global and domestic economic conditions, including employment levels, housing market conditions, property valuations, interest rates and legislative and regulatory changes, all of which are beyond our control. Changes in interest rates generally affect both the rates we charge to our customers and the rates we pay on our borrowings. Achieving our profitability goals in 2018 is largely dependent upon macroeconomic conditions which include the interest rate environment, housing market conditions, unemployment levels, market volatility, energy prices and our ability to attract and retain loans and deposits from customers, all of which could impact trading and other revenue, net interest income, loan volume, loss provision and ultimately our results of operations.

Basis of Reporting

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP").

Group Reporting Basis We report financial information to HSBC in accordance with HSBC Group accounting and reporting policies, which apply International Financial Reporting Standards ("IFRSs") as issued by the IASB and endorsed by the EU and, as a result, our segment results are prepared and presented using financial information prepared on the basis of HSBC Group's accounting and reporting policies ("Group Reporting Basis"). Because operating results on the Group Reporting Basis are used in managing our businesses and rewarding performance of employees, our management also separately monitors profit before tax under this basis of reporting. The following table reconciles our U.S. GAAP versus Group Reporting Basis profit before tax:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Profit before tax – U.S. GAAP basis	\$ 1,049	\$ 218	\$ 560
Adjustments:			
Loans held for sale	(150)	60	14
Structured notes and deposits	(85)	—	—
Loan impairment	(29)	(7)	193
Property	(11)	(19)	(19)
Loan origination	5	2	(21)
Low income housing tax credit investments	7	9	15
Litigation expense	8	(8)	(2)
Pension and other postretirement benefit costs	94	19	15
Other	12	20	—
Profit before tax – Group Reporting Basis	<u>\$ 900</u>	<u>\$ 294</u>	<u>\$ 755</u>

A summary of differences between U.S. GAAP and the Group Reporting Basis as they impact our results is presented below, including a new difference related to structured notes and deposits:

Loans held for sale - For loans transferred to held for sale subsequent to origination, the Group Reporting Basis requires these loans to be reported separately on the balance sheet when certain criteria are met which are generally more stringent than those under U.S. GAAP, but does not change the recognition and measurement criteria. Accordingly, for the Group Reporting Basis, such loans continue to be accounted for and impairment continues to be measured in accordance with IAS 39, "Financial Instruments: Recognition and Measurement" ("IAS 39"), with any gain or loss recorded at the time of sale. U.S. GAAP requires loans that meet the held for sale classification requirements be transferred to a held for sale category and subsequently be measured at the lower of amortized cost or fair value. Under U.S. GAAP, the component of the lower of amortized cost or fair value adjustment upon transfer to held for sale related to credit risk is recorded in the statement of income (loss) as provision for credit losses while the component related to interest rates and liquidity factors is reported in the statement of income (loss) in other revenues. Changes in the lower of amortized cost or fair value after the initial transfer to held for sale are reported in the statement of income (loss) in other revenues.

For loans originated with the intent to sell, the Group Reporting Basis requires these loans to be classified as trading assets and recorded at their fair value, with income recorded in trading revenue. Under U.S. GAAP, such loans are classified as loans held for sale and, with the exception of certain loans accounted for under fair value option ("FVO") accounting, are recorded at the lower of amortized cost or fair value, with changes in the lower of amortized cost or fair value adjustment recorded in other revenues.

Structured notes and deposits - Structured notes and deposits are classified as trading liabilities under the Group Reporting Basis and are carried at fair value with changes in fair value recorded in earnings. We elected to apply fair value option accounting to these structured notes and deposits under U.S. GAAP. Beginning January 1, 2017, the adoption of new accounting guidance under U.S. GAAP requires the fair value movement on fair value option liabilities, including structured notes and deposits, attributable to our own credit spread to be recorded in other comprehensive income (loss).

Loan impairment - The Group Reporting Basis requires a discounted cash flow methodology for estimating impairment on pools of homogeneous customer loans which requires the discounting of cash flows including recovery estimates at the original effective interest rate of the pool of customer loans. The amount of impairment relating to the discounting of future cash flows unwinds with the passage of time and is recognized in interest income. Under U.S. GAAP, a discounted cash flow methodology on pools

of homogeneous loans is applied only to the extent loans are considered troubled debt restructurings ("TDR Loans"). Also under the Group Reporting Basis, if the fair value on secured loans previously written down increases because collateral values have improved and the improvement can be related objectively to an event occurring after recognition of the write-down, such write-down is reversed, which is not permitted under U.S. GAAP. Additionally under the Group Reporting Basis, future recoveries on charged-off loans or loans written down to fair value less cost to sell are accrued for on a discounted basis and a recovery asset is recorded. Subsequent recoveries are recorded to earnings under U.S. GAAP, but are adjusted against the recovery asset under the Group Reporting Basis. Under the Group Reporting Basis, interest on impaired loans is recorded at the effective interest rate on the customer loan balance net of impairment allowances.

For commercial loans collectively evaluated for impairment, we utilize different loss emergence periods for calculating the allowance for credit losses under U.S. GAAP and the Group Reporting Basis. On an annual basis, we conduct reviews of our loss emergence period estimate used for U.S. GAAP reporting purposes based upon regulatory guidance and bank industry practice in the United States and, separately, the loss emergence period estimate under the Group Reporting Basis. These reviews have resulted in a longer emergence period under U.S. GAAP than under the Group Reporting Basis and, therefore, the allowance for credit losses for commercial loans collectively evaluated for impairment is higher under U.S. GAAP than under the Group Reporting Basis. This difference in loss emergence period is primarily attributable to the different approaches used for U.S. GAAP and the Group Reporting Basis. We have determined that, based on the judgment involved and the practice which has evolved in different jurisdictions, both approaches for estimating loss emergence periods result in an appropriate allowance for credit losses under the reporting basis to which each is being applied.

Property - The sale and leaseback of our 452 Fifth Avenue property, including the 1 W. 39th Street building, in 2010 resulted in the recognition of a gain under the Group Reporting Basis while under U.S. GAAP, such gain is deferred and was being recognized over the lease term (which was ten years) due to our continuing involvement. During 2017, we extended the lease for an additional five years as well as the amortization of the deferred gain to reflect the new lease term.

Loan origination - Certain loan fees and incremental direct loan costs, which would not have been incurred but for the origination of the loans, are deferred and amortized to earnings over the life of the loan under the Group Reporting Basis. Certain loan fees and direct incremental loan origination costs, including internal costs directly attributable to the origination of loans in addition to direct salaries, are deferred and amortized to earnings over the life of the loan under U.S. GAAP. Loan origination deferrals under the Group Reporting Basis are more stringent and generally result in lower costs being deferred than permitted under U.S. GAAP. In addition, all deferred loan origination fees, costs and loan premiums must be recognized based on the expected life of the loan under the Group Reporting Basis as part of the effective interest calculation while under U.S. GAAP, they may be recognized on either a contractual or expected life basis.

Low income housing tax credit investments - Under the Group Reporting Basis, given the inter-relationship between the tax benefits obtained from our investment in low income housing tax credit investments and the amortization of our investment balance, such amounts are presented net in other operating income. Under U.S. GAAP, such amounts are presented net in income tax expense.

Litigation expense - Under U.S. GAAP litigation accruals are recorded when it is probable a liability has been incurred and the amount is reasonably estimable. Under the Group Reporting Basis, a present obligation and a probable outflow of economic benefits must exist for an accrual to be recorded. This creates differences in the timing of accrual recognition between the Group Reporting Basis and U.S. GAAP. Additionally under the Group Reporting Basis, legal costs to defend litigation are accrued at the time that a liability is recorded for the related litigation while under U.S. GAAP, these costs are recognized as services are performed.

Pension and other postretirement benefit costs - Pension expense under U.S. GAAP is generally higher than under the Group Reporting Basis as a result of the amortization of the amount by which actuarial losses exceeds the higher of 10 percent of the projected benefit obligation or fair value of plan assets (the corridor). In addition, under the Group Reporting Basis, pension expense is determined using a finance cost component comprising the net interest on the net defined benefit liability which does not reflect the benefit from the expectation of higher returns on plan assets. In 2017, pension expense was higher under U.S. GAAP due primarily to the impact of HSBC North America completing a limited-time lump sum offer to former vested HSBC North America Pension Plan employees during the fourth quarter of 2017. Under the Group Reporting Basis, completion of the offer resulted in a benefit from reducing HSBC North America's net under-funded status while under U.S. GAAP this benefit was more than offset by expense from an acceleration of a portion of the Plan's actuarial losses which had been reflected in HSBC North America's accumulated other comprehensive income. Under the Group Reporting Basis, these actuarial losses are recorded directly to retained earnings.

Other - Other includes the net impact of certain adjustments which represent differences between U.S. GAAP and the Group Reporting Basis that were not individually material, including derivatives, precious metal loans, servicing assets, renewable energy tax credit investments, share-based payments and certain trading securities that were reclassified to loans and receivables under the Group Reporting Basis in 2008.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with accounting standards generally accepted in the United States. We believe our policies are appropriate and fairly present the financial position and results of operations of HSBC USA.

The significant accounting policies used in the preparation of our consolidated financial statements are more fully described in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements. Certain critical accounting policies affecting the reported amounts of assets, liabilities, revenues and expenses, are complex and involve significant judgments by our management, including the use of estimates and assumptions. As a result, changes in estimates, assumptions or operational policies could significantly affect our financial position and our results of operations. We base our accounting estimates on historical experience, observable market data, inputs derived from or corroborated by observable market data by correlation or other means and on various other assumptions that we believe to be appropriate, including assumptions based on unobservable inputs. To the extent we use models to assist us in measuring the fair value of particular assets or liabilities, we strive to use models that are consistent with those used by other market participants. Actual results may differ from these estimates due to the levels of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change. The impact of estimates and assumptions on the financial condition or operating performance may be material.

Of the significant accounting policies used in the preparation of our consolidated financial statements, the items discussed below involve what we have identified as critical accounting estimates based on the associated degree of judgment and complexity. Our management has reviewed these critical accounting policies as well as the associated estimates, assumptions and accompanying disclosure with the Audit Committee of our Board of Directors.

Allowance for Credit Losses Because we lend money to others, we are exposed to the risk that borrowers may not repay amounts owed to us when contractually due. Consequently, we maintain an allowance for credit losses that reflects our estimate of probable incurred losses in the existing loan portfolio. Allowance for credit loss estimates are reviewed periodically and adjustments are reflected through the provision for credit losses in the period they become known. Our risk and finance departments share responsibility for establishing appropriate levels of allowances for credit losses inherent in our various loan portfolios and they assess and independently approve our allowance for credit losses. We believe the accounting estimate relating to the allowance for credit losses is a "critical accounting estimate" for the following reasons:

- Changes in the provision can materially affect our financial results;
- Estimates related to the allowance for credit losses require us to project future borrower performance, including cash flows, delinquencies and charge-offs, along with, when applicable, collateral values, which are highly uncertain; and
- The allowance for credit losses is influenced by factors outside of our control such as borrower performance, economic conditions such as industry and business trends and trends in housing markets and interest rates, energy prices, unemployment, bankruptcy trends and the effects of laws and regulations.

Because our estimates of the allowance for credit losses involve judgment and are influenced by factors outside of our control, there is uncertainty inherent in these estimates. Our estimate of probable incurred credit losses is inherently uncertain because it is highly sensitive to changes in economic conditions which influence growth, industry and business performance, bankruptcy trends, trends in housing markets and interest rates, delinquency rates and the flow of loans through various stages of delinquency, the realizability of any collateral and actual loss experience. Changes in such estimates could significantly impact our allowance and provision for credit losses.

As an illustration of the effect of changes in estimates related to the allowance for credit losses, a 10 percent change in our projection of probable net credit losses on our loans would have resulted in a change of approximately \$68 million in our allowance for credit losses at December 31, 2017.

Our allowance for credit losses is based on estimates and is intended to be adequate but not excessive. The allowance for credit losses is regularly assessed for adequacy. The allowance for credit losses, which is carried as a reduction to loans on the balance sheet includes reserves for inherent probable credit losses associated with all loans outstanding. A reserve is also maintained for off-balance sheet risk, which is recorded in other liabilities and includes probable and reasonably estimable credit losses arising from off-balance sheet arrangements such as letters of credit and undrawn commitments to lend.

The allowances include amounts calculated for specific individual loan balances and for collective loan portfolios depending on the nature of the exposure and the manner in which risks inherent in that exposure are managed.

- All commercial loans in a nonaccrual status that exceed \$500,000 and all commercial TDR Loans are evaluated individually for impairment. When a loan is found to be "impaired," a specific reserve is calculated. Reserves against impaired loans, including consumer and commercial loans modified in troubled debt restructurings, are determined primarily by an analysis of discounted expected cash flows with reference to independent valuations of underlying loan collateral and considering secondary market prices for distressed debt where appropriate.

- Loans that are not individually evaluated for impairment and those evaluated and found not to be impaired are pooled into homogeneous categories of loans and collectively evaluated to determine if it is deemed probable, based on historical data and other environmental factors, that a loss has been incurred even though it has not yet manifested itself in a specific loan.

We estimate probable losses for pools of homogeneous consumer loans and certain small business loans which do not qualify as TDR Loans using a roll rate migration analysis that estimates the likelihood that a loan will progress through the various stages of delinquency, or buckets and ultimately charge-off based upon recent performance experience of other loans in our portfolio. This migration analysis incorporates estimates of the period of time between a loss occurring and the confirming event of its charge-off. This analysis also considers delinquency status, loss experience and severity and takes into account whether borrowers have filed for bankruptcy or have been subject to account management actions, such as the re-age or modification of accounts. We also take into consideration the loss severity expected based on the underlying collateral, if any, for the loan in the event of default based on historical and recent trends which are updated monthly based on a rolling average of several months' data using the most recently available information and is typically in the range of 20-40 percent for residential mortgages and 70-100 percent for home equity mortgages. At both December 31, 2017 and 2016, less than 1 percent of our second lien home equity mortgages for which the first lien residential mortgage is held or serviced by us and has a delinquency status of 90 days or more delinquent were less than 90 days delinquent and not considered to be a TDR Loan or already recorded at fair value less cost to sell.

An advanced credit risk analysis methodology is utilized to support the estimation of incurred losses inherent in pools of homogeneous commercial loans and off-balance sheet risk. This methodology uses the probability of default from the customer risk rating assigned to each counterparty together with the estimated loss emergence period (estimate of the period of time between a loss occurring and the confirming event of its charge-off) of the separate portfolios. The "Loss Given Default" rating assigned to each transaction or facility is based on the collateral securing the transaction and the measure of exposure based on the transaction. A suite of models, tools and templates is maintained using quantitative and statistical techniques, which are combined with management's judgment to support the assessment of each transaction. These were developed using internal data and supplemented with data from external sources which was judged to be consistent with our internal credit standards. These advanced measures are applied to the homogeneous credit pools to estimate the required allowance for credit losses.

In addition, loss reserves on consumer and commercial loans are maintained to reflect our judgment of portfolio risk factors which may not be fully reflected in the statistical calculations or when historical trends are not reflective of current inherent losses in the portfolio. Portfolio risk factors considered in establishing the allowance for credit losses on loans include, as appropriate, growth, including new lending markets and customer concentrations, product mix and risk selection, unemployment rates, bankruptcy trends, geographic concentrations, loan product features such as adjustable rate loans, economic conditions such as trends in housing markets, interest rates and industry and business performance, portfolio seasoning, account management policies and practices, model imprecision, changes in underwriting practices, current levels of charge-offs and delinquencies, changes in laws and regulations, customer concentration and other factors which can affect payment patterns on outstanding loans such as natural disasters. We also consider key ratios such as allowance as a percentage of loans, allowance as a percentage of nonperforming loans and allowance as a percentage of net charge-offs in developing our allowance estimates.

The results from the consumer roll rate analysis, commercial analysis and the specific impairment reserving process are reviewed each quarter by the Wholesale and Retail Allowance for Loan Losses Committees. These committees also consider other observable factors, both internal and external to us in the general economy, to ensure that the estimates provided by the various models adequately include all known information at each reporting period.

Goodwill Impairment Goodwill is not subject to amortization but is tested for possible impairment at least annually or more frequently if events or changes in circumstances indicate that it is more likely than not that the asset might be impaired. Impairment testing requires that the fair value of each reporting unit be compared with its carrying amount, which is determined on the basis of capital invested in the unit including attributable goodwill. We determine the invested capital of a reporting unit by applying to the reporting unit's risk-weighted assets a capital charge that is consistent with Basel III requirements, and additionally, allocating to each reporting unit the remaining carrying amount of HUSI's net assets. Accordingly, the entire carrying amount of HUSI's net assets is allocated to our reporting units. Significant and long-term changes in the applicable reporting unit's industry and related economic conditions are considered to be primary indicators of potential impairment due to their impact on expected future cash flows. In addition, shorter-term changes may impact the discount rate applied to such cash flows based on changes in investor requirements or market uncertainties. In evaluating possible impairment, specific factors we consider are: (a) the observance of material changes to business plan information (e.g., financial forecasts); (b) significant increases in observed peer group discount rates; (c) significant announced or planned business divestitures; (d) the margin by which the fair value of each reporting unit exceeded the carrying amount at the previous testing date; (e) deterioration in macroeconomic, industry or market conditions that have not yet been reflected in the latest business plan information, if any, and; (f) other relevant events specific to the reporting unit (e.g., changes in management, strategy or customers, capital allocation or litigation).

The determination of fair value as part of the impairment testing of our goodwill is a "critical accounting estimate" due to the significant judgment required in the use of the fair value approaches. We utilize the market approach and the discounted cash flow

method to determine fair value. The market approach focuses on valuation multiples for reasonably similar publicly traded companies and also considers recent market transactions. The discounted cash flow method includes such variables as revenue growth rates, expense trends, interest rates and terminal values. Based on an evaluation of key data and market factors, management's judgment is required to select the specific variables to be incorporated into the models. Additionally, the estimated fair value can be significantly impacted by the risk adjusted cost of capital percentage used to discount future cash flows. The risk adjusted cost of capital percentage is derived from an appropriate capital asset pricing model, which itself depends on a number of financial and economic variables which are established on the basis of those believed to be used by market participants. Because our fair value estimate involves judgment and is influenced by factors outside our control, it is reasonably possible such estimate could change. When management's judgment is that the anticipated cash flows have decreased and/or the cost of capital percentage has increased, the effect will be a lower estimate of fair value. If the fair value of the reporting unit is determined to be lower than the carrying amount, an impairment charge may be recorded and net income will be negatively impacted.

Impairment testing of goodwill requires that the fair value of each reporting unit be compared with its carrying amount, including goodwill. Reporting units were identified based upon an analysis of each of our individual operating segments. A reporting unit is defined as an operating segment or any distinct, separately identifiable component one level below an operating segment for which complete, discrete financial information is available that management regularly reviews. Goodwill was allocated to the carrying amount of each reporting unit based on its relative fair value. Movements of businesses across reporting units may result in a reallocation of goodwill.

We have established July 1 of each year as the date for conducting our annual goodwill impairment assessment. We continue to utilize a two-step approach to test our goodwill for impairment. The first step, used to identify potential impairment, involves comparing each reporting unit's fair value to its carrying amount, including goodwill. If the fair value of a reporting unit exceeds its carrying amount, including allocated goodwill, there is no indication of impairment and no further procedures are required. If the carrying amount including allocated goodwill of the reporting unit exceeds the unit's fair value, a second step is performed to quantify the impairment amount, if any. If the implied fair value of goodwill as determined using the same methodology as used in a business combination is less than the carrying amount of goodwill, an impairment charge is recorded for the excess. Any impairment charge recognized cannot exceed the amount of goodwill assigned to a reporting unit. Subsequent reversals of goodwill impairments are not permitted. During the third quarter of 2017, we completed our annual impairment test of goodwill and determined that the fair value of all of our reporting units exceeded their carrying amounts, with the fair value of each reporting unit being 137 percent or more of book value, including allocated goodwill.

Our goodwill impairment testing is highly sensitive to certain assumptions and estimates used as discussed above. We continue to perform periodic analyses of the risks and strategies of our business and product offerings. If a significant deterioration in economic and credit conditions, a change in the strategy or performance of our business or product offerings, or an increase in the capital requirements of our business occurs, interim impairment tests for reporting units could be required which may indicate that goodwill at one or more of our reporting units is impaired, in which case we would be required to recognize an impairment charge.

Valuation of Financial Instruments A significant portion of our financial assets and liabilities are carried at fair value. These include trading assets and liabilities, derivatives held for trading or used for hedging, securities available-for-sale and loans held for sale. Furthermore, we have elected to measure specific assets and liabilities at fair value under the fair value option, including certain commercial loans held for sale, certain securities purchased and sold under resale and repurchase agreements, structured deposits, structured notes, and certain own debt issuances. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where available, we use quoted prices to determine fair value. If quoted prices are not available, we base fair value on models using inputs that are either directly observable or are derived from and corroborated by market data.

Valuation Governance Framework - We have established a control framework to ensure fair values are either determined or validated by a function independent of the risk-taker. Controls over the valuation process are summarized in this MD&A under the caption "Fair Value."

Valuation of Major Classes of Assets and Liabilities - Fair value measurement accounting principles establish a fair value hierarchy structure that prioritizes the inputs to determine the fair value of an asset or liability (the "Fair Value Framework"). The Fair Value Framework establishes a three-tiered fair value hierarchy with Level 1 representing quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs are inputs that are observable for the identical asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are inactive, and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals. Level 3 inputs are unobservable inputs for the asset or liability and include situations where there is little, if any, market activity for the asset or liability. Classification within the fair value hierarchy is based on the lowest hierarchical level input that is significant to the fair value measurement. As such, the classification of a financial asset or liability within the fair value hierarchy is dynamic in that the asset or liability could be transferred to other hierarchy levels in each reporting period as a result of price discovery. We review and update our fair value hierarchy classifications quarterly. Changes from one quarter to the next related to the observability of

the inputs into a fair value measurement may result in a reclassification between hierarchy levels. Level 3 assets as a percentage of total assets measured at fair value were approximately 3.0 percent at December 31, 2017.

Imprecision in estimating unobservable market inputs can impact the amount of revenue, loss or other comprehensive income (loss) recorded for a particular financial instrument. While we believe our valuation methods are appropriate, the use of different methodologies or assumptions to determine the fair value of certain financial assets and liabilities could result in a different estimate of fair value at the reporting date. For a more detailed discussion of the determination of fair value for individual financial assets and liabilities carried at fair value see Note 26, "Fair Value Measurements," in the accompanying consolidated financial statements. The following is a description of the significant estimates used in the valuation of financial assets and liabilities for which quoted market prices and observable market parameters are not available.

- *Derivatives* - We manage groups of derivative instruments with offsetting market and credit risks. Accordingly, we measure the fair value of each group of derivative instruments based on the exit price of the group's net risk position. The fair value of a net risk position is determined using internal models that utilize multiple market inputs. The majority of the market inputs can be validated through market consensus data. For complex or long-dated derivative products where market data is not available, fair value is sensitive to the limitation of the valuation model (model risk), the liquidity of the product (liquidity risk) and the assumptions about inputs not obtainable through price discovery process (data uncertainty risk). Accordingly, we make valuation adjustments to capture the risks and uncertainties. Because of the interrelated nature, we do not separately make an explicit adjustment to the fair value for each of these risks. Instead, we apply a range of assumptions to the valuation input that we believe implicitly incorporates adjustments for liquidity, model and data uncertainty risks.

We also include a credit risk adjustment to reflect the credit risk associated with the net derivative positions. In estimating the credit valuation adjustment, we net the derivative positions by counterparties. The fair value for a net long credit risk position is adjusted for the counterparty's credit risk referred to as credit valuation adjustment (CVA) whereas the fair value for a net short credit risk position is adjusted for HUSI's own credit risk referred to as debit valuation adjustment (DVA). We calculate the credit risk adjustment by applying the probability of default of the counterparty to the expected exposure, and multiplying the result by the expected loss given default. We estimate the implied probability of default based on the credit spread of the specific counterparty observed in the credit default swap market. Where credit default spread of the counterparty is not available, we use the credit default spread of a specific proxy (e.g. the credit default swap spread of the counterparty's parent) or a proxy based on credit default swaps referencing to credit names of similar credit standing.

- *Valuation of Securities* - For the majority of our trading and available-for-sale securities, we obtain fair value for each security instrument from multiple independent pricing vendors ("IPV") and brokers, if available. We have established adequate controls in pricing vendor selection and fair value validation. The validation methods include but are not limited to comparisons among IPV prices for the same instrument, review and challenge of IPV valuation methodologies, inputs and assumptions, and the elapsed time between the date to which market data relates and the measurement date. For securities that are difficult to value, we use internal pricing models which estimate the fair value based on our assumptions in funding risk, default risk and loss upon default. We exercise significant judgment in estimating these assumptions and inputs to the valuation model. Nonetheless, we believe these model inputs reflect market participants' assumptions about risks and the risk premium required to compensate for undertaking risks. For certain non-recourse instruments, we use the fair value of the collateral as a proxy to the measurement.
- *Consumer loans Held for Sale* - Consumer loans held for sale are recorded at the lower of amortized cost or fair value. The fair value estimates of consumer loans held for sale are determined primarily using the discounted cash flow method using assumptions consistent with those which would be used by market participants in valuing such loans. Valuation inputs include estimates of prepayment rates, default rates, loss severities, collateral values and market rates of return. We also may hold discussions on value directly with potential investors. Where available, we measure residential mortgage whole loans held for sale based on transaction prices of loan portfolios of similar characteristics observed in the whole loan market. Adjustments are made to reflect differences in collateral location, loan-to-value ratio, FICO scores, vintage year, default rates, the completeness of the loan documentation and other risk characteristics.
- *Structured Notes and Deposits* - Structured notes and deposits are hybrid instruments containing embedded derivatives. The valuation of the hybrid instruments is predominantly driven by the derivative features embedded within the instruments and our own credit risk. Depending on the complexity of the embedded derivative, the same risk elements of valuation adjustments described in the derivative section above would also apply to hybrid instruments. In addition, cash flows for the funded notes and deposits are discounted at the relevant interest rates for the duration of the instrument adjusted for our own credit spreads. The credit spreads so applied are determined with reference to our own debt issuance rates observed in primary and secondary markets, internal funding rates and the structured note rates in recent executions.

Except for structured notes and deposits with embedded credit derivative features, the associated risks embedded in the hybrid instruments issued to customers are economically hedged with our affiliates through a freestanding derivative. As a result, HUSI is market risk neutral in substantially all of the structured notes and deposits.

- *Long-Term Debt (Own Debt Issuances)* - The fair value of own debt issuances is based on the observed price for the identical or similar instruments transacted in the secondary market. However, the secondary market could become inactive or price quotes could be stale or differ among market participants. In those circumstances, we use inputs to value the interest rate and the credit spread components of the debt. Changes in such estimates, and in particular our own credit spread estimates, could be volatile and markedly impact the total mark-to-market on debt designated at fair value. For example, a 10 percent change in the value of our debt designated at fair value would have resulted in a change to our reported mark-to-market of approximately \$1,289 million for the year ended December 31, 2017.

Because the fair value of certain financial assets and liabilities are significantly impacted by the use of estimates, the use of different assumptions can result in changes in the estimated fair value of those assets and liabilities, which can result in equity and earnings volatility as follows:

- Changes in the fair value of trading assets and liabilities (including derivatives held for trading) are recorded in current period earnings;
- Changes in the fair value of a derivative that has been designated and qualifies as a fair value hedge, along with the changes in the fair value of the hedged asset or liability (including losses or gains on firm commitments, if any), are recorded in current period earnings;
- Changes in the fair value of a derivative that has been designated and qualifies as a cash flow hedge are recorded in other comprehensive income (loss), net of tax, to the extent of its effectiveness, until earnings are impacted by the variability of cash flows from the hedged item. Any ineffectiveness is recognized in current period earnings;
- Changes in the fair value of securities available-for-sale are recorded in other comprehensive income (loss);
- Changes in the fair value of loans held for sale when their cost exceeds fair value are recorded in current period earnings; and
- Changes in the fair value of certain commercial loans held for sale, certain securities purchased and sold under resale and repurchase agreements, structured deposits, structured notes and long-term debt that we have elected to measure at fair value under the fair value option are recorded in current period earnings, which for periods prior to January 1, 2017, included the change in fair value of fair value option liabilities attributable to our own credit spread. Beginning January 1, 2017, the change in fair value of fair value option liabilities attributable to our own credit spread is recorded in other comprehensive income (loss).

Derivatives Held for Hedging Derivatives designated as qualified hedges are tested for hedge effectiveness. For these transactions, assessments are made at the inception of the hedge and on a recurring basis, whether the derivative used in the hedging transaction has been and is expected to continue to be highly effective in offsetting changes in fair values or cash flows of the hedged item. This assessment is conducted using statistical regression analysis.

If we determine as a result of this assessment that a derivative is no longer a highly effective hedge, hedge accounting is discontinued as of the quarter in which such determination was made. The assessment of the effectiveness of the derivatives used in hedging transactions is considered to be a "critical accounting estimate" due to the use of statistical regression analysis in making this determination. Inputs to statistical regression analysis require the use of estimates regarding the amount and timing of future cash flows which are susceptible to significant changes in future periods based on changes in market rates as well as the selection of a convention for the treatment of credit spreads in the analysis. Statistical regression analysis also involves the use of additional assumptions including the determination of the period over which the analysis should occur.

The outcome of the statistical regression analysis serves as the foundation for determining whether or not a derivative is highly effective as a hedging instrument. This can result in earnings volatility as the mark-to-market on derivatives which do not qualify as effective hedges and the ineffectiveness associated with qualifying hedges are recorded in current period earnings. For example, a 10 percent adverse change in the value of our derivatives that do not qualify as effective hedges would have reduced revenue by approximately \$242 million for the year ended December 31, 2017.

Deferred Tax Asset Valuation Allowance We recognize deferred tax assets and liabilities for the future tax consequences related to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for tax credits and State net operating losses. Our net deferred tax assets, including deferred tax liabilities, totaled \$1.5 billion and \$1.8 billion at December 31, 2017 and 2016, respectively. We evaluate our deferred tax assets for recoverability considering negative and positive evidence, including our historical financial performance, projections of future taxable income, future reversals of existing taxable temporary differences, tax planning strategies and any carryback availability. We are required to establish a valuation allowance for deferred tax assets and record a charge to earnings or equity if we determine, based on available evidence at the time the determination is made, that it is more likely than not that some portion or all of the deferred tax assets will not be realized. In evaluating the need for a valuation allowance, we estimate future taxable income based on management approved business plans. This process involves significant management judgment about assumptions that are subject to change from period to period. Because the recognition of deferred tax assets requires management to make significant judgments about future earnings,

the periods in which items will impact taxable income and the application of inherently complex tax laws, we have identified the assessment of deferred tax assets and the need for any related valuation allowance as a critical accounting estimate.

We are included in HSBC North America's consolidated U.S. Federal income tax return and in various combined State tax returns. We have entered into a tax allocation agreement with HSBC North America and its subsidiary entities which governs the current amount of taxes to be paid or received by the various entities and, therefore, we look at HSBC North America and its affiliates in reaching conclusions on recoverability. Based on our forecasts of future taxable income, we currently anticipate that our continuing operations will generate sufficient taxable income to allow us to realize our deferred tax assets.

The use of different assumptions of future earnings, the periods in which items will impact taxable income and the application of inherently complex tax laws can result in changes in the amounts of deferred tax items recognized, which can result in equity and earnings volatility because such changes are reported in current period earnings. Furthermore, if future events differ from our current forecasts, valuation allowances may need to be established or adjusted, which could have a material adverse effect on our results of operations, financial condition and capital position. We will continue to update our assumptions and forecasts of future taxable income and assess the need and adequacy of any valuation allowance.

Our interpretations of tax laws are subject to examination by the Internal Revenue Service and State taxing authorities. Resolution of disputes over interpretations of tax laws may result in us being assessed additional income taxes. We regularly review whether we may be assessed such additional income taxes and recognize liabilities for such potential future tax obligations as appropriate.

Additional detail on our assumptions with respect to the judgments made in evaluating the realizability of our deferred tax assets and on the components of our deferred tax assets and deferred tax liabilities at December 31, 2017 and 2016 can be found in Note 16, "Income Taxes," in the accompanying consolidated financial statements.

Contingent Liabilities Both we and certain of our subsidiaries are parties to various legal proceedings resulting from ordinary business activities relating to our current and/or former operations. These actions include assertions concerning violations of laws and/or unfair treatment of consumers. We have also been subject to various governmental and regulatory proceedings.

We estimate and provide for potential losses that may arise out of litigation and regulatory proceedings to the extent that such losses are probable and can be reasonably estimated. Significant judgment is required in making these estimates and our final liabilities may ultimately be materially different from those estimates. Our total estimated liability in respect of litigation and regulatory proceedings is determined on a case-by-case basis and represents an estimate of probable losses after considering, among other factors, the progress of each case or proceeding, our experience and the experience of others in similar cases or proceedings and the opinions and views of legal counsel.

Litigation and regulatory exposure is a critical accounting estimate because it represents a key area of judgment and is subject to uncertainty and certain factors outside of our control. Due to the inherent uncertainties and other factors involved in such matters, we cannot be certain that we will ultimately prevail in each instance. Such uncertainties impact our ability to determine whether it is probable that a liability exists and whether the amount can be reasonably estimated. Also, as the ultimate resolution of these proceedings is influenced by factors that are outside of our control, it is reasonably possible our estimated liability under these proceedings may change. We will continue to update our accruals for these legal, governmental and regulatory proceedings as facts and circumstances change. For further details, see Note 27, "Litigation and Regulatory Matters," in the accompanying consolidated financial statements.

Balance Sheet Review

We utilize deposits and borrowings from various sources to provide liquidity, fund our balance sheet, meet cash and capital needs, and fund investments in subsidiaries. The following table provides balance sheet totals at December 31, 2017 and increases (decreases) since December 31, 2016:

	December 31, 2017	Increase (Decrease) From December 31, 2016	
		Amount	%
(dollars are in millions)			
Period end assets:			
Short-term investments	\$ 44,890	\$ (6,606)	(12.8)%
Loans, net	71,882	(976)	(1.3)
Loans held for sale	715	(1,094)	(60.5)
Trading assets	16,150	(700)	(4.2)
Securities	44,677	(5,042)	(10.1)
All other assets	8,921	352	4.1
	<u>\$ 187,235</u>	<u>\$ (14,066)</u>	<u>(7.0)%</u>
Period end liabilities and equity:			
Total deposits	\$ 118,702	\$ (10,546)	(8.2)%
Trading liabilities	4,879	(29)	(.6)
Short-term borrowings	4,650	(451)	(8.8)
Long-term debt	34,966	(2,773)	(7.3)
Interest, taxes and other liabilities	3,944	(6)	(.2)
Total equity	20,094	(261)	(1.3)
	<u>\$ 187,235</u>	<u>\$ (14,066)</u>	<u>(7.0)%</u>

Short-Term Investments Short-term investments include cash and due from banks, interest bearing deposits with banks and federal funds sold and securities purchased under agreements to resell. Balances may fluctuate from period to period depending upon our liquidity position at the time and our strategy for deploying liquidity. Short-term investments decreased compared with December 31, 2016 largely reflecting the impact of funding an overnight loan to an affiliate, as the wire process from the affiliate to settle daily activity failed. This loan was repaid in early January 2018.

Loans, Net The following table summarizes our loan balances at December 31, 2017 and increases (decreases) since December 31, 2016:

	December 31, 2017	Increase (Decrease) From December 31, 2016	
		Amount	%
(dollars are in millions)			
Commercial loans:			
Real estate, including construction	\$ 10,533	\$ (357)	(3.3)%
Business and corporate banking	12,504	(1,576)	(11.2)
Global banking ⁽¹⁾⁽²⁾	20,088	(3,393)	(14.4)
Other commercial ⁽²⁾	9,910	4,145	71.9
Total commercial	<u>53,035</u>	<u>(1,181)</u>	<u>(2.2)</u>
Consumer loans:			
Residential mortgages	17,273	92	.5
Home equity mortgages	1,191	(217)	(15.4)
Credit cards	721	33	4.8
Other consumer	343	(39)	(10.2)
Total consumer	<u>19,528</u>	<u>(131)</u>	<u>(.7)</u>
Total loans	<u>72,563</u>	<u>(1,312)</u>	<u>(1.8)</u>
Allowance for credit losses	681	(336)	(33.0)
Loans, net	<u>\$ 71,882</u>	<u>\$ (976)</u>	<u>(1.3)%</u>

⁽¹⁾ Represents large multinational firms including globally focused U.S. corporate and financial institutions, U.S. dollar lending to multinational banking clients managed by HSBC on a global basis and complex large business clients supported by GB&M relationship managers.

⁽²⁾ During 2017, in conjunction with the creation of the new Corporate Center segment as discussed further in Note 22, "Business Segments," in the accompanying consolidated financial statements, we reclassified loans to HSBC affiliates from global banking to other commercial and revised prior periods to conform with the current year presentation. As a result, other commercial includes loans to HSBC affiliates which totaled \$6,750 million and \$3,274 million at December 31, 2017 and 2016, respectively.

Commercial loans at December 31, 2017 reflects a \$5.0 billion overnight loan to an affiliate as discussed above. Excluding this item, commercial loans declined \$6.2 billion compared with December 31, 2016 due to paydowns and maturities exceeding new loan originations as we continue to focus efforts on improving returns as well as lower loans to affiliates driven by the prepayment of a \$2.5 billion credit agreement by HSBC Finance during the first quarter of 2017. The decline in commercial non-affiliate loans was primarily in the energy, real estate, materials, health care and pharmaceutical industries.

Consumer loans decreased slightly compared with December 31, 2016 driven by a continued decline in home equity mortgages due to net paydowns as our focus continues to shift towards residential mortgage loans and, to a lesser extent, lower other consumer loans reflecting paydowns. These decreases were partially offset by an increase in residential mortgage loans as we continue to target new residential mortgage loan originations towards our Premier and Advance customer relationships as well as higher credit card receivables reflecting growth in customer activity driven by new product promotions.

The following table presents loan-to-value ("LTV") ratios for our residential mortgage loan portfolio, excluding mortgage loans held for sale:

	LTV Ratios ⁽¹⁾⁽²⁾			
	December 31, 2017		December 31, 2016	
	First Lien	Second Lien	First Lien	Second Lien
LTV < 80%	97.6%	89.8%	96.8%	83.6%
80% ≤ LTV < 90%	1.6	6.6	1.9	9.7
90% ≤ LTV < 100% .....	.5	2.6	.8	4.8
LTV ≥ 100% .....	.3	1.0	.5	1.9
Average LTV for portfolio	51.0	52.4	52.8	56.4

- (1) LTVs for first liens are calculated using the loan balance as of the reporting date. LTVs for second liens are calculated using the loan balance as of the reporting date plus the senior lien amount at origination. Current estimated property values are derived from the property's appraised value at the time of loan origination updated by the change in the Federal Housing Finance Agency's house pricing index ("HPI") at either a Core Based Statistical Area or state level. The estimated value of the homes could differ from actual fair values due to changes in condition of the underlying property, variations in housing price changes within metropolitan statistical areas and other factors. As a result, actual property values associated with loans that end in foreclosure may be significantly lower than the estimates used for purposes of this disclosure.
- (2) Current estimated property values are calculated using the most current HPIs available and applied on an individual loan basis, which results in an approximate three month delay in the production of reportable statistics. Therefore, the information in the table above reflects current estimated property values using HPIs at September 30, 2017 and 2016, respectively.

Loans Held for Sale The following table summarizes loans held for sale at December 31, 2017 and increases (decreases) since December 31, 2016:

	December 31, 2017	Increase (Decrease) From December 31, 2016	
		Amount	%
(dollars are in millions)			
Commercial loans:			
Real estate, including construction	\$ 115	\$ 98	*
Global banking	533	(294)	(35.6)
Total commercial.....	648	(196)	(23.2)
Consumer loans:			
Residential mortgages	6	(884)	(99.3)
Home equity mortgages	—	(4)	(100.0)
Other consumer	61	(10)	(14.1)
Total consumer	67	(898)	(93.1)
Total loans held for sale.....	\$ 715	\$ (1,094)	(60.5)%

* Not meaningful.

Commercial loans held for sale decreased compared with December 31, 2016. Commercial loans held for sale primarily consists of certain global banking loans that we have elected to designate under the fair value option which include loans that we originate in connection with our participation in a number of syndicated credit facilities with the intent of selling them to unaffiliated third parties as well as loans that we purchase from the secondary market and hold as hedges against our exposure to certain total return swaps. The fair value of these loans totaled \$471 million and \$725 million at December 31, 2017 and 2016, respectively. Balances will fluctuate from period to period depending on the volume and level of activity.

We also originate loans in commercial real estate with the intention of selling them to third parties which totaled \$115 million and \$17 million at December 31, 2017 and 2016, respectively. Balances will fluctuate from period to period depending on the volume and level of activity. Commercial loans held for sale also includes certain loans that we no longer intend to hold for investment and transferred to held for sale which totaled \$62 million and \$102 million at December 31, 2017 and 2016, respectively. During 2017, we reversed \$5 million of the lower of amortized cost or fair value adjustment previously recorded on commercial loans held for sale as a component of other income (loss) in the consolidated statement of income (loss) as a result of an increase in fair value due to improved pricing.

Consumer loans held for sale decreased compared with December 31, 2016. During 2017, we completed the sale of the portfolio of residential mortgage loans that we previously purchased from HSBC Finance and transferred to held for sale during 2016 to third parties. These residential mortgage loans had an unpaid principal balance of \$581 million (aggregate carrying value of \$536 million) at the time of sale and we recognized a gain on sale of approximately \$50 million, including transaction costs. During 2017, we reversed \$1 million of the lower of amortized cost or fair value adjustment previously recorded on this portfolio of loans as a component of other income (loss) in the consolidated statement of income (loss) as a result of an increase in fair value due to improved pricing.

In addition to the residential mortgage loans discussed above, in March 2017 we completed the sale of certain residential mortgage loans which previously had been written down to the lower of amortized cost or fair value of the collateral less cost to sell (generally 180 days past due) in accordance with our existing charge-off policies and were transferred to held for sale during 2016 to a third party. These residential mortgage loans had an unpaid principal balance of \$364 million (aggregate carrying value of \$276 million) at the time of sale and we recognized a loss on sale of approximately \$2 million, largely reflecting transaction costs. During the first quarter of 2017, we reversed \$5 million of the lower of amortized cost or fair value adjustment previously recorded on these

loans as a component of other income (loss) in the consolidated statement of income (loss) as a result of an increase in fair value due to improved pricing.

During 2017, we also continued to sell agency eligible residential mortgage loan originations on a servicing released basis directly to PHH Mortgage. Gains and losses from the sale of these residential mortgage loans are reflected as a component of residential mortgage banking revenue (expense) in the accompanying consolidated statement of income (loss). Beginning with January 2018 applications, PHH Mortgage is no longer obligated to purchase these loans from us directly upon origination and instead we now market these loans for sale to other third parties. Residential mortgage loans held for sale also includes subprime residential mortgage loans with a fair value of \$2 million and \$3 million at December 31, 2017 and 2016, respectively, which were previously acquired from unaffiliated third parties and from HSBC Finance with the intent of securitizing or selling the loans to third parties.

Other consumer loans held for sale reflects student loans which we no longer originate.

Excluding the commercial loans designated under fair value option discussed above, loans held for sale are recorded at the lower of amortized cost or fair value, with adjustments to fair value being recorded as a valuation allowance through other revenues. The valuation allowance on consumer loans held for sale was \$5 million and \$57 million at December 31, 2017 and 2016, respectively. The valuation allowance on commercial loans held for sale was \$10 million and \$55 million at December 31, 2017 and 2016, respectively.

Trading Assets and Liabilities The following table summarizes trading assets and liabilities at December 31, 2017 and increases (decreases) since December 31, 2016:

	December 31, 2017	Increase (Decrease) From December 31, 2016	
		Amount	%
(dollars are in millions)			
Trading assets:			
Securities ⁽¹⁾	\$ 10,151	\$ (516)	(4.8)%
Precious metals	2,274	502	28.3
Derivatives, net ⁽²⁾	3,725	(686)	(15.6)
	<u>\$ 16,150</u>	<u>\$ (700)</u>	<u>(4.2)%</u>
Trading liabilities:			
Securities sold, not yet purchased	\$ 1,722	\$ 662	62.5 %
Payables for precious metals	524	462	*
Derivatives, net ⁽³⁾	2,633	(1,153)	(30.5)
	<u>\$ 4,879</u>	<u>\$ (29)</u>	<u>(0.6)%</u>

* Not meaningful.

⁽¹⁾ See Note 3, "Trading Assets and Liabilities," in the accompanying consolidated financial statements for a breakout of trading securities by category.

⁽²⁾ At December 31, 2017 and 2016, the fair value of derivatives included in trading assets has been reduced by \$3,423 million and \$4,462 million, respectively, relating to amounts recognized for the obligation to return cash collateral received under master netting agreements with derivative counterparties.

⁽³⁾ At December 31, 2017 and 2016, the fair value of derivatives included in trading liabilities has been reduced by \$3,680 million and \$3,826 million, respectively, relating to amounts recognized for the right to reclaim cash collateral paid under master netting agreements with derivative counterparties.

Securities balances decreased compared with December 31, 2016 due primarily to a decrease in corporate bond positions reflecting the unwind of one of our unconsolidated variable interest entities ("VIEs") which resulted in the termination of our investment in the VIE along with the related derivatives during the second quarter of 2017. At the time of unwind, our investment in the VIE had a total carrying value of \$1,081 million. This decrease was partially offset by an increase in foreign sovereign positions. Securities positions are held as economic hedges of interest rate and credit derivative products issued to clients of domestic and emerging markets. Balances of securities sold, not yet purchased increased compared with December 31, 2016 driven by an increase in short U.S. Treasury positions related to economic hedges of derivatives in the interest rate trading portfolio.

Precious metals trading assets increased compared with December 31, 2016 due to increases in our own silver and palladium inventory positions held as hedges for client activity as well as higher spot prices. Payables for precious metals were higher reflecting an increase in borrowing of gold inventory to support client activity levels. Precious metal positions may not represent our net underlying exposure as we may use derivatives contracts to reduce our risk associated with these positions, the fair value of which would appear in derivatives in the table above.

Derivative asset and liability balances both decreased compared with December 31, 2016 mainly from market movements as well as the termination of derivatives associated with the unwind of an unconsolidated VIE as discussed above. Market movements resulted in lower valuations of interest rate, foreign exchange, credit and commodity derivatives, partially offset by higher valuations of equity derivatives.

Securities Securities include securities available-for-sale and securities held-to-maturity. Securities balances decreased compared with December 31, 2016 reflecting net sales of U.S. Treasury and U.S. Government sponsored mortgage-backed securities, partially offset by net purchases of U.S. Government agency mortgage-backed securities as part of a continuing strategy to maximize returns while balancing the securities portfolio for risk management purposes based on the current interest rate environment and liquidity needs.

See Note 4, "Securities," in the accompanying consolidated financial statements for information regarding our securities portfolios at December 31, 2017 and 2016. At December 31, 2015, our securities available-for-sale portfolio, which totaled \$35,773 million, consisted of \$34,545 million of U.S. Treasury, U.S. Government agency and sponsored enterprise obligations, \$348 million of U.S. state and political subdivision obligations and \$880 million of other available-for-sale securities and our securities held-to-maturity portfolio, which totaled \$14,024 million, consisted of \$13,998 million of U.S. Government agency and sponsored enterprise obligations, \$19 million of U.S. state and political subdivision obligations and \$7 million of other held-to-maturity securities.

All Other Assets All other assets includes, among other items, properties and equipment, net and goodwill. All other assets increased compared with December 31, 2016 largely due to higher outstanding settlement balances related to security sales, higher derivative balances associated with hedging activities and higher margin requirements related to futures trading, partially offset by lower tax assets.

Deposits The following table summarizes deposit balances by major depositor categories at December 31, 2017 and increases (decreases) since December 31, 2016:

	December 31, 2017	Increase (Decrease) From December 31, 2016	
		Amount	%
(dollars are in millions)			
Individuals, partnerships and corporations.....	\$ 104,169	\$ (6,121)	(5.5)%
Domestic and foreign banks	10,871	(6,701)	(38.1)
U.S. government and states and political subdivisions	623	26	4.4
Foreign governments and official institutions	2,366	1,577	*
Deposits held for sale ⁽¹⁾	673	673	*
Total deposits.....	<u>\$ 118,702</u>	<u>\$ (10,546)</u>	<u>(8.2)%</u>
Total core deposits ⁽²⁾	<u>\$ 98,500</u>	<u>\$ (171)</u>	<u>(0.2)%</u>

* Not meaningful.

⁽¹⁾ Represents deposits associated with the sale of a portion of our Private Banking business. No lower of cost or fair value adjustment was required as a result of the transfer to held for sale.

⁽²⁾ Core deposits, as calculated in accordance with Federal Financial Institutions Examination Council ("FFIEC") guidelines, generally include all domestic demand, money market and other savings accounts, as well as time deposits with balances not exceeding \$250,000.

Total deposits decreased compared with December 31, 2016 due primarily to lower deposits from affiliates and, to a lesser extent, lower deposits in Private Banking due in part to the impact of entering into the client referral agreement with UBS as well as a decline in wholesale time deposits. These decreases were partially offset by higher commercial savings and demand deposits reflecting increased business activity and growth in deposits from individuals driven by promotional rates offered to our retail customers on savings accounts and certificates of deposit. The strategy for our core retail banking business includes building relationship deposits across multiple markets, channels and segments. This strategy involves various initiatives, such as:

- HSBC Premier, a comprehensive banking and wealth management proposition for the internationally minded mass affluent customer with a dedicated premier relationship manager. Total Premier deposits increased to \$25,726 million at December 31, 2017 as compared with \$24,351 million at December 31, 2016; and
- Expanding our existing customer relationships by needs-based sales of wealth, banking and mortgage products.

We continue to actively manage our balance sheet to increase profitability while maintaining adequate liquidity.

Short-Term Borrowings Short-term borrowings were lower compared with December 31, 2016 due primarily to a decrease in securities sold under repurchase agreements driven by higher netting of outstanding positions.

Long-Term Debt Long-term debt decreased compared with December 31, 2016 as the impact of debt issuances and fair value movements on fair value option debt were more than offset by debt retirements and lower borrowings from the Federal Home Loan Bank of New York ("FHLB"). Debt issuances during 2017 totaled \$5,158 million, of which \$331 million was issued by HSBC Bank USA.

Incremental issuances from our shelf registration statement with the SEC totaled \$4,827 million of senior structured notes during 2017. Total long-term debt outstanding under this shelf was \$21,387 million and \$22,235 million at December 31, 2017 and 2016, respectively.

Incremental issuances from the HSBC Bank USA Global Bank Note Program totaled \$331 million during 2017. Total debt outstanding under this program was \$4,117 million and \$4,443 million at December 31, 2017 and 2016, respectively. We anticipate using the Global Bank Note Program more in the future as part of our efforts designed to minimize overall funding costs while accessing diverse funding channels.

Borrowings from the FHLB totaled \$3,100 million and \$5,700 million at December 31, 2017 and 2016, respectively.

Interest, Taxes and Other Liabilities Interest, taxes and other liabilities was flat compared with December 31, 2016 as increases in tax liabilities, accrued interest payable and deferred income were offset by lower margin requirements related to futures trading and lower derivative balances associated with hedging activities.

Results of Operations

Net Interest Income Net interest income is the total interest income on earning assets less the total interest expense on deposits and borrowed funds. In the discussion that follows, interest income and rates are presented and analyzed on a taxable equivalent basis to permit comparisons of yields on tax-exempt and taxable assets. An analysis of consolidated average balances and interest rates on a taxable equivalent basis is presented in this MD&A under the caption "Consolidated Average Balances and Interest Rates."

The significant components of net interest margin are summarized in the following table:

Year Ended December 31,	2017	2017 Compared to 2016 Increase (Decrease)		2016	2016 Compared to 2015 Increase (Decrease)		2015
		Volume	Rate		Volume	Rate	
(dollars are in millions)							
Interest income:							
Short-term investments	\$ 669	\$ 10	\$ 294	\$ 365	\$ 26	\$ 231	\$ 108
Trading securities	209	(20)	(33)	262	(10)	(68)	340
Securities	952	(96)	91	957	66	(19)	910
Commercial loans.....	1,511	(299)	273	1,537	(41)	212	1,366
Consumer loans.....	730	(31)	14	747	18	(1)	730
Other.....	52	11	(2)	43	(7)	(9)	59
Total interest income.....	<u>4,123</u>	<u>(425)</u>	<u>637</u>	<u>3,911</u>	<u>52</u>	<u>346</u>	<u>3,513</u>
Interest expense:							
Deposits.....	703	(21)	256	468	25	183	260
Short-term borrowings	124	(6)	51	79	(14)	47	46
Long-term debt.....	998	23	111	864	107	48	709
Tax liabilities and other	25	9	1	15	4	(5)	16
Total interest expense.....	<u>1,850</u>	<u>5</u>	<u>419</u>	<u>1,426</u>	<u>122</u>	<u>273</u>	<u>1,031</u>
Net interest income – taxable equivalent basis	<u>2,273</u>	<u>\$ (430)</u>	<u>\$ 218</u>	<u>2,485</u>	<u>\$ (70)</u>	<u>\$ 73</u>	<u>2,482</u>
Less: tax equivalent adjustment	—			1			12
Net interest income – non taxable equivalent basis	<u>\$2,273</u>			<u>\$2,484</u>			<u>\$2,470</u>
Yield on total interest earning assets.....	<u>2.32%</u>			2.02%			1.91%
Cost of total interest bearing liabilities	<u>1.31</u>			.99			.76
Interest rate spread	<u>1.01</u>			1.03			1.15
Benefit from net non-interest paying funds ⁽¹⁾	<u>.27</u>			.25			.20
Net interest margin on average earning assets.....	<u>1.28%</u>			1.28%			1.35%

⁽¹⁾ Represents the benefit associated with interest earning assets in excess of interest bearing liabilities. Increased percentages reflect growth in this excess, while decreased percentages reflect a reduction in this excess.

During 2017, net interest income decreased as the favorable impact of higher short-term market rates was more than offset by lower interest income from the impact of lower average loan balances, higher interest expense from long-term debt and retail deposits as well as lower interest income from trading securities. In 2016, net interest income increased slightly as the favorable impact of higher short-term market rates and higher interest income from securities was largely offset by higher interest expense from wholesale time deposits and long-term debt as well as lower interest income from trading securities and the impact of lower average commercial loan balances. Higher short-term market rates during both 2017 and 2016 resulted in higher interest income from variable rate assets, including short-term investments and variable rate loans, partially offset by higher wholesale deposit and short-term borrowing interest expense.

Short-term investments Higher interest income during 2017 and 2016 was due to higher yields earned on these investments and, to a lesser extent, higher average balances. The increase in interest income in 2016 also reflects a shift in mix towards higher yielding securities purchased under agreements to resell.

Trading securities Interest income was lower during 2017 due to decreases in higher yielding corporate bond and municipal bond positions. In 2016, interest income declined driven primarily by increased investments in lower yielding U.S. Treasury securities and, to a lesser extent, lower average balances overall as the increase in U.S. Treasury positions was more than offset by decreases in municipal bonds and foreign sovereign positions. Securities in the trading portfolio are managed as economic hedges against the derivative activity of our clients. As a result, interest income associated with trading securities in all periods was partially offset within trading revenue by the performance of the associated derivatives as discussed further below.

Securities Interest income decreased slightly during 2017 as the impact of lower average balances was largely offset by higher yields. Lower average balances during 2017 reflects net sales of U.S. Treasury and U.S. Government sponsored mortgage-backed securities, partially offset by net purchases of U.S. Government agency mortgage-backed securities. In 2016, interest income was higher due to higher average balances, partially offset by lower yields. Higher average balances in 2016 reflects net purchases of U.S. Treasury and U.S. Government sponsored mortgage-backed securities, partially offset by net sales and paydowns of U.S. Government agency mortgage-backed securities.

Commercial loans Interest income was lower during 2017 as the impact of higher yields driven by rate increases on variable rate products was more than offset by lower average balances. In 2016, interest income increased due to higher yields driven by rate increases on variable rate products, partially offset by lower average balances. Lower average balances in both 2017 and 2016 were due to paydowns, maturities and loan sales exceeding new loan originations as we continue to focus efforts on improving returns.

Consumer loans Interest income decreased during 2017 due primarily to lower average balances driven by loan sales and net paydowns, partially offset by higher yields. In 2016, interest income was higher due to higher average balances driven by growth in residential mortgages.

Other Higher interest income during 2017 largely reflects higher average balances in cash collateral posted. In 2016, interest income was lower reflecting a lower dividend rate earned on Federal Reserve Bank stock and lower average balances due to a decline in cash collateral posted.

Deposits Interest expense increased during 2017 due primarily to higher rates paid reflecting the impact of rate increases on wholesale deposits and promotional rates offered to our retail customers on savings accounts and certificates of deposits, partially offset by lower average interest-bearing deposit balances. In 2016, interest expense increased due primarily to higher rates paid reflecting the impact of rate increases on wholesale deposits and foreign bank deposits, higher average interest-bearing deposit balances overall and, to a lesser extent, higher rates paid on savings accounts driven by promotional offers to our retail customers.

Short-term borrowings Higher interest expense during 2017 and 2016 was driven by higher rates paid on these borrowings, partially offset by lower average borrowings.

Long-term debt Interest expense was higher during 2017 due primarily to higher rates paid reflecting the impact of rate increases on variable rate borrowings and new issuances and, to a lesser extent, higher average borrowings. In 2016, interest expense was higher due to higher average borrowings and higher rates paid reflecting the impact of rate increases on variable rate borrowings and new issuances.

Tax liabilities and other Interest expense increased during 2017 driven by higher average borrowings in securities sold, not yet repurchased. In 2016, interest expense was relatively flat.

Provision for Credit Losses The following table summarizes the provision for credit losses associated with our various loan portfolios:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Commercial:			
Real estate, including construction	\$ (3)	\$ —	\$ 2
Business and corporate banking.....	(59)	10	215
Global banking.....	(116)	348	136
Other commercial.....	6	(6)	(2)
Total commercial	<u>(172)</u>	<u>352</u>	<u>351</u>
Consumer:			
Residential mortgages.....	(7)	(9)	(15)
Home equity mortgages.....	(8)	(1)	(4)
Credit cards.....	22	26	20
Other consumer.....	—	4	9
Total consumer.....	<u>7</u>	<u>20</u>	<u>10</u>
Total provision for credit losses.....	<u>\$ (165)</u>	<u>\$ 372</u>	<u>\$ 361</u>
Provision as a percentage of average loans	<u>(.2)%</u>	<u>.5%</u>	<u>.4%</u>

Our provision for credit losses decreased \$537 million during 2017 driven by a lower provision for credit losses in our commercial loan portfolio and, to a lesser extent, a lower provision for credit losses in our consumer loan portfolio. In 2016, our provision for credit losses increased \$11 million due to a higher provision for credit losses in our consumer loan portfolio while the provision for credit losses in our commercial loan portfolio was flat. During 2017, we decreased our allowance for credit losses as the provision for credit losses was lower than net charge-offs by \$336 million. In 2016 and 2015, we increased our allowance for credit losses as the provision for credit losses was higher than net charge-offs by \$105 million and \$232 million, respectively.

The provision for credit losses in our commercial loan portfolio decreased \$524 million during 2017 reflecting releases in credit loss reserves compared with loss provisions in 2016. The releases of loss reserves in 2017 reflect improvements in the credit quality of our portfolio driven by paydowns, sales and maturities exceeding new loan originations as we continue to focus efforts on improving returns as well as improvements in credit conditions associated with certain client relationships, including a single mining client relationship. The loss provisions in 2016 were driven primarily by the deterioration of the single mining client relationship as well as other downgrades reflecting weakness in the financial condition of certain clients at that time, including oil and gas, mining and other industry loan exposures. In 2016, the provision for credit losses in our commercial loan portfolio was flat compared with 2015 as lower provisions associated with oil and gas industry loan exposures were offset by higher provisions associated with the deterioration of the single mining customer relationship and, to a lesser extent, other downgrades reflecting weaknesses in the financial condition of certain customer relationships, including mining and other industry loan exposures.

As previously discussed, during 2016 we transferred certain mortgages to held for sale and, as a result, recorded a lower of cost or fair value adjustment of \$11 million related to credit factors as a component of the provision for credit losses. Excluding this item, the provision for credit losses on residential mortgages and home equity mortgages increased \$6 million during 2017 and decreased \$2 million during 2016. While we experienced releases in the provision for credit losses in both 2017 and 2016, reflecting the positive impacts of improvements in economic and credit conditions and the continued origination of higher quality Premier mortgages, these impacts were more pronounced in 2016. The increase in 2017 also reflects the non-recurrence of a reserve release recorded in 2016 related to residential mortgages serviced by others as a result of updated information regarding the underlying loan characteristics reported by the servicers, partially offset by a lower provision for credit losses on home equity mortgages reflecting lower outstanding balances. In 2016, the decrease was driven by improvements in economic and credit conditions and the origination of higher quality Premier mortgages.

The provision for credit losses associated with credit cards and other consumer loans decreased \$8 million during 2017 due to continued improvements in economic and credit conditions. In 2016, the provision for credit losses associated with credit cards and other consumer loans was relatively flat as an increase in the provision for credit losses on credit cards was largely offset by the non-recurrence of a lower of cost or fair value adjustment recorded in 2015 associated with the transfer of a small student loan portfolio to held for sale.

Our methodology and accounting policies related to the allowance for credit losses are presented under the caption "Critical Accounting Policies and Estimates" in this MD&A and in Note 2, "Summary of Significant Accounting Policies and New

Accounting Pronouncements," in the accompanying consolidated financial statements. See "Credit Quality" in this MD&A for additional discussion on the allowance for credit losses associated with our various loan portfolios.

Other Revenues The following table summarizes the components of other revenues:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Credit card fees.....	\$ 46	\$ 52	\$ 43
Trust and investment management fees.....	156	153	170
Other fees and commissions.....	669	721	743
Trading revenue.....	354	227	74
Other securities gains, net.....	52	70	48
Servicing and other fees from HSBC affiliates ⁽¹⁾	348	289	276
Residential mortgage banking revenue (expense).....	(6)	16	62
Gain (loss) on instruments designated at fair value and related derivatives.....	43	(71)	264
Other income (loss):			
Valuation of loans held for sale.....	18	(83)	(14)
Insurance.....	14	20	21
Gains on sales of Visa Inc. Class B common shares to a third party.....	312	71	—
Miscellaneous income (loss).....	(4)	(61)	48
Total other income (loss).....	<u>340</u>	<u>(53)</u>	<u>55</u>
Total other revenues.....	<u>\$ 2,002</u>	<u>\$ 1,404</u>	<u>\$ 1,735</u>

⁽¹⁾ In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. As a result, we have reclassified prior year amounts in order to conform to the current year presentation. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information.

Credit card fees Credit card fees were lower during 2017 due to higher cost estimates associated with our credit card rewards program, partially offset by higher interchange fees. In 2016, credit card fees were higher due primarily to lower cost estimates associated with our credit card reward program.

Trust and investment management fees Trust and investment management fees increased slightly during 2017 reflecting higher asset management fees from fixed income funds due to improved performance. In 2016, trust and investment management fees decreased driven by a decline in assets under management in Private Banking as well as lower asset management fees from fixed income funds reflecting a shift in product mix.

Other fees and commissions The following table summarizes the components of other fees and commissions:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Account services.....	\$ 276	\$ 276	\$ 286
Credit facilities.....	310	349	347
Custodial fees.....	22	21	22
Other fees.....	61	75	88
Total other fees and commissions.....	<u>\$ 669</u>	<u>\$ 721</u>	<u>\$ 743</u>

Other fees and commissions decreased during 2017 due to lower credit facilities fees and other fee based income. In 2016, other fees and commissions were lower due to lower account service fees and other fee based income. The decreases during both 2017 and 2016 reflect the impact of lower commercial lending activity compared with the respective prior year periods.

Trading revenue Trading revenue is generated by participation in the foreign exchange, rates, credit, equities and precious metals markets. The following table presents trading revenue by business activity. Not included in the table below is the impact of net interest income related to trading securities which is an integral part of trading activities' overall performance. Net interest income related to trading activities is recorded in net interest income in the consolidated statement of income (loss). Trading revenues related to the mortgage banking business are included in residential mortgage banking revenue (expense).

Year Ended December 31,	2017	2016	2015
	(in millions)		
Business Activities:			
Derivatives ⁽¹⁾	\$ (72)	\$ (35)	\$ (172)
Balance Sheet Management.....	24	(27)	(18)
Foreign Exchange	190	210	213
Precious Metals.....	212	90	55
Global Banking.....	(4)	(11)	(2)
Other trading	4	—	(2)
Total trading revenue	<u>\$ 354</u>	<u>\$ 227</u>	<u>\$ 74</u>

⁽¹⁾ Includes derivative contracts related to credit default and cross-currency swaps, equities, interest rates and structured credit products.

2017 compared with 2016 Trading revenue increased during 2017 largely driven by the improved performance of Precious Metals and Balance Sheet Management, partially offset by lower revenue from Derivatives and Foreign Exchange.

During the second quarter of 2017, one of our unconsolidated VIEs was unwound and our investment in the VIE along with the related derivatives were terminated resulting in a gain of approximately \$11 million, largely reflecting a make-whole payment provided by a third party guarantor of the investment. Excluding this item, trading revenue from Derivatives remained lower during 2017 primarily due to lower new deal activity on interest rate swaps, lower gains from valuation adjustments on our legacy structured credit products and unfavorable debit valuation adjustments associated with movements in our own credit spreads. These decreases were partially offset by the improved performance of emerging markets products. Derivatives trading revenue in all periods does not reflect associated net interest income as certain derivatives, such as total return swaps, were economically hedged by holding the underlying interest bearing referenced assets.

Trading revenue related to Balance Sheet Management activities increased due to the improved performance of economic hedge positions used to manage interest rate risk.

Foreign Exchange trading revenue decreased during 2017 driven by reduced client trading activity.

Precious Metals trading revenue increased during 2017 from increased client trading activity reflecting improved investor demand for this asset class and the impact of a redeployment of surplus liquidity in the short term to Precious Metals in 2017.

Global Banking trading revenue improved during 2017 due primarily to a lower valuation reserve on credit default swap economic hedge positions.

2016 Compared with 2015 Trading revenue increased during 2016 largely driven by the improved performance of Derivatives and Precious Metals, partially offset by lower revenue from Balance Sheet Management, Global Banking and Foreign Exchange.

Trading revenue from Derivatives improved during 2016 from higher new deal activity in interest rate swaps, higher valuations of legacy structured credit exposures and the improved performance of emerging markets products. These improvements were partially offset by unfavorable debit valuation adjustments associated with movements in our own credit spreads.

Trading revenue related to Balance Sheet Management activities decreased during 2016 due to the performance of economic hedge positions used to manage interest rate risk.

Foreign Exchange trading revenue declined during 2016 from reduced client trade activity.

Precious Metals trading revenue increased during 2016 due to increased client trading activity, primarily financing related trading activity.

Global Banking trading revenue decreased during 2016 reflecting a higher valuation reserve on credit default swap economic hedge positions.

Other securities gains, net We maintain securities portfolios as part of our balance sheet diversification and risk management strategies. During 2017, 2016 and 2015, we sold \$14,196 million, \$19,462 million and \$15,149 million, respectively, of primarily U.S. Treasury and U.S. Government agency mortgage-backed securities as part of a continuing strategy to maximize returns while balancing the securities portfolio for risk management purposes based on the current interest rate environment and liquidity needs.

Other securities gains, net decreased during 2017 due primarily to lower gains from the sales of U.S. Treasury and U.S. Government agency mortgage-backed securities associated with rebalancing the portfolio for risk management purposes and the non-recurrence of gains from the sale of certain longer-term state municipal bonds as we reduced these positions in 2016. In 2016, other securities gains, net increased driven by the non-recurrence of losses associated with the sale of certain foreign debt securities during 2015 which we had held since 2011 as part of a strategy to support the realization of certain foreign tax credits before they expired and, to a lesser extent, gains from the sale of certain longer term state municipal bonds as discussed above. These increases in 2016 were partially offset by lower gains from the sales of U.S. Treasury and U.S. Government agency mortgage-backed securities associated with rebalancing the portfolio for risk management purposes. The gross realized gains and losses from sales of securities, which is included as a component of other securities gains, net above, are summarized in Note 4, "Securities," in the accompanying consolidated financial statements.

Servicing and other fees from HSBC affiliates During 2017 and 2016, we received \$28 million and \$6 million, respectively, of loan prepayment fees from HSBC Finance. Excluding this item, affiliate income remained higher during 2017 and 2016. The increase in 2017 was driven by higher billings associated with shared services performed on behalf of other HSBC affiliates, including higher billings associated with certain RBWM wealth managers which were transferred to HSBC Bank USA from HMUS support services during the third quarter of 2016, partially offset by lower fees associated with residential mortgage servicing activities performed on behalf of HSBC Finance and lower fee income associated with trading activity booked on the balance sheets of other HSBC affiliates. In 2016, the increase was largely due to higher fee income associated with trading activity booked on the balance sheets of other HSBC affiliates, partially offset by lower fees associated with residential mortgage servicing activities performed on behalf of HSBC Finance.

Residential mortgage banking revenue (expense) Residential mortgage banking revenue (expense) declined during 2017 and 2016 due primarily to the impact of the sale of our remaining Mortgage Servicing Rights ("MSRs") portfolio during the fourth quarter of 2016 and, to a lesser extent, lower recoveries for repurchase obligations associated with loans previously sold.

Gain (loss) on instruments designated at fair value and related derivatives We have elected to apply fair value option accounting to certain commercial loans held for sale, certain securities purchased and sold under resale and repurchase agreements, certain own fixed-rate debt issuances and all of our hybrid instruments issued, including structured notes and deposits. We also use derivatives to economically hedge the interest rate and other risks associated with certain financial liabilities for which fair value option accounting has been elected. Beginning January 1, 2017, the fair value movement on fair value option liabilities attributable to our own credit spread is recorded in other comprehensive income (loss). Excluding this item, which resulted in a loss of \$36 million in 2016 and a gain of \$214 million in 2015, gain (loss) on instruments designated at fair value and related derivatives remained higher during 2017 and remained lower during 2016. The increase in 2017 was attributable primarily to favorable movements related to the economic hedging of interest rate and other risks within our structured notes and deposits, partially offset by unfavorable fair value adjustments on loans designated at fair value. The decrease in 2016 was attributable primarily to unfavorable movements related to the economic hedging of interest rate and other risks within our own debt and structured notes and deposits, partially offset by favorable fair value adjustments on loans designated at fair value and the non-recurrence of a net loss recorded in 2015 related to changes in estimates associated with the valuation techniques used to measure the fair value of certain structured notes and deposits. See Note 15, "Fair Value Option," in the accompanying consolidated financial statements for additional information including a breakout of these amounts by individual component.

Other income (loss) Beginning in late 2016 and into 2017, we sold substantially all of our remaining Visa Class B Shares to a third party resulting in net pre-tax gains of approximately \$312 million and \$71 million, during 2017 and 2016, respectively. Excluding this item, other income (loss) remained higher during 2017 and remained lower during 2016. The increase in 2017 was primarily due to improved valuations on loans held for sale, net gains in 2017 from the sale of residential mortgages, lower losses associated with credit default swap protection as discussed below and lower losses associated with fair value hedge ineffectiveness. In 2016, the decrease was due primarily to losses of \$70 million in 2016 associated with credit default swap protection which largely reflects the hedging of a single client exposure compared with gains of \$43 million in 2015 (and losses of \$43 million in 2017) as well as higher losses from valuation write-downs on loans held for sale.

Operating Expenses The following table summarizes the components of operating expenses:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Salaries and employee benefits	\$ 1,077	\$ 981	\$ 1,000
Support services from HSBC affiliates: ⁽¹⁾			
Fees paid to HSBC Markets (USA) Inc. ("HMUS")	121	214	283
Fees paid to HSBC Technology & Services (USA) ("HTSU")	1,165	1,027	1,030
Fees paid to other HSBC affiliates	263	254	243
Total support services from HSBC affiliates	<u>1,549</u>	<u>1,495</u>	<u>1,556</u>
Occupancy expense, net ⁽¹⁾	202	171	172
Other expenses:			
Equipment and software	53	58	48
Marketing	84	57	60
Outside services	95	120	89
Professional fees	100	98	117
Off-balance sheet credit reserves	(26)	44	33
Federal Deposit Insurance Corporation ("FDIC") assessment fees	138	168	120
Miscellaneous	119	106	89
Total other expenses	<u>563</u>	<u>651</u>	<u>556</u>
Total operating expenses	<u>\$ 3,391</u>	<u>\$ 3,298</u>	<u>\$ 3,284</u>
Personnel - average number	5,811	5,734	6,034
Efficiency ratio	79.3%	84.8%	78.1%

⁽¹⁾ In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. Separately, we also concluded that rental revenue we receive from our affiliates for rent on certain office space would be better presented as a reduction to occupancy expense as opposed to a reduction to affiliates expense. As a result, we have reclassified prior year amounts in order to conform to the current year presentation. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information.

Costs to achieve, which reflect transformation costs to deliver the cost reduction and productivity outcomes outlined in the HSBC Investor Update in June 2015, were a significant component of total operating expenses during 2017 and 2016. Costs to achieve primarily consisted of project cost support service charges from HTSU, lease termination and associated expenses, professional fees and severance costs. Excluding costs to achieve, total operating expenses decreased \$16 million during 2017 and decreased \$78 million during 2016. The following table presents costs to achieve by financial statement line item:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Salaries and employee benefits	\$ 23	\$ 8	\$ 8
Support services from HSBC affiliates	130	73	3
Occupancy expense, net	36	10	6
Other expenses	33	22	4
Total operating expenses	<u>\$ 222</u>	<u>\$ 113</u>	<u>\$ 21</u>

Salaries and employee benefits During the fourth quarter of 2017, HSBC North America completed a limited-time offer to former vested HSBC North America Pension Plan employees resulting in a pre-tax settlement loss to our allocated pension expense of approximately \$35 million. See Note 20, "Pension and Other Postretirement Benefits," for additional discussion. Excluding this item and costs to achieve as discussed above, salaries and employee benefits expense remained higher during 2017 and remained lower during 2016. The increase in 2017 was driven by the impact of salaries expense associated with certain RBWM wealth managers which were transferred to HSBC Bank USA from HMUS support services during the third quarter of 2016, higher incentive compensation expense due to improved business performance and higher expense associated with long-term disability medical benefits. In addition, while salaries expense continues to reflect the impact of cost management efforts, including targeted staff reductions to optimize staffing and improve efficiency as well as reductions in staff performing residential mortgage servicing activities on behalf of HSBC Finance, these reductions were more than offset by the factors described above as well as the addition of higher cost personnel associated with growth initiatives in certain businesses. In 2016, the decrease was due primarily to lower

incentive compensation expense. While cost management efforts in 2016 resulted in a decline in the average number of personnel, the impact of this decline was largely offset by the addition of higher cost personnel associated with growth initiatives in certain businesses and the implementation of a global standards program designed to achieve the most effective financial crime risk controls and capabilities.

Support services from HSBC affiliates Excluding costs to achieve as discussed above, support services from HSBC affiliates was relatively flat during 2017 as lower expense due to the transfer of certain RBWM wealth managers to HSBC Bank USA from HMUS support services as discussed above as well as the favorable impact of cost management efforts including staff optimization in our technology and support service functions were largely offset by increased costs associated with our investment to improve and modernize our legacy business systems. The trend in the components of support services from HSBC affiliates presented in the table above also reflects the impact of a transfer of support service personnel from HMUS to HTSU during the first quarter of 2017 which increased HTSU support services expense and decreased HMUS support services expense by approximately \$94 million during 2017. Excluding costs to achieve as discussed above, support services from HSBC affiliates remained lower during 2016 due primarily to the favorable impact of cost management efforts including staff optimization in our technology and support service functions, lower costs associated with business systems reflecting the completion of certain projects and lower corporate real estate expense. These decreases in 2016 were partially offset by higher fee expense associated with trading activity booked on our balance sheet by other HSBC affiliates. A summary of the activities charged to us from various HSBC affiliates is included in Note 21, "Related Party Transactions," in the accompanying consolidated financial statements.

Occupancy expense, net Excluding costs to achieve as discussed above, occupancy expense remained higher during 2017 and remained lower during 2016. The increase in 2017 was due to lower rental income as well as the impact of extending the lease of our 452 Fifth Avenue property, including the 1 W. 39th Street building. The sale and leaseback of our 452 Fifth Avenue property in 2010 resulted in a gain which is deferred and was being recognized over the lease term (which was ten years) due to our continuing involvement. During the second quarter of 2017, we extended the lease for an additional five years as well as the amortization of the deferred gain to reflect the new lease term. These increases were partially offset by lower depreciation expense. In 2016, the decrease was due to lower rent expense, partially offset by increased maintenance costs.

Other expenses Excluding costs to achieve as discussed above, other expenses remained lower during 2017 and remained higher during 2016. The decrease in 2017 was largely due to releases of off-balance sheet credit reserves compared with provisions in 2016, higher levels of expense capitalization related to internally developed software, lower deposit insurance assessment fees, the non-recurrence of \$27.5 million of expense recorded in 2016 related to the civil money penalty that was assessed in conjunction with the termination of the OCC Servicing Consent Order and lower outside services expense due in part to the non-recurrence of expense recorded for activities related to the sale of our MSR in 2016. These decreases in 2017 were partially offset by higher marketing expense largely driven by new product promotions in credit cards, higher operational losses associated with certain credit card accounts and higher litigation expense. In 2016, the increase reflects higher deposit insurance assessment fees, higher outside services expense as discussed above, an expense recorded in 2016 related to the termination of the OCC Servicing Consent Order as discussed above, higher expense associated with settlements of certain compensatory fee exposures which resulted in expense of \$7 million in 2016 compared with a benefit of \$14 million in 2015, higher off-balance sheet credit reserves due to downgrades and lower levels of expense capitalization related to internally developed software, including an impairment charge of \$11 million. These increases in 2016 were partially offset by lower professional fees, lower litigation expense and lower losses associated with card fraud.

Efficiency ratio Our efficiency ratio was 79.3 percent during 2017, compared with 84.8 percent during 2016 and 78.1 percent during 2015. Our efficiency ratio in 2016 and 2015 were impacted by the change in the fair value of our own debt attributable to our own credit spread for which we have elected fair value option accounting which was reported as a component of total other revenues. Excluding this item, our efficiency ratio improved during 2017 and remained higher during 2016. The improvement in 2017 was due to higher other revenues, partially offset by lower net interest income and higher operating expenses. In 2016, the increase was due primarily to lower other revenue, partially offset by higher net interest income and higher operating expenses.

Income taxes Our effective tax rate was 117.1 percent in 2017 compared with 40.8 percent in 2016 and 41.1 percent in 2015. For a complete analysis of the differences between effective tax rates based on the total income tax provision attributable to pretax income and the statutory U.S. Federal income tax rate, see Note 16, "Income Taxes," in the accompanying consolidated financial statements.

In December 2017, Tax Legislation was enacted which reduced the Federal corporate income tax rate from 35 percent to 21 percent effective January 1, 2018. During the fourth quarter of 2017, we increased our income tax provision by \$865 million as a result of the Federal corporate tax rate change, due to a lower carrying value of our net deferred tax asset. After the initial revaluation of the deferred tax asset at December 31, 2017, the rate reduction is expected to have a positive impact on future earnings. The Tax Legislation also contained other complex provisions, such as the BEAT, which may have a material impact in future periods on income tax expense and taxes payable for the HSBC North America consolidated tax group, of which we are a member. We are currently evaluating the BEAT provisions and their potential impact, which is currently uncertain and will depend on future tax regulatory guidance, actions HSBC North America or its affiliates may take as a result of the Tax Legislation and the future

earnings of HUSI and other subsidiaries of HSBC North America. Although our analysis is ongoing and could change depending upon the factors discussed above, we currently do not anticipate a material impact on our financial position or results of operations from the BEAT.

Segment Results – Group Reporting Basis

We have five distinct business segments that are utilized for management reporting and analysis purposes which are aligned with HSBC's global business strategy: Retail Banking and Wealth Management ("RBWM"), Commercial Banking ("CMB"), Global Banking and Markets ("GB&M"), Private Banking ("PB") and a Corporate Center ("CC") which was created in 2017 and is discussed further below. See Item 1, "Business," in this Form 10-K for a description of our segments, which are generally based upon customer groupings and global businesses, including a discussion of the main business activities of the segments and a summary of their products and services.

We previously announced that we made the decision to implement changes to our internal management reporting for certain activities and functions and report them within a new CC segment beginning in January 2017. These activities and functions include Balance Sheet Management and our legacy structured credit products which historically were both reported in GB&M, as well as a portfolio of residential mortgage loans previously purchased from HSBC Finance, including certain loan servicing activities performed on behalf of HSBC Finance, which were historically reported in RBWM. In addition, we have reviewed central costs historically reported in the Other segment and have reallocated these costs to the global businesses where appropriate. Remaining residual costs are reported in the CC along with all other remaining items historically reported in the Other segment. As a result, beginning in the first quarter of 2017, we aligned our segment reporting with the changes made to our internal management reporting and are reporting these changes as part of the newly created CC segment for all periods presented.

The following table summarizes the impact on reported segment profit before tax, total assets and total deposits as of and for the years ended December 31, 2016 and 2015:

	2016	2015
	(in millions)	
Increase (decrease) in segment profit before tax during the year ended December 31:		
RBWM	\$ 7	\$ (4)
CMB	13	8
GB&M	(192)	(144)
PB	5	4
CC (as compared with previously reported Other)	167	136
Increase (decrease) in segment total assets at December 31:		
RBWM	\$ (585)	\$ (696)
CMB	—	—
GB&M	(107,780)	(78,783)
PB	—	—
CC (as compared with previously reported Other)	108,365	79,479
Increase (decrease) in segment total deposits at December 31:		
RBWM	\$ —	\$ —
CMB	—	—
GB&M	(6,989)	(5,011)
PB	—	—
CC (as compared with previously reported Other)	6,989	5,011

During 2017, we adopted new accounting guidance under the Group Reporting Basis which, for financial liabilities measured under the fair value option, requires recognizing the change in fair value attributable to our own credit spread in other comprehensive income (loss) consistent with the new accounting guidance also adopted under U.S. GAAP. The adoption of this guidance did not require periods prior to 2017 to be restated. See the discussion of the CC segment below for further details regarding the impact of adopting this guidance.

There have been no additional changes in the basis of our segmentation or measurement of segment profit as compared with the presentation in our 2016 Form 10-K.

Net interest income of each segment represents the difference between actual interest earned on assets and interest incurred on liabilities of the segment, adjusted for a funding charge or credit. Segments are charged a cost to fund assets (e.g. customer loans) and receive a funding credit for funds provided (e.g. customer deposits) based on equivalent market rates. The objective of these charges/credits is to transfer interest rate risk from the segments to one centralized unit in Balance Sheet Management and more appropriately reflect the profitability of the segments.

Certain other revenue and operating expense amounts are also apportioned among the business segments based upon the benefits derived from this activity or the relationship of this activity to other segment activity. These inter-segment transactions are accounted for as if they were with third parties.

We report financial information to our parent, HSBC, in accordance with HSBC Group accounting and reporting policies, which apply IFRS issued by the IASB and endorsed by the EU, and, as a result, our segment results are prepared and presented using financial information prepared on the Group Reporting Basis as operating results are monitored and reviewed, trends are evaluated and decisions about allocating resources, such as employees, are primarily made on this basis. We continue, however, to monitor capital adequacy and report to regulatory agencies on a U.S. GAAP basis. The significant differences between U.S. GAAP and the Group Reporting Basis as they impact our results are summarized in Note 22, "Business Segments," and under the caption "Basis of Reporting" in the MD&A section of this Form 10-K, including a new difference related to structured notes and deposits.

HSBC Group will adopt the requirements of IFRS 9, "Financial Instruments" ("IFRS 9"), on January 1, 2018 with the exception of the provisions relating to the presentation of gains and losses on financial instruments designated at fair value which were previously adopted. The adoption of IFRS 9 will generally result in higher expected credit losses under the Group Reporting Basis than under current practice. The adoption of IFRS 9 on January 1, 2018 resulted in an increase to our loan impairment allowance of approximately \$60 million with a corresponding charge to equity under the Group Reporting Basis.

Retail Banking and Wealth Management RBWM provides a range of banking and wealth products and services to individuals and certain small businesses, focusing on internationally minded customers in large metropolitan centers on the West and East coasts.

During 2017, we continued to direct resources towards the development and delivery of premium service. Particular focus has been placed on HSBC Premier, HSBC's global banking service which offers customers a seamless international service, and HSBC Advance, a proposition directed towards the emerging affluent customer in the initial stages of wealth accumulation.

The following table summarizes the Group Reporting Basis results for our RBWM segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Net interest income.....	\$ 886	\$ 818	\$ 787
Other operating income ⁽¹⁾	526	363	308
Total operating income ⁽²⁾	1,412	1,181	1,095
Loan impairment charges.....	25	70	68
Net operating income.....	1,387	1,111	1,027
Operating expenses ⁽¹⁾	1,185	1,131	1,152
Profit (loss) before tax.....	\$ 202	\$ (20)	\$ (125)

⁽¹⁾ In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. As a result, we have reclassified prior year amounts in order to conform to the current year presentation, which increased both RBWM other operating income and RBWM operating expenses \$11 million during the year ended December 31, 2016. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information.

⁽²⁾ The following table summarizes the impact of key activities on the total operating income of our RBWM segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Current accounts, savings and deposits.....	\$ 635	\$ 539	\$ 510
Mortgages, credit cards and other personal lending.....	275	373	410
Wealth and asset management products.....	173	131	135
Retail business banking and other ⁽³⁾	329	138	40
Total operating income.....	\$ 1,412	\$ 1,181	\$ 1,095

⁽³⁾ During 2017, retail business banking and other reflects a gain on the sale of Visa Class B Shares of approximately \$312 million and a loss on the sale of certain partially charged off residential mortgages as discussed below. During 2016, retail business banking and other reflects a gain on the sale of Visa Class B Shares of approximately \$71 million.

2017 profit before tax compared with 2016 Our RBWM segment reported a profit before tax during 2017 compared with a loss before tax during 2016 due primarily to higher other operating income driven by the sale of substantially all of our remaining Visa Class B Shares which resulted in a net pre-tax gain of approximately \$312 million in 2017 compared with a net pre-tax gain of approximately \$71 million in 2016. The improvement in 2017 also reflects higher net interest income, lower loan impairment charges and a \$26 million benefit recorded to pension expense during the fourth quarter of 2017 associated with the completion of a limited-time offer to former vested HSBC North America Pension Plan employees. These improvements were partially offset by higher operating expenses.

Net interest income increased during 2017 largely driven by higher net interest income from deposits due to higher average balances and improved spreads, partially offset by lower net interest income from lending. Net interest income from lending declined due to lower average balances driven by loan sales and a declining home equity mortgage portfolio as well as lower spreads.

Excluding the gains on sale of Visa Class B Shares as discussed above, other operating income decreased during 2017 primarily due to a loss of \$73 million on the sale of certain partially charged-off residential mortgages during the first quarter of 2017 and lower servicing fees reflecting the impact of the sale of our remaining MSRs portfolio during the fourth quarter of 2016. These decreases were partially offset by higher affiliate income associated with certain RBWM wealth managers which were transferred to HSBC Bank USA from HMUS support services during the third quarter of 2016.

Loan impairment charges were lower during 2017 driven by continued improvements in economic and credit conditions, the continued origination of higher quality Premier mortgages and lower loan impairment charges on home equity mortgages reflecting lower outstanding balances. These decreases were partially offset by the non-recurrence of a reserve release recorded in 2016 related to residential mortgages serviced by others as a result of updated information regarding the underlying loan characteristics reported by the servicers.

Excluding the benefit to pension expense as discussed above, operating expenses remained higher during 2017 due primarily to higher expense associated with the impact of certain RBWM wealth managers which were transferred to HSBC Bank USA from HMUS support services as discussed above, the addition of personnel associated with growth initiatives, higher marketing expense largely driven by new product promotions in credit cards and higher operational losses largely associated with certain credit card accounts. These increases were partially offset by the non-recurrence of \$27.5 million of expense recorded in 2016 related to the civil money penalty that was assessed in conjunction with the termination of the OCC Servicing Consent Order.

2016 loss before tax compared with 2015 Our RBWM segment reported an improved loss before tax during 2016 due primarily to higher other operating income driven by a net pre-tax gain of approximately \$71 million from the sale of Visa Class B Shares in 2016, higher net interest income and lower operating expenses.

Net interest income increased during 2016 largely driven by higher net interest income from deposits due to higher average balances and improved spreads, partially offset by lower net interest income from lending. Net interest income from lending declined as the favorable impact of growth in residential mortgage average balances was more than offset by a declining home equity mortgage portfolio and lower spreads.

Excluding the gain on sale of Visa Class B Shares as discussed above, other operating income decreased during 2016 due largely to lower servicing fees resulting from the planned run-off and sale of our serviced portfolio, a lower recovery for repurchase obligations associated with loans previously sold and reduced asset management fees from fixed income funds reflecting a shift in product mix.

Loan impairment charges were slightly higher during 2016 as the positive impacts of continued improvements in economic and credit conditions and the origination of higher quality Premier mortgages were more pronounced in 2015.

Operating expenses were lower in 2016 due primarily to lower litigation expense and the impact of cost management efforts including targeted staff reductions to optimize staffing and improve efficiency. These improvements were partially offset by an expense recorded in 2016 related to the termination of the OCC Servicing Consent Order as discussed above, higher expense associated with settlements of certain compensatory fee exposures which resulted in expense of \$7 million in 2016 compared with a benefit of \$14 million in 2015 and higher outside services expense due in part to activities related to the sale of our MSRs.

Commercial Banking CMB offers a full range of commercial financial services and tailored solutions to enable clients to grow their businesses, focusing on key markets with high concentrations of international connectivity.

Total average loans outstanding, including loans held for sale, decreased 6 percent as compared with the fourth quarter 2016 as we focused efforts on improving returns. Total average deposits outstanding were 6 percent higher as compared with the fourth quarter 2016.

The following table summarizes the Group Reporting Basis results for our CMB segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Net interest income.....	\$ 739	\$ 749	\$ 747
Other operating income	216	229	243
Total operating income ⁽¹⁾	955	978	990
Loan impairment charges (recoveries)	(52)	50	140
Net operating income	1,007	928	850
Operating expenses.....	558	591	609
Profit before tax	\$ 449	\$ 337	\$ 241

⁽¹⁾ The following table summarizes the impact of key activities on the total operating income of our CMB segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Lending and Transaction Management.....	\$ 441	\$ 501	\$ 486
Global Liquidity and Cash Management, current accounts and savings deposits.....	414	375	377
Global Trade and Receivables Finance.....	52	50	79
Investment banking products and other	48	52	48
Total operating income	\$ 955	\$ 978	\$ 990

2017 profit before tax compared with 2016 Our CMB segment reported a higher profit before tax during 2017 due to improved loan impairment charges and lower operating expenses, partially offset by lower net interest income and lower other operating income.

Net interest income was lower during 2017 due to lower loan balances largely reflecting the sale of certain commercial real estate loans during the second quarter of 2016 as well as paydowns and maturities exceeding new loan originations as we focused efforts on improving returns, partially offset by improved spreads on deposits.

Other operating income was lower in 2017 driven by lower credit facilities fees reflecting the impact of lower commercial lending activity compared with 2016 and the non-recurrence of gains recorded in 2016 from asset sales in commercial real estate.

Loan impairment charges improved during 2017 due primarily to releases in credit loss reserves in 2017 reflecting improvements in credit conditions associated with certain client relationships, including oil and gas industry clients, as well as releases of reserves due to paydowns and maturities exceeding new loan originations compared with loan impairment charges in 2016 associated with downgrades reflecting weaknesses in the financial condition of certain client relationships at that time.

Operating expenses declined during 2017 driven by lower deposit insurance assessment fees, the impact of targeted staff reductions during 2016 and lower pension expense which reflects a \$9 million benefit associated with the limited-time offer to Plan employees as discussed above.

2016 profit before tax compared with 2015 Our CMB segment reported a higher profit before tax during 2016 primarily due to lower loan impairment charges and lower operating expenses, partially offset by lower other operating income.

Net interest income increased slightly during 2016 as the favorable impacts of growth in deposit balances in Global Liquidity and Cash Management and improved lending spreads, were largely offset by lower loan balances in Lending and Transaction Management and higher funding costs.

Other operating income was lower during 2016 due primarily to lower fee based income reflecting the impact of lower commercial lending activity compared with 2015 and lower transaction volume in investment banking products.

Loan impairment charges were lower during 2016 due primarily to lower provisions for oil and gas industry loan exposures, partially offset by higher provisions associated with downgrades reflecting weaknesses in the financial condition of certain customer relationships.

Operating expenses were lower during 2016 driven by the impact of cost management efforts including targeted staff reductions to optimize staffing and improve efficiency, partially offset by higher deposit insurance assessment fees.

Global Banking and Markets GB&M provides tailored financial solutions to major government, corporate and institutional clients worldwide.

We continue to target U.S. companies with international banking requirements and foreign companies with banking needs in the Americas. Consistent with our global strategy, we are also focused on identifying opportunities to offer our products to CMB, PB and RBWM customers.

The following table summarizes the Group Reporting Basis results for our GB&M segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Net interest income.....	\$ 585	\$ 567	\$ 409
Other operating income ⁽¹⁾	617	785	1,047
Total operating income ⁽²⁾	<u>1,202</u>	<u>1,352</u>	<u>1,456</u>
Loan impairment charges (recoveries).....	(94)	383	65
Net operating income.....	<u>1,296</u>	<u>969</u>	<u>1,391</u>
Operating expenses ⁽¹⁾	881	986	1,017
Profit (loss) before tax.....	<u>\$ 415</u>	<u>\$ (17)</u>	<u>\$ 374</u>

⁽¹⁾ In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. As a result, we have reclassified prior year amounts in order to conform to the current year presentation, which increased both GB&M other operating income and GB&M operating expenses \$61 million and \$63 million during the years ended December 31, 2016 and 2015, respectively. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information.

⁽²⁾ The following table summarizes the impact of key activities on the total operating income of our GB&M segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Credit.....	\$ 10	\$ 59	\$ —
Rates.....	62	81	15
Foreign Exchange and Metals.....	246	284	247
Equities.....	35	40	112
Total Global Markets.....	<u>353</u>	<u>464</u>	<u>374</u>
Global Banking.....	271	380	452
Global Liquidity and Cash Management.....	499	447	423
Securities Services.....	55	41	31
Global Trade and Receivables Finance.....	49	63	63
Credit and funding valuation adjustments.....	(99)	(91)	13
Other ⁽²⁾	74	48	100
Total operating income.....	<u>\$ 1,202</u>	<u>\$ 1,352</u>	<u>\$ 1,456</u>

⁽³⁾ Other includes cost reimbursements associated with certain trading activities performed on behalf of other HSBC affiliates, corporate funding charges and net interest income on capital held in the business and not assigned to products.

2017 profit before tax compared with 2016 Our GB&M segment reported a profit before tax during 2017 compared with a loss before tax during 2016 due primarily to improved loan impairment charges, lower operating expenses and higher net interest income, partially offset by lower other operating income.

Credit revenue declined during 2017 due to lower revenue from collateralized financing related activity, lower client activity and volumes from low market volatility, and higher primary issuances in 2016.

Revenue from Rates decreased during 2017 due to lower new deal activity on interest rate swaps, partially offset by favorable movements related to the economic hedging of interest rate and other risks within our structured notes and deposits.

Foreign Exchange and Metals revenue decreased during 2017 as higher revenue from Metals client related trading activity was offset by lower revenue from client trading activity in Foreign Exchange.

The decrease in Equities revenue during 2017 was due primarily to unfavorable movements related to the economic hedging of interest rate and other risks within our structured notes and deposits.

Global Banking revenue decreased during 2017 due to lower net interest income driven by lower loan balances as paydowns and maturities exceeding new loan originations as we focused efforts on improving returns, higher funding costs and lower event

financing fees which were partially offset by lower losses associated with credit default swap protection which largely reflects the hedging of a single client exposure.

Global Liquidity and Cash Management revenue increased during 2017 driven by higher net interest income due to the favorable impact of higher short-term market rates as well as an increase in high quality deposit balances.

Securities Services revenue increased during 2017 driven by higher revenue from new direct custody and clearing client activity as well as higher net interest income due to the favorable impact of higher short-term market rates.

Global Trade and Receivables Finance revenue was lower during 2017 reflecting a decline in receivables financing products, partially offset by higher supply chain solutions revenue.

Credit and funding valuation adjustments were unfavorable in 2017 attributable primarily to movements in our own credit spreads within our structured notes and deposits and, to a lesser extent, our derivative liability balances.

Other revenue increased during 2017 reflecting higher net interest income on capital held in the business and not assigned to products and higher cost reimbursements associated with certain trading activities performed on behalf of other HSBC affiliates, partially offset by an inducement fee paid to a third party in the first quarter of 2017 associated with the sale of a portion of our portfolio of residual interests in real estate mortgage investment conduits.

Loan impairment charges improved during 2017 reflecting releases in credit loss reserves in 2017 compared with loan impairment charges in 2016. The releases of loss reserves in 2017 reflect improvements in the credit quality of our portfolio driven by paydowns, sales and maturities exceeding new loan originations as we continue to focus efforts on improving returns and improvements in credit conditions associated with certain client relationships, including a single mining client relationship. The loan impairment charges in 2016 were driven primarily by the deterioration of the single mining client relationship as well as other downgrades reflecting weakness in the financial condition of certain clients at that time, including oil and gas, mining and other industry loan exposures. Loan impairment charges associated with oil and gas industry loan exposures in 2016 were largely due to the downgrade of a large client relationship and the establishment of specific reserves related to two large loans which became impaired.

Operating expenses were lower during 2017 due primarily to lower corporate function cost allocations from affiliates, lower litigation expense and lower deposit insurance assessment fees.

2016 profit before tax compared with 2015 Our GB&M segment reported a loss before tax during 2016 compared with a profit before tax during 2015 due to higher loan impairment charges and lower other operating income, partially offset by higher net interest income and lower operating expenses.

Credit revenue improved during 2016 due to higher revenue from collateralized financing related activity.

Revenue from Rates improved during 2016 from higher new deal activity in interest rate swaps and the non-recurrence of a loss recorded in 2015 related to changes in estimates associated with the valuation techniques used to measure the fair value of certain rate linked structured notes. These improvements were partially offset by unfavorable movements related to the economic hedging of interest rate and other risks within our structured notes and deposits.

Foreign Exchange and Metals revenue increased during 2016 primarily due to higher revenue from Metals client related trading activity and improvements in Foreign Exchange trading volumes and price volatility.

The decrease in Equities revenue during 2016 was due primarily to unfavorable movements related to the economic hedging of interest rate and other risks within our structured notes and deposits and the non-recurrence of a gain recorded in 2015 related to changes in estimates associated with the valuation techniques used to measure the fair value of certain equity linked structured notes and deposits.

Global Banking revenue decreased during 2016 due to losses in 2016 associated with credit default swap protection which largely reflects the hedging of a single client exposure compared with gains in 2015 and lower financing fees, partially offset by higher net interest income driven by improved loan spreads.

Global Liquidity and Cash Management revenue increased during 2016 driven by higher net interest income due to an increase in high quality deposit balances as well as the favorable impact of higher short-term market rates, partially offset by decreased fee income due to lower transaction volumes.

Securities Services revenue increased during 2016 driven by growth in the reinsurance trust and loan agency business as well as higher net interest income due to the favorable impact of higher short-term market rates.

Global Trade and Receivables Finance revenue was flat during 2016.

Credit and funding valuation adjustments were unfavorable in 2016 attributable primarily to movements in our own credit spreads within our structured notes and deposits and our derivative liability balances.

Other revenue decreased during 2016 due to higher corporate funding charges, partially offset by higher net interest income on capital held in the business and not assigned to products.

Loan impairment charges were higher during 2016 due largely to higher provisions associated with the deterioration of the single mining customer relationship and higher provisions associated with oil and gas industry loan exposures, as discussed above, as well as other downgrades reflecting weaknesses in the financial condition of certain customer relationships, including mining and other industry loan exposures.

Operating expenses were lower during 2016 due primarily to lower corporate function cost allocations from affiliates, partially offset by higher deposit insurance assessment fees.

Private Banking PB serves high net worth and ultra-high net worth individuals and families with complex needs domestically and abroad.

In August 2017, our PB business entered into an agreement to refer parts of its Latin America portfolio, consisting primarily of clients based in areas where we do not have a corporate presence, including Central America and the Andean Pact, to UBS. Our Private Banking business has made a decision to no longer service clients based in those markets and renew focus on clients and prospects based in markets where we can leverage HSBC's global connectivity, including the United States, Argentina, Brazil, Chile and Mexico. These markets are consistent with HSBC's global strategy and allow us to better serve clients through collaboration with other HSBC businesses based in these markets. Under the terms of the agreement, we facilitate the referral of these client relationships to UBS for a fee, including the transfer of client assets, consisting of client investments and deposits, as well as the transfer of the relationship managers and client service employees that support these clients. Loans associated with these client relationships were not included in the agreement. As a result of entering into the agreement, we recognized a pre-tax gain on sale, net of allocated goodwill and transaction costs, of \$9 million during the third quarter of 2017. Total operating income associated with these client relationships was approximately \$51 million, \$50 million and \$55 million during 2017, 2016 and 2015, respectively.

While client deposit levels decreased \$2,505 million or 22 percent, total loans increased by \$583 million or 10 percent as compared with December 31, 2016. Overall period end client assets were \$1,373 million lower.

The following table provides additional information regarding client assets during 2017 and 2016:

Year Ended December 31,	2017	2016
	(in millions)	
Client assets at beginning of period.....	\$ 40,462	\$ 42,716
Net new money (outflows).....	(2,333)	(3,113)
Client transfers to UBS	(853)	—
Value change	1,813	859
Client assets at end of period.....	<u>\$ 39,089</u>	<u>\$ 40,462</u>

The following table summarizes the Group Reporting Basis results for our PB segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Net interest income.....	\$ 217	\$ 207	\$ 205
Other operating income	94	89	99
Total operating income	<u>311</u>	<u>296</u>	<u>304</u>
Loan impairment charges (recoveries)	2	—	(5)
Net operating income	<u>309</u>	<u>296</u>	<u>309</u>
Operating expenses.....	244	232	245
Profit before tax.....	<u>\$ 65</u>	<u>\$ 64</u>	<u>\$ 64</u>

2017 profit before tax compared with 2016 Our PB segment profit before tax was relatively flat during 2017 as higher net interest income and higher other operating income was largely offset by higher operating expenses.

Net interest income was higher during 2017 due to improved spreads reflecting the impact of favorable market rates.

Other operating income includes a net pre-tax gain of \$9 million associated with the sale of a portion of our Private Banking business during the third quarter of 2017 as discussed above. Excluding this item, other operating income decreased in 2017 due to lower fees and commissions driven by a decline in managed and investment product balances.

Loan impairment charges were relatively flat in 2017.

Operating expenses increased during 2017 reflecting higher litigation expense, higher staff costs and higher corporate function cost allocations from affiliates.

2016 profit before tax compared with 2015 Our PB segment profit before tax was flat during 2016 as lower operating expenses were offset by lower other operating income and lower loan impairment recoveries.

Net interest income was relatively flat during 2016 as improved spreads reflecting the impact of favorable market rates and the favorable impact of higher deposit balances was largely offset by lower loan balances and higher funding costs.

Other operating income decreased during 2016 due to lower fees and commissions reflecting a decline in managed and investment product balances.

Loan impairment recoveries were lower during 2016 as 2015 reflects releases of reserves due to paydowns.

Operating expenses decreased during 2016 reflecting lower litigation expense and lower corporate function cost allocations from affiliates.

Corporate Center CC includes Balance Sheet Management, our legacy structured credit products, certain legacy residential mortgage loan and servicing activities, income and expense associated with certain affiliate transactions, certain corporate function costs including costs to achieve, adjustments to the fair value of HSBC shares held for stock plans, interest expense associated with certain tax exposures, income associated with other tax related investments and changes in the fair value of certain debt issued for which fair value option accounting was elected and related derivatives, which for periods prior to January 1, 2017 included the fair value movement attributable to our own credit spread. Beginning January 1, 2017, the fair value movement on fair value option liabilities attributable to our own credit spread is recorded in other comprehensive income (loss).

The following table summarizes the Group Reporting Basis results for our CC segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Net interest income (expense).....	\$ (40)	\$ 132	\$ 181
Gain (loss) on own fair value option debt attributable to our own credit spread.....	—	(3)	194
Other operating income.....	274	130	107
Total operating income ⁽¹⁾	<u>234</u>	<u>259</u>	<u>482</u>
Loan impairment charges (recoveries).....	—	(9)	(4)
Net operating income.....	<u>234</u>	<u>268</u>	<u>486</u>
Operating expenses.....	<u>465</u>	<u>338</u>	<u>285</u>
Profit (loss) before tax.....	<u>\$ (231)</u>	<u>\$ (70)</u>	<u>\$ 201</u>

⁽¹⁾ The following table summarizes the impact of key activities on the total operating income of our CC segment:

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Balance Sheet Management ⁽²⁾	\$ 245	\$ 169	\$ 205
Legacy structured credit products.....	40	53	15
Legacy residential mortgage activities ⁽³⁾	(15)	20	44
Other ⁽⁴⁾	(36)	17	218
Total operating income.....	<u>\$ 234</u>	<u>\$ 259</u>	<u>\$ 482</u>

⁽²⁾ Balance Sheet Management includes gains on the sale of securities of \$48 million in 2017 compared with gains of \$65 million and \$91 million in 2016 and 2015, respectively.

⁽³⁾ Reflects fees associated with residential mortgage servicing activities performed on behalf of HSBC Finance and revenue associated with certain residential mortgage loans that we previously purchased from HSBC Finance.

⁽⁴⁾ In 2016 and 2015, other includes the gain (loss) on own fair value option debt attributable to our own credit spread.

2017 loss before tax compared with 2016 Our CC segment reported a higher loss before tax during 2017 due primarily to lower net interest income and higher operating expenses due in part to higher costs to achieve of approximately \$85 million, partially offset by higher other operating income.

Net interest income was lower during 2017 driven largely by the impact of the liquidity framework we adopted in preparation for the planned implementation of the Net Stable Funding Ratio ("NSFR") which provides a temporary cap on the net liquidity charge to GB&M until the NSFR becomes effective. See "Risk Management" in this MD&A for additional discussion of NSFR. The decrease also reflects lower corporate funding charges to the businesses due in part to the loan prepayment fees received from HSBC Finance as discussed below as well as lower net interest income from legacy residential mortgages which were sold during 2017.

Other operating income increased during 2017 reflecting the improved performance of economic hedge positions used to manage interest rate risk, fees of \$28 million received from HSBC Finance associated with the prepayment of its loan during the first quarter of 2017, lower losses associated with fair value hedge ineffectiveness and a gain of approximately \$11 million associated with the unwind of one of our unconsolidated VIEs during the second quarter of 2017. These increases were partially offset by lower fees associated with residential mortgage servicing activities performed on behalf of HSBC Finance, lower gains from asset sales in Balance Sheet Management and lower gains from valuation adjustments on our legacy structured credit products.

Loan impairment recoveries were lower during 2017 as 2016 reflects releases of reserves due to improvements in economic and credit conditions associated with legacy residential mortgages which were sold during 2017.

Excluding costs to achieve as discussed above, operating expenses remained higher during 2017 reflecting higher corporate function cost allocations and higher litigation expense, partially offset by the favorable impact of cost management efforts, including staff optimization in our technology and support service functions as well as reductions in staff performing residential mortgage servicing activities on behalf of HSBC Finance, and higher levels of expense capitalization related to internally developed software.

2016 profit before tax compared with 2015 Our CC segment reported a loss before tax during 2016 compared with a profit before tax during 2015 due primarily to lower net interest income, a loss of \$3 million in 2016 on own fair value option debt attributable to our own credit spread compared with a gain of \$194 million in 2015 and higher operating expenses due in part to higher costs to achieve of approximately \$78 million, partially offset by higher other operating income.

Net interest income was lower during 2016 driven largely by the impact of the liquidity framework we adopted in preparation for the planned implementation of the NSFR as discussed above and lower net interest income from lending, partially offset by higher interest income from increased investments.

Excluding the impact of own fair value option debt attributable to our own credit spread as discussed above, other operating income was higher during 2016 reflecting higher gains from valuation adjustments on our legacy structured credit products, the non-recurrence of losses associated with the sale of certain foreign debt securities during 2015 and higher income related to bank owned life insurance. These improvements were partially offset by higher losses related to the performance of economic hedge positions used to manage interest rate risk, lower gains from asset sales in Balance Sheet Management and lower fees associated with residential mortgage servicing activities performed on behalf of HSBC Finance.

Loan impairment recoveries were higher during 2016 driven by the positive impacts of improvements in economic and credit conditions associated with the residential mortgages that we previously purchased from HSBC Finance.

Excluding costs to achieve as discussed above, operating expenses decreased during 2016 due primarily to the favorable impact of cost management efforts, including staff optimization in our technology and support service functions as well as reductions in staff performing residential mortgage servicing activities on behalf of HSBC Finance, partially offset by lower levels of expense capitalization related to internally developed software.

Reconciliation of Segment Results As previously discussed, segment results are reported on a Group Reporting Basis. For segment reporting purposes, inter-segment transactions have not been eliminated, and we generally account for transactions between segments as if they were with third parties. See Note 22, "Business Segments," in the accompanying consolidated financial statements for a reconciliation of our Group Reporting Basis segment results to U.S. GAAP consolidated totals.

Credit Quality

In the normal course of business, we enter into a variety of transactions that involve both on and off-balance sheet credit risk. Principal among these activities is lending to various commercial, institutional, governmental and individual customers. We participate in lending activity throughout the U.S. and, on a limited basis, internationally.

Allowance for Credit Losses Commercial loans are monitored on a continuous basis with a formal assessment completed, at a minimum, annually. As part of this process, a credit grade and loss given default are assigned and an allowance is established for these loans based on a probability of default estimate associated with each credit grade under the allowance for credit losses methodology. Credit Review, a function independent of the business, provides an ongoing assessment of lending activities that includes independently assessing credit grades and loss given default estimates for sampled credits across various portfolios. When it is deemed probable based upon known facts and circumstances that full interest and principal on an individual loan will not be collected in accordance with its contractual terms, the loan is considered impaired. An impairment reserve is then established based on the present value of expected future cash flows, discounted at the loan's original effective interest rate, or as a practical expedient, the loan's observable market price or the fair value of the collateral if the loan is collateral dependent. Updated appraisals for collateral dependent loans are generally obtained only when such loans are considered troubled and the frequency of such updates are generally based on management judgment under the specific circumstances on a case-by-case basis. In addition, loss reserves on commercial loans are maintained to reflect our judgment of portfolio risk factors which may not be fully reflected in the reserve calculations.

Our probability of default estimates for commercial loans are mapped to our credit grade master scale. These probability of default estimates are validated on an annual basis using back-testing of actual default rates and benchmarking of the internal ratings with external rating agency data like Standard and Poor's ("S&P") ratings and default rates. Substantially all appraisals in connection with commercial real estate loans are ordered by the independent real estate appraisal review unit at HSBC. The appraisal must be reviewed and accepted by this unit. For loans greater than \$250,000, an appraisal is generally ordered when the loan is classified as Substandard as defined by the OCC. On average, it takes approximately four weeks from the time the appraisal is ordered until it is completed and the values accepted by HSBC's independent appraisal review unit. Subsequent provisions or charge-offs are completed shortly thereafter, generally within the quarter in which the appraisal is received.

In situations where an external appraisal is not used to determine the fair value of the underlying collateral of impaired loans, current information such as rent rolls and operating statements of the subject property are reviewed and presented in a standardized format. Operating results such as net operating income and cash flows before and after debt service are established and reported with relevant ratios. Third-party market data is gathered and reviewed for relevance to the subject collateral. Data is also collected from similar properties within the portfolio. Actual sales levels of properties, operating income and expense figures and rental data on a square foot basis are derived from existing loans and, when appropriate, used as comparables for the subject property. Property specific data, augmented by market data research, is used to project a stabilized year of income and expense to create a 10-year cash flow model to be discounted at appropriate rates to present value. These valuations are then used to determine if any impairment on the underlying loans exists and an appropriate allowance is recorded when warranted.

For TDR Loans, an allowance for credit losses is maintained based on the present value of expected future cash flows discounted at the loans' original effective interest rate or in the case of certain loans which are solely dependent on the collateral for repayment, the estimated fair value of the collateral less costs to sell. The circumstances in which we perform a loan modification involving a TDR Loan at a then current market interest rate for a borrower with similar credit risk would include other changes to the terms of the original loan made as part of the restructuring (e.g. principal reductions, collateral changes, etc.) in order for the loan to be classified as a TDR Loan.

For pools of homogeneous consumer loans and certain small business loans which do not qualify as TDR Loans, we estimate probable losses using a roll rate migration analysis that estimates the likelihood that a loan will progress through the various stages of delinquency, or buckets, and ultimately charge-off based upon recent historical performance experience of other loans in our portfolio. This migration analysis incorporates estimates of the period of time between a loss occurring and the confirming event of its charge-off. This analysis considers delinquency status, loss experience and severity and takes into account whether borrowers have filed for bankruptcy or have been subject to account management actions, such as the re-age or modification of accounts. We also take into consideration the loss severity expected based on the underlying collateral, if any, for the loan in the event of default based on historical and recent trends which are updated monthly based on a rolling average of several months' data using the most recently available information.

The roll rate methodology is a migration analysis based on contractual delinquency and rolling average historical loss experience which captures the increased likelihood of an account migrating to charge-off as the past due status of such account increases. The roll rate models used were developed by tracking the movement of delinquencies by age of delinquency by "bucket" over a specified time period. Each bucket represents a period of delinquency in 30-day increments. The roll from the last delinquency bucket results in charge-off. Contractual delinquency is a method for determining aging of past due accounts based on the status of payments

under the loan. Average roll rates are developed to avoid temporary aberrations caused by seasonal trends in delinquency experienced by some product types. We have determined that a 12-month average roll rate balances the desire to avoid temporary aberrations, while at the same time analyzing recent historical data. The roll rate calculations are performed monthly and are done consistently from period to period. We regularly monitor our portfolio to evaluate the period of time utilized in our roll rate migration analysis and perform a formal review on an annual basis. In addition, loss reserves on consumer loans are maintained to reflect our judgment of portfolio risk factors which may not be fully reflected in the statistical roll rate calculation.

Our allowance for credit losses methodology and our accounting policies related to the allowance for credit losses are presented in further detail under the caption "Critical Accounting Policies and Estimates" in this MD&A and in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements. Our approach toward credit risk management is summarized under the caption "Risk Management" in this MD&A.

The following table sets forth the allowance for credit losses for the periods indicated:

At December 31,	2017	2016	2015	2014	2013
	(dollars are in millions)				
Allowance for credit losses	\$ 681	\$ 1,017	\$ 912	\$ 680	\$ 606
Ratio of Allowance for credit losses to:					
Loans: ⁽¹⁾					
Commercial:					
Non-affiliates.....	1.31%	1.83%	1.35%	.92%	.71%
Affiliates.....	—	—	—	—	—
Total commercial.....	1.15	1.72	1.25	.85	.64
Consumer:					
Residential mortgages.....	.14	.15	.38	.64	1.18
Home equity mortgages.....	.92	1.42	1.50	1.79	2.44
Credit cards.....	4.44	4.94	4.58	5.42	5.85
Other consumer.....	1.46	1.83	2.21	2.04	2.55
Total consumer.....	.37	.44	.65	.96	1.55
Total.....	.94%	1.38%	1.10%	.87%	.90%
Net charge-offs: ⁽²⁾					
Commercial ⁽³⁾	405%	463%	1,217%	1,538%	434%
Consumer.....	348	132	205	229	183
Total.....	398%	381%	707%	596%	259%
Nonperforming loans: ⁽¹⁾⁽⁴⁾					
Commercial.....	99%	118%	293%	351%	118%
Consumer.....	15	17	15	20	28
Total.....	61%	77%	78%	63%	46%

⁽¹⁾ Ratios exclude loans held for sale as these loans are carried at the lower of amortized cost or fair value.

⁽²⁾ Ratios reflect full year net charge-offs.

⁽³⁾ Our commercial net charge-off coverage ratio for 2017, 2016, 2015, 2014 and 2013 was 49 months, 56 months, 146 months, 185 months and 52 months, respectively. The net charge-off coverage ratio represents the commercial allowance for credit losses at year end divided by average monthly commercial net charge-offs during the year.

⁽⁴⁾ Represents our commercial and consumer allowance for credit losses, as appropriate, divided by the corresponding outstanding balance of total nonperforming loans held for investment. Nonperforming loans include accruing loans contractually past due 90 days or more.

The following table summarizes the changes in the allowance for credit losses by product and the related loan balance by product during the years ended December 31, 2017, 2016, 2015, 2014 and 2013:

	Commercial				Consumer				Total
	Construction and Other Real Estate	Business and Corporate Banking	Global Banking	Other Comm'l	Residential Mortgages	Home Equity Mortgages	Credit Cards	Other Consumer	
(in millions)									
Year Ended December 31, 2017:									
Allowance for credit losses – beginning of period.....	\$ 92	\$ 317	\$ 508	\$ 13	\$ 26	\$ 20	\$ 34	\$ 7	\$ 1,017
Provision charged (credited) to income	(3)	(59)	(116)	6	(7)	(8)	22	—	(165)
Charge-offs.....	(7)	(37)	(141)	(1)	(4)	(6)	(30)	(4)	(230)
Recoveries.....	—	23	13	—	10	5	6	2	59
Net (charge-offs) recoveries.....	(7)	(14)	(128)	(1)	6	(1)	(24)	(2)	(171)
Allowance for credit losses – end of period	\$ 82	\$ 244	\$ 264	\$ 18	\$ 25	\$ 11	\$ 32	\$ 5	\$ 681
Year Ended December 31, 2016:									
Allowance for credit losses – beginning of period.....	\$ 86	\$ 407	\$ 267	\$ 19	\$ 68	\$ 24	\$ 32	\$ 9	\$ 912
Provision charged (credited) to income ⁽¹⁾	—	10	348	(6)	(9)	(1)	26	4	372
Charge-offs ⁽¹⁾⁽²⁾	(1)	(110)	(107)	—	(45)	(8)	(30)	(8)	(309)
Recoveries.....	7	10	—	—	12	5	6	2	42
Net (charge-offs) recoveries.....	6	(100)	(107)	—	(33)	(3)	(24)	(6)	(267)
Allowance for credit losses – end of period	\$ 92	\$ 317	\$ 508	\$ 13	\$ 26	\$ 20	\$ 34	\$ 7	\$ 1,017
Year Ended December 31, 2015:									
Allowance for credit losses – beginning of period.....	\$ 89	\$ 251	\$ 131	\$ 21	\$ 107	\$ 32	\$ 39	\$ 10	\$ 680
Provision charged (credited) to income	2	215	136	(2)	(15)	(4)	20	9	361
Charge-offs.....	(10)	(69)	—	(1)	(35)	(8)	(32)	(12)	(167)
Recoveries.....	5	10	—	1	11	4	5	2	38
Net (charge-offs) recoveries.....	(5)	(59)	—	—	(24)	(4)	(27)	(10)	(129)
Allowance for credit losses – end of period	\$ 86	\$ 407	\$ 267	\$ 19	\$ 68	\$ 24	\$ 32	\$ 9	\$ 912
Year Ended December 31, 2014:									
Allowance for credit losses – beginning of period.....	\$ 108	\$ 105	\$ 75	\$ 20	\$ 186	\$ 49	\$ 50	\$ 13	\$ 606
Provision charged (credited) to income	2	157	64	(7)	(40)	(14)	23	3	188
Charge-offs.....	(24)	(19)	(8)	(1)	(55)	(13)	(41)	(8)	(169)
Recoveries.....	3	8	—	9	16	10	7	2	55
Net (charge-offs) recoveries.....	(21)	(11)	(8)	8	(39)	(3)	(34)	(6)	(114)
Allowance for credit losses – end of period	\$ 89	\$ 251	\$ 131	\$ 21	\$ 107	\$ 32	\$ 39	\$ 10	\$ 680
Year Ended December 31, 2013:									
Allowance for credit losses – beginning of period.....	\$ 162	\$ 92	\$ 46	\$ 17	\$ 210	\$ 45	\$ 55	\$ 20	\$ 647
Provision charged (credited) to income	(7)	46	28	(5)	42	54	32	3	193
Charge-offs.....	(62)	(42)	—	—	(78)	(52)	(41)	(13)	(288)
Recoveries.....	15	9	1	8	12	2	4	3	54
Net (charge-offs) recoveries.....	(47)	(33)	1	8	(66)	(50)	(37)	(10)	(234)
Allowance for credit losses – end of period	\$ 108	\$ 105	\$ 75	\$ 20	\$ 186	\$ 49	\$ 50	\$ 13	\$ 606

⁽¹⁾ The provision for credit losses and charge-offs for residential mortgage loans during 2016 includes \$11 million related to the lower of amortized cost or fair value adjustment attributable to credit factors for loans transferred to held for sale. See Note 7, "Loans Held for Sale," in the accompanying consolidated financial statements for additional information.

⁽²⁾ For collateral dependent loans that are transferred to held for sale, the existing allowance for credit losses at the time of transfer are recognized as a charge-off. We transferred to held for sale certain residential mortgage loans during 2016 and, accordingly, we recognized the existing allowance for credit losses on these loans as additional charge-offs totaling \$22 million during 2016.

The allowance for credit losses at December 31, 2017 decreased \$336 million or 33 percent as compared with December 31, 2016 due primarily to lower loss estimates in our commercial loan portfolio and, to a lesser extent, lower loss estimates in our consumer

loan portfolio. Our commercial allowance for credit losses decreased \$322 million or 35 percent as compared with December 31, 2016 largely due to improvements in the credit quality of our portfolio driven by managed reductions in certain exposures, releases of reserves due to paydowns and maturities exceeding new loan originations as we continue to focus efforts on improving returns, improvements in credit conditions associated with certain client relationships and the partial charge-off of a single mining client relationship. Our consumer allowance for credit losses decreased \$14 million or 16 percent as compared with December 31, 2016 due to continued improvements in economic and credit conditions, the continued origination of higher quality Premier mortgages and lower loss estimates in our home equity mortgage portfolio reflecting lower outstanding balances. These decreases were partially offset by the impact of a slight increase in delinquency levels in the fourth quarter.

The allowance for credit losses at December 31, 2016 increased \$105 million or 12 percent as compared with December 31, 2015 due to higher loss estimates in our commercial loan portfolio, partially offset by lower loss estimates in our consumer loan portfolio. Our commercial allowance for credit losses increased \$151 million or 19 percent as compared with December 31, 2015 primarily due to higher loss estimates associated with the deterioration of the single mining customer relationship and, to a lesser extent, other downgrades reflecting weaknesses in the financial condition of certain customer relationships, including mining and other industry loan exposures. These increases were partially offset by charge-offs associated with oil and gas industry loan exposures, including a large impaired oil and gas industry loan that was sold during the second quarter. Our consumer allowance for credit losses decreased \$46 million or 35 percent as compared with December 31, 2015 primarily due to charge-offs associated with the transfers of mortgages to held for sale as well as releases of reserves related to certain residential mortgages serviced by others as a result of updated information regarding the underlying loan characteristics being reported by the servicers and improved loss estimates associated with certain home equity mortgages. The decrease also reflects lower loss estimates driven by improvements in economic and credit conditions and the origination of higher quality Premier mortgages.

The allowance for credit losses at December 31, 2015 increased \$232 million or 34 percent as compared with December 31, 2014 due to higher loss estimates in our commercial loan portfolio, partially offset by lower loss estimates in our consumer loan portfolio. Our commercial allowance for credit losses increased \$287 million or 58 percent as compared with December 31, 2014 reflecting higher loss estimates associated with oil and gas industry loan exposures and, to a lesser extent, downgrades in other industry loan exposures reflecting weaknesses in the financial circumstances of certain customer relationships as well as higher allowances associated with loan growth. These increases were partially offset by releases of reserves associated with maturities of lower quality loans and managed reductions in certain exposures. Our consumer allowance for credit losses decreased \$55 million or 29 percent as compared with December 31, 2014 reflecting lower loss estimates in our residential mortgage and home equity mortgage loan portfolios driven by lower severity estimates, improvements in economic and credit conditions including lower delinquency levels and the origination of higher quality Premier mortgages as well as lower loss estimates associated with the remediation of certain mortgage servicing activities and a lower allowance for credit losses in our credit card portfolio reflecting lower receivable levels and improved delinquency roll rates.

The allowance for credit losses at December 31, 2014 increased \$74 million or 12 percent as compared with December 31, 2013 due to higher loss estimates in our commercial loan portfolio, partially offset by lower loss estimates in our consumer loan portfolio. Our commercial allowance for credit losses increased \$184 million or 60 percent as compared with December 31, 2013 primarily due to revisions to certain estimates used in our commercial loan impairment calculation, including estimates of loss emergence, which resulted in an incremental increase in the allowance for credit losses of approximately \$178 million. Excluding this item, our commercial allowance for credit losses increased \$6 million as compared with December 31, 2013 driven by higher allowances associated with loan growth and increased levels of reserves for risk factors not fully reflected in the statistical reserve calculation including large loan as well as emerging and expansion markets loan exposure was partially offset by improvements in economic and credit conditions, including lower specific customer loss allowances which led to lower levels of delinquency and nonperforming loans, as well as the sale, charge-off or payoff of certain commercial exposures. Our consumer allowance for credit losses decreased \$110 million or 37 percent as compared with December 31, 2013 reflecting lower loss estimates in our residential mortgage loan portfolio driven by lower severity estimates, improvements in economic and credit conditions including lower delinquency levels and the origination of higher quality Premier mortgages. These improvements were partially offset by increased loss estimates associated with the remediation of certain mortgage servicing activities. Also contributing to the decrease was a lower allowance for credit losses for our credit card portfolio due to improved economic conditions, including lower dollars of delinquency and lower receivable levels.

Our residential mortgage loan allowance for credit losses in all periods reflects consideration of risk factors relating to trends such as recent portfolio performance as compared with average roll rates and economic uncertainty, including housing market trends as well as second lien exposure.

The allowance for credit losses as a percentage of total loans held for investment at December 31, 2017, 2016 and 2015 increased or decreased compared with their respective prior year periods for the reasons discussed above. In 2014, the allowance for credit losses as a percentage of total loans held for investment decreased as the increase in our overall allowance for credit losses for the reasons discussed above was outpaced by an increase in loans due to loan growth, primarily in our commercial loan portfolio.

The allowance for credit losses as a percentage of net charge-offs at December 31, 2017 was relatively flat compared with December 31, 2016 as lower dollars of net charge-offs in both our commercial and consumer loan portfolios was largely offset by a decrease in our overall allowance for credit losses for the reasons discussed above. In 2016, the allowance for credit losses as a percentage of net charge-offs decreased as the increase in dollars of net charge-offs largely driven by higher charge-offs associated with oil and gas industry loan exposures in our commercial loan portfolio, including a large impaired oil and gas industry loan that was sold during the second quarter, outpaced the increase in our overall allowance for credit losses for the reasons discussed above. In 2015, the allowance for credit losses as a percentage of net charge-offs increased as the increase in our overall allowance for credit losses for the reasons discussed above outpaced the increase in dollars of net charge-offs due to higher charge-offs in our commercial loan portfolio. In 2014, the allowance for credit losses as a percentage of net charge-offs increased due to lower dollars of net charge-offs in both our commercial and consumer loan portfolios, while our overall allowance for credit losses increased for the reasons discussed above.

The allowance for credit losses as a percentage of nonperforming loans held for investment at December 31, 2017 decreased as compared with December 31, 2016 as the decrease in our overall allowance for credit losses for the reasons discussed above outpaced the decreases in nonperforming loans driven by our commercial loan portfolio. In 2016, the allowance for credit losses as a percentage of nonperforming loans held for investment was relatively flat as the increase in nonperforming loans driven by higher nonperforming loans in our commercial loan portfolio was largely offset by the increase in our overall allowance for credit losses for the reasons discussed above. In 2015, the allowance for credit losses as a percentage of nonperforming loans held for investment increased as the increase in our overall allowance for credit losses for the reasons discussed above outpaced the increase in nonperforming loans driven by higher nonperforming loans in our commercial loan portfolio. In 2014, the allowance for credit losses as a percentage of nonperforming loans held for investment increased due to a higher overall allowance for credit losses for the reasons discussed, while nonperforming loans were lower in both our commercial and consumer loan portfolios.

The following table presents the allowance for credit losses by major loan categories, excluding loans held for sale:

At December 31,	% of Loans to Total Loans		% of Loans to Total Loans		% of Loans to Total Loans		% of Loans to Total Loans		% of Loans to Total Loans	
	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
	2017	2016	2017	2016	2015	2014	2015	2014	2013	2013
	(dollars are in millions)									
Commercial ⁽¹⁾	\$ 608	73.1%	\$ 930	73.4%	\$ 779	75.3%	\$ 492	74.7%	\$ 308	71.6%
Consumer:										
Residential mortgages ..	25	23.8	26	23.3	68	21.5	107	21.4	186	23.4
Home equity mortgages	11	1.6	20	1.9	24	1.9	32	2.3	49	3.0
Credit cards	32	1.0	34	.9	32	.8	39	.9	50	1.3
Other consumer	5	.5	7	.5	9	.5	10	.7	13	.7
Total consumer	73	26.9	87	26.6	133	24.7	188	25.3	298	28.4
Total	\$ 681	100.0%	\$ 1,017	100.0%	\$ 912	100.0%	\$ 680	100.0%	\$ 606	100.0%

⁽¹⁾ See Note 6, "Allowance for Credit Losses," in the accompanying consolidated financial statements for components of the commercial allowance for credit losses.

Reserves for Off-Balance Sheet Credit Risk We also maintain a separate reserve for credit risk associated with certain commercial off-balance sheet exposures, including letters of credit, unused commitments to extend credit and financial guarantees. The following table summarizes this reserve, which is included in other liabilities on the consolidated balance sheet. The related provision is recorded as a component of other expense within operating expenses.

At December 31,	2017	2016	2015	2014	2013
	(in millions)				
Off-balance sheet credit risk reserve	\$ 106	\$ 134	\$ 99	\$ 68	\$ 60

Off-balance sheet reserves decreased in 2017 largely due to managed reductions in certain exposures and improvements in credit conditions associated with certain client relationships. The increase in off-balance sheet reserves in 2016 reflects the impact of downgrades in oil and gas industry and other industry loan exposures. The increase in off-balance sheet reserves in 2015 reflects higher loss estimates associated with oil and gas industry exposures. The increase in off-balance sheet reserves in 2014 largely reflects growth in customer activity. Off-balance sheet exposures are summarized under the caption "Off-Balance Sheet Arrangements, Credit Derivatives and Other Contractual Obligations" in this MD&A.

Delinquency The following table summarizes dollars of two-months-and-over contractual delinquency and two-months-and-over contractual delinquency as a percent of total loans and loans held for sale ("delinquency ratio"):

	2017				2016			
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
(dollars are in millions)								
Delinquent loans:								
Commercial.....	\$ 45	\$ 82	\$ 68	\$ 79	\$ 90	\$ 124	\$ 42	\$ 49
Consumer:								
Residential mortgages ⁽¹⁾⁽²⁾	425	406	442	434	765	774	801	835
Home equity mortgages ⁽¹⁾⁽²⁾	39	36	38	40	46	47	49	48
Credit cards.....	12	11	11	12	14	13	12	13
Other consumer.....	10	10	8	10	11	10	9	10
Total consumer.....	486	463	499	496	836	844	871	906
Total.....	\$ 531	\$ 545	\$ 567	\$ 575	\$ 926	\$ 968	\$ 913	\$ 955
Delinquency ratio:								
Commercial.....	.08%	.17%	.14%	.16%	.16%	.21%	.07%	.08%
Consumer:								
Residential mortgages ⁽¹⁾⁽²⁾	2.46	2.36	2.57	2.51	4.23	4.28	4.44	4.66
Home equity mortgages ⁽¹⁾⁽²⁾	3.27	2.92	2.96	2.98	3.26	3.22	3.24	3.11
Credit cards.....	1.66	1.68	1.70	1.86	2.03	1.95	1.80	1.97
Other consumer.....	2.48	2.26	1.63	2.20	2.43	2.20	1.81	2.11
Total consumer.....	2.48	2.37	2.54	2.51	4.05	4.09	4.20	4.40
Total.....	.72%	.80%	.82%	.82%	1.22%	1.22%	1.12%	1.12%

⁽¹⁾ At December 31, 2017 and 2016, consumer mortgage loan delinquency includes \$342 million and \$711 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less costs to sell, including \$1 million and \$358 million, respectively, relating to loans held for sale.

⁽²⁾ The following table reflects dollars of contractual delinquency and delinquency ratios for interest-only loans and adjustable rate mortgage loans:

	2017				2016			
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
(dollars are in millions)								
Dollars of delinquent loans:								
Interest-only loans.....	\$ 10	\$ 30	\$ 41	\$ 25	\$ 46	\$ 54	\$ 58	\$ 68
ARM loans.....	142	137	147	121	237	246	241	252
Delinquency ratio:								
Interest-only loans.....	.29%	.86%	1.18%	.70%	1.28%	1.49%	1.58%	1.88%
ARM loans.....	1.19	1.15	1.24	1.01	1.94	2.00	1.96	2.06

Compared with September 30, 2017, our two-months-and-over contractual delinquency ratio decreased 8 basis points due to lower dollars of delinquency in our commercial loan portfolio and higher outstanding loan balances, primarily in our commercial loan portfolio, which were partially offset by higher dollars of delinquency in our consumer loan portfolio. Compared with December 31, 2016, our two-months-and-over contractual delinquency ratio decreased 50 basis points driven by lower dollars of delinquency in both our consumer and commercial loan portfolios.

Compared with September 30, 2017 and December 31, 2016, our commercial loan two-months-and-over contractual delinquency ratio decreased 9 basis points and 8 basis points, respectively, due to lower dollars of delinquency largely driven by the restructuring of a large global banking loan and, as compared with September 30, 2017, higher outstanding loan balances.

Our consumer loan two-month-and-over contractual delinquency ratio increased 11 basis points compared with September 30, 2017 due to higher dollars of residential mortgage delinquency largely reflecting the impact from Hurricane Irma. Compared with December 31, 2016, our consumer loan two-month-and-over contractual delinquency ratio decreased 157 basis points due to lower dollars of delinquency driven by the sales of certain residential mortgages and, to a lesser extent, continued improvements in economic and credit conditions the continued origination of higher quality Premier mortgages. These decreases were partially offset by the impact of a slight increase in delinquency levels in the fourth quarter as discussed above.

Net Charge-offs of Loans The following table summarizes net charge-off (recovery) dollars as well as the net charge-off (recovery) of loans for the quarter, annualized, as a percentage of average loans, excluding loans held for sale, ("net charge-off ratio"):

	2017					2016					2015 Full Year
	Full Year	Quarter Ended				Full Year	Quarter Ended				
		Dec. 31	Sept. 30	June 30	Mar. 31		Dec. 31	Sept. 30	June 30	Mar. 31	
(dollars are in millions)											
Net Charge-off Dollars:											
Commercial:											
Real estate, including construction	\$ 7	\$ —	\$ 4	\$ 2	\$ 1	\$ (6)	\$ —	\$ (6)	\$ —	\$ —	\$ 5
Business and corporate banking	14	—	5	—	9	100	43	23	8	26	59
Global banking	128	70	14	45	(1)	107	15	7	78	7	—
Other commercial	1	—	—	1	—	—	—	—	—	—	—
Total commercial	<u>150</u>	<u>70</u>	<u>23</u>	<u>48</u>	<u>9</u>	<u>201</u>	<u>58</u>	<u>24</u>	<u>86</u>	<u>33</u>	<u>64</u>
Consumer:											
Residential mortgages	(6)	(2)	(2)	(4)	2	33	—	31	(2)	4	24
Home equity mortgages	1	(1)	—	1	1	3	(2)	3	—	2	4
Credit cards	24	5	6	7	6	24	5	6	7	6	27
Other consumer	2	1	—	—	1	6	1	1	3	1	10
Total consumer	<u>21</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>10</u>	<u>66</u>	<u>4</u>	<u>41</u>	<u>8</u>	<u>13</u>	<u>65</u>
Total	<u>\$ 171</u>	<u>\$ 73</u>	<u>\$ 27</u>	<u>\$ 52</u>	<u>\$ 19</u>	<u>\$ 267</u>	<u>\$ 62</u>	<u>\$ 65</u>	<u>\$ 94</u>	<u>\$ 46</u>	<u>\$ 129</u>
Net Charge-off Ratio:											
Commercial:											
Real estate, including construction .....	.07%	—%	.15%	.08%	.04%	(.06)%	—%	(.22)%	—%	—%	.04%
Business and corporate banking .....	.11	—	.15	—	.28	.55	1.17	.65	.22	.70	.39
Global banking .....	.59	1.36	.28	.81	(.02)	.45	.25	.11	1.14	.09	—
Other commercial .....	.02	—	—	.10	—	—	—	—	—	—	—
Total commercial	<u>.30</u>	<u>.58</u>	<u>.19</u>	<u>.39</u>	<u>.07</u>	<u>.34</u>	<u>.41</u>	<u>.16</u>	<u>.57</u>	<u>.21</u>	<u>.10</u>
Consumer:											
Residential mortgages	(.03)	(.05)	(.04)	(.09)	.04	.19	—	.70	(.05)	.09	.14
Home equity mortgages .....	.08	(.33)	—	.30	.29	.20	(.56)	.81	—	.51	.24
Credit cards	3.65	2.95	3.68	4.34	3.65	3.59	2.98	3.59	4.23	3.58	3.98
Other consumer .....	.52	1.09	—	—	1.03	1.53	1.04	1.11	2.87	.99	2.34
Total consumer	<u>.11</u>	<u>.06</u>	<u>.08</u>	<u>.08</u>	<u>.20</u>	<u>.33</u>	<u>.08</u>	<u>.81</u>	<u>.16</u>	<u>.26</u>	<u>.32</u>
Total	<u>.25%</u>	<u>.43%</u>	<u>.16%</u>	<u>.30%</u>	<u>.10%</u>	<u>.33 %</u>	<u>.32%</u>	<u>.33 %</u>	<u>.47%</u>	<u>.22%</u>	<u>.16%</u>

Our net charge-off ratio as a percentage of average loans decreased 8 basis points for the full year of 2017 compared with the full year of 2016 due to lower levels of net charge-offs in both our commercial and consumer loan portfolios. The decrease in net charge-offs in our commercial loan portfolio reflects lower charge-offs associated with oil and gas industry loan exposures which were partially offset by the partial charge-off of a single mining client relationship in 2017. The decrease in net charge-offs in our consumer loan portfolio was largely due to the non-recurrence of charge-offs recorded in 2016 related to the transfers of mortgages to held for sale and, to a lesser extent, continued improvements in economic and credit conditions and the continued origination of higher quality Premier mortgages.

Our net charge-off ratio as a percentage of average loans increased 17 basis points for the full year of 2016 compared with the full year of 2015 due to higher levels of net charge-offs in our commercial loan portfolio largely driven by higher charge-offs associated with oil and gas industry loan exposures, including a large impaired oil and gas industry loan that was sold during the second quarter. Net charge-offs in our consumer loan portfolio were relatively flat for the full year of 2016 compared with the full year of 2015 as higher charge-offs driven by the transfers of mortgages to held for sale were offset by lower charge-offs due to continued improvements in economic and credit conditions, including the impact of lower levels of delinquency on accounts less than 180 days delinquent, as well as the continued origination of higher quality Premier mortgages which are an increasingly larger portion of the portfolio.

Nonperforming Assets Nonperforming assets consisted of the following:

At December 31,	2017	2016	2015
	(in millions)		
Nonaccrual loans:			
Commercial:			
Real estate, including construction	\$ 12	\$ 56	\$ 53
Business and corporate banking	215	187	167
Global banking.....	385	546	44
Other commercial	1	1	1
Commercial nonaccrual loans held for sale.....	—	11	26
Total commercial	<u>613</u>	<u>801</u>	<u>291</u>
Consumer:			
Residential mortgages ⁽¹⁾⁽²⁾⁽³⁾	414	435	814
Home equity mortgages ⁽¹⁾⁽²⁾	67	75	71
Consumer nonaccrual loans held for sale	1	369	3
Total consumer.....	<u>482</u>	<u>879</u>	<u>888</u>
Total nonaccruing loans	<u>1,095</u>	<u>1,680</u>	<u>1,179</u>
Accruing loans contractually past due 90 days or more:			
Commercial:			
Business and corporate banking	1	1	1
Total commercial	<u>1</u>	<u>1</u>	<u>1</u>
Consumer:			
Credit cards	9	10	9
Other consumer.....	8	7	7
Total consumer.....	<u>17</u>	<u>17</u>	<u>16</u>
Total accruing loans contractually past due 90 days or more	<u>18</u>	<u>18</u>	<u>17</u>
Total nonperforming loans	<u>1,113</u>	<u>1,698</u>	<u>1,196</u>
Other real estate owned ⁽⁴⁾	11	27	29
Total nonperforming assets	<u>\$ 1,124</u>	<u>\$ 1,725</u>	<u>\$ 1,225</u>

⁽¹⁾ At December 31, 2017, 2016 and 2015, nonaccrual consumer mortgage loans held for investment include \$360 million, \$382 million and \$768 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell.

⁽²⁾ Nonaccrual consumer mortgage loans held for investment include all loans which are 90 or more days contractually delinquent as well as loans discharged under Chapter 7 bankruptcy and not re-affirmed and second lien loans where the first lien loan that we own or service is 90 or more days contractually delinquent.

⁽³⁾ Nonaccrual consumer mortgage loans for all periods does not include guaranteed loans purchased from the Government National Mortgage Association. Repayment of these loans are predominantly insured by the Federal Housing Administration and as such, these loans have different risk characteristics from the rest of our customer loan portfolio.

⁽⁴⁾ Includes \$1 million or less of commercial other real estate owned at December 31, 2017, 2016 and 2015, respectively.

Nonaccrual loans at December 31, 2017 decreased as compared with December 31, 2016 due to lower levels of nonaccrual loans in both our commercial and consumer loan portfolios. The decrease in commercial nonaccrual loans was driven primarily by managed reductions in certain exposures and the partial charge-off of a single mining client relationship. The decrease in consumer nonaccrual loans was primarily due to the sales of certain residential mortgages and, to a lesser extent, continued improvements in economic and credit conditions the continued origination of higher quality Premier mortgages. Accruing loans past due 90 days or more remained flat compared with December 31, 2016.

Nonaccrual loans at December 31, 2016 increased as compared with December 31, 2015 due to higher levels of commercial nonaccrual loans driven by the downgrade of a single mining customer relationship as well as other downgrades reflecting weaknesses in the financial condition of certain customer relationships. Our consumer nonaccrual loans decreased slightly compared with December 31, 2015 reflecting the impact of continued improvements in economic and credit conditions. Residential mortgage nonaccrual loan levels continued to be impacted by an elongated foreclosure process. Accruing loans past due 90 days or more remained flat compared with December 31, 2015.

Accrued but unpaid interest on loans placed on nonaccrual status generally is reversed and reduces current income at the time loans are so categorized. Interest income on these loans may be recognized to the extent of cash payments received. Our policies and practices for problem loan management and placing loans on nonaccrual status are summarized in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements.

Impaired Commercial Loans A commercial loan is considered to be impaired when it is deemed probable that not all principal and interest amounts due according to the contractual terms of the loan agreement will be collected. Probable losses from impaired loans are quantified and recorded as a component of the overall allowance for credit losses. Generally, impaired commercial loans include loans in nonaccrual status, loans that have been assigned a specific allowance for credit losses, loans that have been partially charged off and TDR Loans. The following table summarizes impaired commercial loan statistics:

At December 31,	2017	2016	2015
	(in millions)		
Impaired commercial loans:			
Balance at end of period.....	\$ 698	\$ 1,053	\$ 453
Amount with impairment reserve	383	596	171
Impairment reserve	127	308	54

Commercial impaired loans decreased in 2017 due to managed reductions in certain exposures and paydowns and the partial charge-off of a single mining client relationship. In 2016, commercial impaired loans increased largely due to higher nonaccrual loans for the reasons discussed above and, to a lesser extent, higher TDR Loans reflecting the restructuring of certain customer relationships.

Criticized Loans Criticized loan classifications presented in the table below are determined by the assignment of various criticized facility grades based on the risk rating standards of our regulator. The following facility grades are deemed to be criticized:

- *Special Mention* – generally includes loans that are protected by collateral and/or the credit worthiness of the customer, but are potentially weak based upon economic or market circumstances which, if not checked or corrected, could weaken our credit position at some future date.
- *Substandard* – includes loans that are inadequately protected by the underlying collateral and/or general credit worthiness of the customer. These loans present a distinct possibility that we will sustain some loss if the deficiencies are not corrected.
- *Doubtful* – includes loans that have all the weaknesses exhibited by substandard loans, with the added characteristic that the weaknesses make collection or liquidation in full of the recorded loan highly improbable. However, although the possibility of loss is extremely high, certain factors exist which may strengthen the credit at some future date, and therefore the decision to charge-off the loan is deferred. Loans graded as doubtful are required to be placed in nonaccruing status.

The following table summarizes criticized commercial loans:

At December 31,	2017	2016	2015
	(in millions)		
Special mention.....	\$ 1,407	\$ 1,941	\$ 2,250
Substandard.....	2,248	3,439	3,214
Doubtful	127	358	65
Total.....	<u>\$ 3,782</u>	<u>\$ 5,738</u>	<u>\$ 5,529</u>

Criticized loans at December 31, 2017 decreased as compared with December 31, 2016 due to managed reductions in certain exposures, paydowns and improvements in credit conditions associated with certain client relationships. Criticized loans at December 31, 2016 increased slightly as compared with December 31, 2015 as the impact of downgrades were largely offset by paydowns and loan sales.

Concentration of Credit Risk A concentration of credit risk is defined as a significant credit exposure with an individual or group engaged in similar activities or affected similarly by economic conditions. We enter into a variety of transactions in the normal course of business that involve both on and off-balance sheet credit risk. Principal among these activities is lending to various commercial, institutional, governmental and individual customers throughout the United States and internationally. We manage the varying degrees of credit risk associated with on and off-balance sheet transactions through specific credit policies and procedures which provide for a strict approval, monitoring and reporting process. It is our policy to require collateral when it is deemed appropriate. Varying degrees and types of collateral are secured depending upon management's credit evaluation.

Our consumer loan portfolio includes the following types of loans:

- Interest-only loans – A loan which allows a customer to pay the interest-only portion of the monthly payment for a period of time which results in lower payments during the initial loan period.
- Adjustable rate mortgage ("ARM") loans – A loan which allows us to adjust pricing on the loan in line with market movements.

The following table summarizes the balances of interest-only and ARM loans in our loan portfolios, including certain loans held for sale, at December 31, 2017 and 2016. Each category is not mutually exclusive and loans may appear in more than one category below.

At December 31,	2017	2016
	(in millions)	
Interest-only residential mortgage and home equity mortgage loans	\$ 3,424	\$ 3,589
ARM loans ⁽¹⁾	11,976	12,219

⁽¹⁾ During 2018 and 2019, approximately \$696 million and \$719 million, respectively, of the ARM loans will experience their first interest rate reset.

The following table summarizes the concentrations of first and second liens within the outstanding residential mortgage and home equity mortgage portfolios. Amounts in the table exclude residential mortgage loans held for sale of \$6 million and \$890 million at December 31, 2017 and 2016, respectively, and home equity mortgage loans held for sale of \$4 million at December 31, 2016.

At December 31,	2017	2016
	(in millions)	
Closed end:		
First lien.....	\$ 17,273	\$ 17,181
Second lien	49	64
Revolving ⁽¹⁾	1,142	1,344
Total.....	<u>\$ 18,464</u>	<u>\$ 18,589</u>

⁽¹⁾ A majority of revolving are second lien mortgages.

Geographic Concentrations The following table reflects regional exposure at December 31, 2017 and 2016 for our real estate secured loan portfolios:

	Commercial Real Estate, including Construction Loans	Residential Mortgages and Home Equity Mortgages
December 31, 2017		
New York State	34.0%	31.9%
California	22.0	42.6
North Central United States	3.2	2.3
North Eastern United States, excluding New York State.....	6.8	8.1
Southern United States	26.2	10.6
Western United States, excluding California.....	6.7	4.5
Mexico	1.1	—
Total.....	<u>100.0%</u>	<u>100.0%</u>
December 31, 2016		
New York State	30.8%	32.0%
California	20.9	39.0
North Central United States	3.2	3.6
North Eastern United States, excluding New York State.....	8.3	8.8
Southern United States	26.8	12.0
Western United States, excluding California.....	6.9	4.6
Mexico	3.1	—
Total.....	<u>100.0%</u>	<u>100.0%</u>

Commercial Credit Exposure Our commercial credit exposure is diversified across a broad range of industries. Commercial loans outstanding and unused commercial commitments by industry are presented in the table below:

At December 31,	2017		2016	
	Commercial Utilized	Unused Commercial Commitments	Commercial Utilized	Unused Commercial Commitments
	(in millions)			
Diversified financials	\$ 8,885	\$ 10,652	\$ 8,526	\$ 10,502
Real estate	8,532	3,048	9,461	2,697
Consumer services	3,884	2,792	3,463	2,406
Materials	3,884	6,379	4,708	6,445
Energy	3,182	7,950	4,806	6,551
Capital goods	2,419	7,120	2,440	4,908
Retailing	2,139	4,659	2,353	4,845
Technology hardware and equipment	2,119	6,849	2,074	5,761
Commercial and professional services	1,981	3,576	2,294	3,397
Consumer durables and apparel	1,921	3,693	1,817	3,722
Health care equipment and services	1,084	1,183	1,460	1,433
Pharmaceuticals, biotechnology and life sciences	876	3,485	1,232	3,599
Food, beverage and tobacco	818	3,242	981	3,310
Banks	790	524	1,006	1,338
Software and services	734	2,331	667	3,053
Utilities	627	724	976	946
Transportation	592	692	669	604
Automobiles and components	580	1,276	679	1,166
Food and staples retailing	517	1,481	676	1,811
Household and personal products	290	1,671	368	1,659
Total commercial credit exposure in top 20 industries ⁽¹⁾	45,854	73,327	50,656	70,153
All other industries	431	5,060	286	4,179
Total commercial credit exposure ⁽²⁾	\$ 46,285	\$ 78,387	\$ 50,942	\$ 74,332

⁽¹⁾ Based in utilization at December 31, 2017.

⁽²⁾ Excludes commercial credit exposures with affiliates.

Cross-Border Net Outstandings Cross-border net outstandings are amounts payable by residents of foreign countries regardless of the currency of claim and local country claims in excess of local country obligations. Cross-border net outstandings, as calculated in accordance with FFIEC guidelines, include deposits placed with other banks, loans, acceptances, securities available-for-sale, trading securities, revaluation gains on foreign exchange and derivative contracts and accrued interest receivable. Excluded from cross-border net outstandings are, among other things, the following: local country claims funded by non-local country obligations (U.S. dollar or other non-local currencies), principally certificates of deposit issued by a foreign branch, where the providers of funds agree that, in the event of the occurrence of a sovereign default or the imposition of currency exchange restrictions in a given country, they will not be paid until such default is cured or currency restrictions lifted or, in certain circumstances, they may accept payment in local currency or assets denominated in local currency (hereinafter referred to as constraint certificates of deposit); and cross-border claims that are guaranteed by cash or other external liquid collateral. Cross-border net outstandings that exceed 75 percent of total assets at year-end are summarized in the following table:

	Banks and Other Financial Institutions	Public Sector, Commercial and Industrial	Total
	(in millions)		
December 31, 2017:			
Brazil.....	\$ 788	\$ 3,035	\$ 3,823
Japan	12	3,697	3,709
United Kingdom	2,090	401	2,491
Canada	\$ 445	\$ 1,053	1,498
Total	<u>\$ 3,335</u>	<u>\$ 8,186</u>	<u>\$ 11,521</u>
December 31, 2016:			
Brazil.....	\$ 854	\$ 4,628	\$ 5,482
Mexico	853	2,081	2,934
United Kingdom	1,456	356	1,812
Total	<u>\$ 3,163</u>	<u>\$ 7,065</u>	<u>\$ 10,228</u>
December 31, 2015:			
Brazil.....	\$ 2,191	\$ 4,755	\$ 6,946
Mexico	1,104	5,131	6,235
Canada	717	1,745	2,462
Total	<u>\$ 4,012</u>	<u>\$ 11,631</u>	<u>\$ 15,643</u>

Credit Risks Associated with Derivative Contracts Credit risk associated with derivatives is measured as the net replacement cost of derivative contracts in a receivable position in the event the counterparties of such contracts fail to perform under the terms of those contracts. In managing derivative credit risk, both the current exposure, which is the replacement cost of contracts on the measurement date, as well as an estimate of the potential change in value of contracts over their remaining lives are considered. Counterparties to our derivative activities include financial institutions, central clearing parties, foreign and domestic government agencies, corporations, funds (mutual funds, hedge funds, etc.), insurance companies and private clients as well as other HSBC entities. These counterparties are subject to regular credit review by the credit risk management department. To minimize credit risk, we enter into legally enforceable master netting agreements which reduce risk by permitting the closeout and netting of transactions with the same counterparty upon occurrence of certain events. In addition, we reduce credit risk by obtaining collateral from counterparties. The determination of the need for and the levels of collateral will differ based on an assessment of the credit risk of the counterparty.

The total risk in a derivative contract is a function of a number of variables, such as:

- volatility of interest rates, currencies, equity or corporate reference entity used as the basis for determining contract payments;
- current market events or trends;
- country risk;
- maturity and liquidity of contracts;
- credit worthiness of the counterparties in the transaction;
- the existence of a master netting agreement among the counterparties; and
- existence and value of collateral received from counterparties to secure exposures.

The table below presents total credit risk exposure calculated using the Basel III Standardized Approach regulatory capital rules published by U.S. banking regulatory agencies which includes the net positive mark-to-market of the derivative contracts plus any adjusted potential future exposure as measured in reference to the notional amount. The regulatory capital rules recognize that bilateral netting agreements reduce credit risk and, therefore, allow for reductions of risk-weighted assets when netting requirements have been met and collateral exists. As a result, risk-weighted amounts for regulatory capital purposes are a portion of the original gross exposures. However, many contracts contain provisions that allow us to close out the transaction if the counterparty fails to post required collateral. In addition, many contracts give us the right to break the transactions earlier than the final maturity date. As a result, these contracts have potential future exposures that are often much smaller than the future exposures derived from the regulatory capital rules.

At December 31,	2017	2016
	(in millions)	
Risk associated with derivative contracts:		
Total credit risk exposure.....	\$ 30,737	\$ 30,339
Less: collateral held against exposure.....	7,213	7,733
Net credit risk exposure.....	<u>\$ 23,524</u>	<u>\$ 22,606</u>

The table below summarizes the risk profile of the counterparties to derivative contracts with credit risk exposure, net of cash and other highly liquid collateral. The ratings presented in the table below are equivalent ratings based on our internal credit rating system.

Rating equivalent at December 31,	Percent of Current Credit Risk Exposure, Net of Collateral	
	2017	2016
AAA to AA-.....	65%	44%
A+ to A-.....	23	41
BBB+ to BBB-.....	10	12
BB+ to B-.....	2	3
CCC+ and below.....	—	—
Total.....	<u>100%</u>	<u>100%</u>

The improvement in the ratings as compared with December 31, 2016 is primarily due to the upgrade of a large clearinghouse counterparty.

The table below sets out the mark-to-market value of derivative contracts associated with an investment grade monoline counterparty at December 31, 2017 and 2016. Our principal exposure to the monoline insurance company is through over-the-counter ("OTC") derivative transactions, primarily credit default swaps, where we have purchased credit protection against securities held within the trading portfolio. Using the internal credit rating of the monoline insurer, fair value adjustments have been recorded due to counterparty credit exposures. The "Credit Risk Adjustment" column in the below table indicates the valuation adjustment taken against the mark-to-market exposures and reflects the creditworthiness of the monoline insurer. These adjustments have been charged to the consolidated statement of income (loss).

At December 31,	2017	2016
	(in millions)	
Derivative contracts with a monoline counterparty - investment grade:		
Net exposure before credit risk adjustment ⁽¹⁾	\$ 117	\$ 181
Credit risk adjustment ⁽²⁾	(12)	(22)
Net exposure after credit risk adjustment.....	<u>\$ 105</u>	<u>\$ 159</u>

⁽¹⁾ Net exposure after legal netting and any other relevant credit mitigation prior to deduction of credit risk adjustment

⁽²⁾ Fair value adjustment recorded against the over-the-counter derivative counterparty exposures to reflect the credit worthiness of the counterparty.

Market risk is the adverse effect that a change in market liquidity, interest rates, credit spreads, currency or implied volatility rates has on the value of a financial instrument. We manage the market risk associated with interest rate and foreign exchange contracts by establishing and monitoring limits as to the types and degree of risk that may be undertaken. We also manage the market risk associated with trading derivatives through hedging strategies that correlate the rates, price and spread movements. This risk is

measured daily by using Value at Risk and other methodologies. See the caption "Risk Management" in this MD&A for additional information regarding the use of Value at Risk analysis to monitor and manage interest rate and other market risks.

Liquidity and Capital Resources

Effective liquidity management is defined as ensuring we can meet customer loan requests, customer deposit maturities/withdrawals and other cash commitments efficiently under both normal operating conditions and under unpredictable circumstances of industry or market stress. To achieve this objective, we have guidelines that require sufficient liquidity to cover potential funding requirements and to avoid over-dependence on volatile, less reliable funding markets. Guidelines are set for the consolidated balance sheet of HSBC USA to ensure that it is a source of strength for our regulated, deposit-taking banking subsidiary, as well as to address the more limited sources of liquidity available to it as a holding company. Similar guidelines are set for HSBC Bank USA to ensure that it can meet its liquidity needs in various stress scenarios. Cash flow analysis, including stress testing scenarios, forms the basis for liquidity management and contingency funding plans. See "Risk Management" in this MD&A for further discussion of our approach towards liquidity risk management, including information regarding the key measures employed to define, monitor and control our liquidity and funding risk.

Interest Bearing Deposits with Banks totaled \$11,157 million and \$20,238 million at December 31, 2017 and 2016, respectively, of which \$10,338 million and \$18,833 million, respectively, were held with the Federal Reserve Bank. Balances may fluctuate from period to period depending upon our liquidity position at the time and our strategy for deploying liquidity. Surplus interest bearing deposits with the Federal Reserve Bank may be deployed into securities purchased under agreements to resell or other investments depending on market conditions and the opportunity to maximize returns.

Federal Funds Sold and Securities Purchased under Agreements to Resell totaled \$32,618 million and \$30,023 million at December 31, 2017 and 2016, respectively. Balances may fluctuate from period to period depending upon our liquidity position at the time and our strategy for deploying liquidity.

Trading Assets includes securities totaling \$10,151 million and \$10,667 million at December 31, 2017 and 2016, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on trends.

Securities includes securities available-for-sale and securities held-to-maturity totaling \$44,677 million and \$49,719 million at December 31, 2017 and 2016, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on trends.

Short-Term Borrowings totaled \$4,650 million and \$5,101 million at December 31, 2017 and 2016, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on short-term borrowing trends.

Deposits totaled \$118,702 million and \$129,248 million at December 31, 2017 and 2016, respectively, which included \$98,500 million and \$98,671 million, respectively, of core deposits as calculated in accordance with FFIEC guidelines. See "Balance Sheet Review" in this MD&A for further analysis and discussion on deposit trends.

Long-Term Debt decreased to \$34,966 million at December 31, 2017 from \$37,739 million at December 31, 2016. The following table summarizes issuances and retirements of long-term debt during 2017 and 2016:

Year Ended December 31,	2017	2016
	(in millions)	
Long-term debt issued.....	\$ 5,158	\$ 8,694
Long-term debt repaid.....	(8,953)	(4,869)
Net long-term debt issued (repaid).....	<u>\$ (3,795)</u>	<u>\$ 3,825</u>

See "Balance Sheet Review" in this MD&A for further analysis and discussion on long-term debt trends, including additional information on debt issued and repaid during 2017.

Under our shelf registration statement on file with the SEC, we may issue certain securities including debt securities and preferred stock. We satisfy the eligibility requirements for designation as a "well-known seasoned issuer," which allows us to file a registration statement that does not have a limit on issuance capacity. The ability to issue under the registration statement is limited by the authority granted by the Board of Directors. At December 31, 2017, we were authorized to issue up to \$36,000 million, of which \$14,613 million was available. HSBC Bank USA has a \$40,000 million Global Bank Note Program that provides for the issuance of subordinated and senior notes, of which \$15,400 million was available at December 31, 2017.

As a member of the FHLB and the Federal Reserve Bank of New York, we have secured borrowing facilities which are collateralized by loans and investment securities. At December 31, 2017, long-term debt included \$3,100 million of borrowings from the FHLB

facility. Based upon the amounts pledged as collateral under these facilities, we have additional borrowing capacity of up to \$15,920 million.

Preferred Equity See Note 17, "Preferred Stock," in the accompanying consolidated financial statements for information regarding all outstanding preferred share issues.

Common Equity During 2017 and 2016, HSBC USA did not receive any cash capital contributions from its parent, HSBC North America, and did not make any capital contributions to its subsidiary, HSBC Bank USA.

Capital Ratios In managing capital, we develop targets for common equity Tier 1 capital to risk-weighted assets, Tier 1 capital to risk-weighted assets, total capital to risk-weighted assets, Tier 1 capital to adjusted quarterly average assets (i.e., the "Tier 1 leverage ratio") and Tier 1 capital to total leverage exposure (i.e., the "supplementary leverage ratio" or "SLR"). Capital targets are reviewed at least semi-annually to ensure they reflect our business mix and risk profile, as well as real-time conditions and circumstances. The following table summarizes HSBC USA's Basel III transitional and fully phased-in capital ratios calculated as of December 31, 2017 and 2016:

	Transitional		Fully Phased-In	
	2017	2016	2017	2016
Common equity Tier 1 capital to risk-weighted assets	14.2%	13.7%	14.1%	13.2%
Tier 1 capital to risk-weighted assets	15.3	14.5	15.2	14.2
Total capital to risk-weighted assets	18.4	18.3	18.1	17.5
Tier 1 leverage ratio ⁽¹⁾	9.9	9.2	9.9	9.1
Supplementary leverage ratio ⁽²⁾	7.3	6.5	7.3	6.5

⁽¹⁾ Adjusted quarterly average assets, the Tier 1 leverage ratio denominator, reflects quarterly average assets adjusted for amounts permitted to be deducted from Tier 1 capital for the three months ended December 31, 2017 and 2016, respectively.

⁽²⁾ Beginning January 1, 2018, banking institutions is required to maintain the regulatory minimum SLR of 3 percent. Total leverage exposure, the SLR denominator, includes adjusted quarterly average assets plus certain off-balance sheet exposures.

HSBC USA manages capital in accordance with HSBC Group policy. The HSBC North America Internal Capital Adequacy Assessment Process ("ICAAP") works in conjunction with the HSBC Group's ICAAP. The HSBC North America ICAAP applies to HSBC Bank USA and evaluates regulatory capital adequacy, economic capital adequacy and capital adequacy under various stress scenarios. Our approach is to meet our capital needs for these stress scenarios locally through activities which reduce risk. To the extent that local alternatives are insufficient or unavailable, we will rely on capital support from our parent in accordance with HSBC's capital management policy. HSBC has indicated that they are fully committed and have the capacity to provide capital as needed to run operations and maintain sufficient regulatory capital ratios.

Regulatory capital requirements are based on the amount of capital required to be held, as defined by regulations, and the amount of risk-weighted assets, also calculated based on regulatory definitions. Economic Capital is a proprietary measure to estimate unexpected loss at the 99.95 percent confidence level over a 1-year time horizon. Economic Capital is compared to a calculation of available capital resources to assess capital adequacy as part of the ICAAP.

In 2013, U.S. banking regulators issued a final rule implementing the Basel III capital framework in the United States which, for banking organizations such as HSBC North America and HSBC Bank USA, became effective in 2014 with certain provisions being phased in over time through the beginning of 2019. The Basel III rule established an integrated regulatory capital framework to improve the quality and quantity of regulatory capital. In addition to phasing in a complete replacement to the general risk-based capital rules for determining risk-weighted assets (the "Standardized Approach"), the Basel III rule builds on the advanced internal ratings approach for credit risk and advanced measurement approach for operational risk (taken together, the "Advanced Approaches") applicable to banking organizations having \$250 billion or more in total consolidated assets or \$10 billion or more of foreign exposures. For additional discussion of the Basel III rule requirements, including fully phased in required minimum capital ratios, see Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in this Form 10-K. As previously disclosed, in accordance with FRB rules, HSBC North America and HSBC Bank USA received regulatory approval to opt out of the Advanced Approaches and are calculating their risk-based and leverage capital requirements solely under the Standardized Approach. HSBC Bank USA submits an annual statement to the OCC to maintain this opt out. HSBC North America and HSBC Bank USA, however, remain subject to the other capital requirements applicable to Advanced Approaches banking organizations such as: the SLR, the countercyclical capital buffer, stress testing requirements, enhanced risk management standards, enhanced governance and stress testing requirements for liquidity management, and other applicable prudential standards.

In December 2017, the Basel Committee adopted a package of revisions to the Basel III framework that aim to increase consistency in risk-weighted asset calculations and improve the comparability of bank's capital ratios (the "Basel IV Revisions"). The Basel IV Revisions include changes to the Standardized Approach and internal ratings-based approach to determining credit risk, revisions to the operational risk framework, a leverage ratio surcharge for G-SIBs and an output floor. The Basel IV Revisions are not directly

applicable to any U.S. banking organization and must first be implemented by the federal banking agencies. The agencies are expected to act before the January 1, 2022 implementation deadline agreed by the Basel Committee, but it is unclear whether they will deviate significantly from the Basel IV Revisions in the direction of greater conservatism as they did with respect to the Basel III framework. For further discussion of the requirements of the Basel IV Revisions see Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in this Form 10-K.

As a result of the adoption of the final rules by the U.S. banking regulators implementing the Basel III regulatory capital and liquidity reforms from the Basel Committee, together with the impact of similar implementation by U.K. banking regulators and future implementation of the Basel IV Revisions, we continue to review the composition of our capital structure.

In 2015, the Financial Stability Board ("FSB") issued its final standards for TLAC requirements for G-SIBs. In 2016, the FRB adopted final rules implementing the FSB's TLAC standard in the United States. The rules require, among other things, the U.S. IHCs of non U.S. G-SIBs, including HSBC North America, to maintain minimum amounts of TLAC which would include minimum levels of Tier 1 capital and long-term debt satisfying certain eligibility criteria, and a related TLAC buffer commencing January 1, 2019, without the benefit of a phase-in period. The TLAC rules also include 'clean holding company requirements' that impose limitations on the types of financial transactions that HSBC North America could engage in. The FSB's TLAC standard and the FRB's TLAC rules represent a significant expansion of the current regulatory capital framework. To support compliance when the TLAC rules become effective, HSBC North America will be required in future periods to issue additional long-term debt that is TLAC compliant and modify the terms of existing long-term debt in order for that debt to be TLAC compliant.

In 2015, HSBC submitted its required resolution plan to the FRB and the FDIC under the Dodd-Frank Act (the Systemically Important Financial Institution Plan or "SIFI Plan") and HSBC Bank USA submitted its required resolution plan under the Federal Deposit Insurance Act (the Insured Depository Institution Plan or "IDI Plan"). In June 2017, HSBC Bank USA received feedback from the FDIC regarding its IDI Plan which will be addressed in HSBC Bank USA's next plan submission. In January 2018, the FRB and the FDIC in a public correspondence acknowledged their review of the 2015 SIFI Plan and provided clarifying expectations for HSBC's 2018 SIFI Plan. HSBC and HSBC Bank USA have been advised that the next submission dates for the IDI Plan and SIFI Plan are extended to July 1, 2018 and December 31, 2018, respectively.

Capital Planning and Stress Testing U.S. bank holding companies with \$50 billion or more in total consolidated assets, including HSBC North America, are required to comply with the FRB's capital plan rule and Comprehensive Capital Analysis and Review ("CCAR") program, as well as the annual supervisory stress tests conducted by the FRB, and the semi-annual company-run stress tests as required under the Dodd-Frank Act (collectively, "DFAST"). As part of the CCAR process, the FRB undertakes a supervisory assessment of bank holding companies on their capital adequacy, internal capital adequacy assessment process and plans for capital distributions. The FRB can object to a capital plan for qualitative or quantitative reasons, in which case the company cannot make capital distributions (with the exception of those that may have already received a non-objection in the previous year) without specific FRB approval. HSBC North America participates in the CCAR and DFAST programs of the FRB and submitted its latest CCAR capital plan and annual company-run DFAST results in April 2017 and its latest mid-cycle DFAST results in October 2017. HSBC Bank USA is subject to the OCC's DFAST requirements, which require certain banks to conduct annual company-run stress tests, and submitted its latest annual DFAST results in April 2017. The company-run stress tests are forward looking exercises to assess the impact of hypothetical macroeconomic baseline, adverse and severely adverse scenarios provided by the FRB and the OCC for the annual exercise, and internally developed scenarios for both the annual and mid-cycle exercises, on the financial condition and capital adequacy of a bank-holding company or bank over a nine quarter planning horizon. In January 2017, the FRB announced that so-called "large and noncomplex" firms, which are firms with less than \$250 billion in total consolidated assets and less than \$75 billion in total nonbanking assets, are exempt from the CCAR qualitative assessment. HSBC North America does not currently fall into the category of "large and noncomplex" and, therefore, remains subject to the qualitative review in the 2018 CCAR cycle.

HSBC North America and HSBC Bank USA are required to disclose the results of their annual DFAST under the FRB and OCC's severely adverse stress scenario and HSBC North America is required to disclose the results of its mid-cycle DFAST under its internally developed severely adverse stress scenario. In June 2017, HSBC North America and HSBC Bank USA publicly disclosed their most recent annual DFAST results and the FRB also publicly disclosed its own DFAST and CCAR results. In October 2017, HSBC North America publicly disclosed the results of its mid-cycle DFAST results.

In June 2017, the FRB informed HSBC North America, our parent company, that it did not object to HSBC North America's capital plan or the planned capital distributions included in its 2017 CCAR submission. Stress testing results are based solely on hypothetical adverse stress scenarios and should not be viewed or interpreted as forecasts of expected outcomes or capital adequacy or of the actual financial condition of HSBC North America or HSBC Bank USA. Capital planning and stress testing for HSBC North America or HSBC Bank USA may impact our future capital and liquidity. See Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in this Form 10-K for further discussion on capital planning and stress testing, including additional detail regarding the FRB's supervisory assessment as part of the CCAR process.

While bank holding company regulatory capital compliance is generally performed at the HSBC North America level, and also separately for HSBC Bank USA, as a bank holding company we are required to meet minimum capital requirements imposed by the FRB. We present our capital ratios, together with HSBC Bank USA's in Note 23, "Retained Earnings and Regulatory Capital Requirements," in the accompanying consolidated financial statements.

In December 2017, the FRB finalized changes to the CCAR program that will require certain IHCs of foreign banking organizations, including HSBC North America, to provide information about the effect of a hypothetical global market shock on trading and counterparty exposures. HSBC North America will be required to provide quarterly information about such effects, and such effects will also be incorporated into the FRB's CCAR stress testing applicable to HSBC North America, potentially causing additional projected stress losses under such tests.

HSBC USA Inc. HSBC USA is a wholly-owned subsidiary of HSBC North America, which is an indirect wholly-owned subsidiary of HSBC, and the parent company of HSBC Bank USA and other subsidiaries through which we offer consumer and commercial banking products and related financial services including derivatives, liquidity and cash management, trade finance and investment solutions. Our main source of funds is cash received from financing activities, primarily through debt issuance to third parties and affiliates. In addition, we receive cash from affiliates by issuing preferred stock, from subsidiaries in the form of dividends and from our parent by receiving capital contributions when necessary.

HSBC USA received cash dividends from its subsidiaries of \$136 million and \$153 million in 2017 and 2016, respectively. During 2017 and 2016, HSBC USA did not receive any cash capital contributions from its parent, HSBC North America.

HSBC USA has a number of obligations to meet with its available cash. It must be able to service its debt and meet the capital needs of its subsidiaries. It also must pay dividends on its preferred stock and may pay dividends on its common stock. HSBC USA paid dividends on its preferred stock totaling \$77 million and \$67 million in 2017 and 2016, respectively. HSBC USA did not pay any dividends on its common stock during either 2017 or 2016. We may pay dividends in the future, but will maintain our capital at levels consistent with our regulatory requirements, risk appetite and internal capital adequacy process.

At various times, we will make capital contributions to our subsidiaries to comply with regulatory guidance, support receivable growth, maintain acceptable investment grade ratings at the subsidiary level, or provide funding for long-term facilities and technology improvements. During 2017 and 2016, HSBC USA did not make any capital contributions its subsidiary, HSBC Bank USA.

As of December 31, 2017, HSBC Bank USA has sufficient undivided profits on hand from which to source contractual dividends, however prior OCC approval must be sought for the declaration and payment of dividends because cumulative net income for 2015 through 2017 was impacted by the Tax Legislation enacted in December 2017 which reduced the value of HSBC Bank USA's net deferred tax asset. See Note 23, "Retained Earnings and Regulatory Capital Requirements," in the accompanying consolidated financial statements for further details. In determining the extent of dividends to pay, HSBC Bank USA must also consider the effect of dividend payments on applicable risk-based capital and leverage ratio requirements, as well as policy statements of federal regulatory agencies that indicate banking organizations should generally pay dividends out of current operating earnings.

Subsidiaries At December 31, 2017, we had one major subsidiary, HSBC Bank USA. We manage substantially all of our operations through HSBC Bank USA, which contributes to the funding of our businesses primarily through receiving deposits from customers; the collection of receivable balances; issuing short-term, medium-term and long-term debt and selling residential mortgage loans. The vast majority of our domestic medium-term notes and long-term debt is marketed through subsidiaries of HSBC. Intermediate and long-term debt may also be marketed through unaffiliated investment banks.

2018 Funding Strategy Our current estimate for funding needs and sources for 2018 are summarized in the following table:

	(in billions)
Increase (decrease) in funding needs:	
Net change in loans.....	\$ 2
Net change in short-term investments and securities.....	(1)
Net change in trading and other assets.....	2
Total funding needs.....	<u>\$ 3</u>
Increase (decrease) in funding sources:	
Net change in deposits.....	\$ 7
Net change in trading and other short-term liabilities.....	—
Net change in long-term debt.....	(4)
Total funding sources.....	<u>\$ 3</u>

The above table reflects a long-term funding strategy. Daily balances fluctuate as we accommodate customer needs, while ensuring that we have liquidity in place to support the balance sheet maturity funding profile. Should market conditions deteriorate, we have contingency plans to generate additional liquidity through the sales of assets or financing transactions. We remain confident in our ability to access the market for long-term debt funding needs in the current market environment. We continue to seek well-priced and stable customer deposits. We continue to sell new agency eligible mortgage loan originations to third parties.

HSBC Finance relies on its affiliates, including HSBC USA, to satisfy any of its incremental funding needs if required. During 2017, HSBC Finance prepaid the \$2.5 billion that was outstanding under our credit agreement with it. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for further information.

HSBC Bank USA is subject to significant restrictions imposed by federal law on extensions of credit to, and certain other "covered transactions" with HSBC USA and other affiliates. Covered transactions include loans and other extensions of credit, investments and asset purchases, and certain other transactions involving the transfer of value from a subsidiary bank to an affiliate or for the benefit of an affiliate. A bank's credit exposure to an affiliate as a result of a derivative, securities lending/borrowing or repurchase transaction is also subject to these restrictions. A bank's transactions with its non-bank affiliates are also required to be on arm's length terms. Certain Edge Act subsidiaries of HSBC Bank USA are limited in the amount of funds they can provide to other affiliates including their parent. Amounts above their level of invested capital have to be secured with U.S. government securities.

For further discussion relating to our sources of liquidity and contingency funding plan, see the caption "Risk Management" in this MD&A.

Capital Expenditures We made capital expenditures of \$37 million and \$32 million during 2017 and 2016, respectively. In addition to these amounts, during 2017 and 2016, we capitalized \$97 million and \$65 million, respectively, relating to the building of several new banking platforms as part of an initiative to improve and modernize our legacy business systems and build common platforms across HSBC.

Commitments See "Off-Balance Sheet Arrangements, Credit Derivatives and Other Contractual Obligations" in this MD&A for further information on our various commitments.

Contractual Cash Obligations The following table summarizes our long-term contractual cash obligations at December 31, 2017 by period due:

	2018	2019	2020	2021	2022	Thereafter	Total
	(in millions)						
Subordinated long-term debt ⁽¹⁾	\$ 73	\$ —	\$ 1,983	\$ 204	\$ —	\$ 4,000	\$ 6,260
Other long-term debt ⁽¹⁾	8,475	5,103	5,011	3,395	1,647	5,075	28,706
Other postretirement benefit obligations ⁽²⁾	4	4	4	4	4	18	38
Minimum future rental commitments on operating leases ⁽³⁾	128	116	107	98	86	215	750
Purchase obligations ⁽⁴⁾	82	37	24	16	14	3	176
Total	\$ 8,762	\$ 5,260	\$ 7,129	\$ 3,717	\$ 1,751	\$ 9,311	\$ 35,930

⁽¹⁾ Represents future principal payments related to debt instruments included in Note 13, "Long-Term Debt," in the accompanying consolidated financial statements.

⁽²⁾ Represents estimated future employee benefits expected to be paid over the next ten years based on assumptions used to measure our benefit obligation at December 31, 2017. See Note 20, "Pension and Other Postretirement Benefits," in the accompanying consolidated financial statements.

⁽³⁾ Represents expected minimum lease payments, net of minimum sublease income under noncancellable operating leases for premises and equipment included in Note 25, "Guarantees Arrangements, Pledged Assets and Repurchase Agreements" in the accompanying consolidated financial statements.

⁽⁴⁾ Represents binding agreements for mortgage servicing, credit card servicing, lockbox services, advertising and other services.

These cash obligations could be funded primarily through cash collections on loans and from the issuance of new unsecured debt or receipt of deposits.

The pension obligation for our employees are the contractual obligation of HSBC North America and, therefore, are excluded from the table above.

Off-Balance Sheet Arrangements, Credit Derivatives and Other Contractual Obligations

As part of our normal operations, we enter into credit derivatives and various off-balance sheet arrangements with affiliates and third parties. These arrangements arise principally in connection with our lending and client intermediation activities and involve primarily extensions of credit and, in certain cases, guarantees.

As a financial services provider, we routinely extend credit through loan commitments and lines and letters of credit and provide financial guarantees, including derivative transactions having characteristics of a guarantee. The contractual amounts of these financial instruments represent our maximum possible credit exposure in the event that a counterparty draws down the full commitment amount or we are required to fulfill our maximum obligation under a guarantee.

The following table provides maturity information related to our credit derivatives and off-balance sheet arrangements. Many of these commitments and guarantees expire unused or without default. As a result, we believe that the contractual amount is not representative of the actual future credit exposure or funding requirements.

	2018	2019	2020	2021	2022	Thereafter	Balance at December 31,	
							2017	2016
(in millions)								
Standby letters of credit, net of participations ⁽¹⁾	\$ 6,647	\$ 882	\$ 428	\$ 544	\$ 94	\$ 113	\$ 8,708	\$ 8,392
Commercial letters of credit	231	3	—	—	—	—	234	242
Credit derivatives ⁽²⁾	8,562	7,757	7,954	8,822	7,988	1,245	42,328	58,329
Other commitments to extend credit:								
Commercial ⁽³⁾	18,106	9,911	14,121	14,358	18,535	3,756	78,787	74,832
Consumer	7,443	—	—	—	—	—	7,443	7,270
Total.....	<u>\$ 40,989</u>	<u>\$ 18,553</u>	<u>\$ 22,503</u>	<u>\$ 23,724</u>	<u>\$ 26,617</u>	<u>\$ 5,114</u>	<u>\$ 137,500</u>	<u>\$ 149,065</u>

⁽¹⁾ Includes \$1,264 million and \$1,315 million issued for the benefit of HSBC affiliates at December 31, 2017 and 2016, respectively.

⁽²⁾ Includes \$25,639 million and \$29,999 million issued for the benefit of HSBC affiliates at December 31, 2017 and 2016, respectively.

⁽³⁾ Includes \$400 million and \$500 million issued for the benefit of HSBC affiliates at December 31, 2017 and 2016, respectively.

Letters of Credit A letter of credit may be issued for the benefit of a customer, authorizing a third party to draw on the letter for specified amounts under certain terms and conditions. The issuance of a letter of credit is subject to our credit approval process and collateral requirements. We issue commercial and standby letters of credit.

- A commercial letter of credit is drawn down on the occurrence of an expected underlying transaction, such as the delivery of goods. Upon the occurrence of the transaction, the amount drawn under the commercial letter of credit is recorded as a receivable from the customer in other assets and as a liability to the vendor in other liabilities until settled.
- A standby letter of credit is issued to third parties for the benefit of a customer and is essentially a guarantee that the customer will perform, or satisfy some obligation, under a contract. It irrevocably obligates us to pay a third party beneficiary when a customer either: (1) in the case of a performance standby letter of credit, fails to perform some contractual non-financial obligation, or (2) in the case of a financial standby letter of credit, fails to repay an outstanding loan or debt instrument.

Fees are charged for issuing letters of credit commensurate with the customer's credit evaluation and the nature of any collateral. Included in other liabilities are deferred fees on standby letters of credit amounting to \$48 million and \$49 million at December 31, 2017 and 2016, respectively. Fees are recognized ratably over the term of the standby letter of credit. Also included in other liabilities is a credit loss reserve on unfunded standby letters of credit of \$26 million and \$39 million at December 31, 2017 and 2016, respectively. See Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," in the accompanying consolidated financial statements for further discussion on off-balance sheet guarantee arrangements.

Credit Derivatives Credit derivative contracts are entered into both for our own benefit and to satisfy the needs of our customers. Credit derivatives are arrangements where one party (the "beneficiary") transfers the credit risk of a reference asset to another party (the "guarantor"). Under this arrangement the guarantor assumes the credit risk associated with the reference asset without directly owning it. The beneficiary agrees to pay to the guarantor a specified fee. In return, the guarantor agrees to reimburse the beneficiary an agreed amount if there is a default to the reference asset during the term of the contract.

We offset most of the market risk by entering into a buy protection credit derivative contract with another counterparty. Credit derivatives, although having characteristics of a guarantee, are accounted for as derivative instruments and are carried at fair value.

The commitment amount included in the table above is the maximum amount that we could be required to pay, without consideration of the approximately equal amount receivable from third parties and any associated collateral. See Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," in the accompanying consolidated financial statements for further discussion on off-balance sheet guarantee arrangements.

Other Commitments to Extend Credit Other commitments to extend credit include arrangements whereby we are contractually obligated to extend credit in the form of loans, participations in loans, lease financing receivables, or similar transactions. Consumer commitments are comprised of certain unused MasterCard/Visa credit card lines, where we have the right to change terms or conditions upon notification to the customer, and commitments to extend credit secured by residential properties, where we have the right to change terms or conditions, for cause, upon notification to the customer. Commercial commitments comprise primarily those related to secured and unsecured loans and lines of credit.

In addition to the above, we have established and manage a number of constant net asset value ("CNAV") money market funds that invest in shorter-dated highly-rated money market securities to provide investors with a highly liquid and secure investment. These funds price the assets in their portfolio on an amortized cost basis, which enables them to create and liquidate shares at a constant price. The funds, however, are not permitted to price their portfolios at amortized cost if that amount varies by more than 50 basis points from the portfolio's market value. In that case, the fund would be required to price its portfolio at market value and consequently would no longer be able to create or liquidate shares at a constant price. We do not consolidate the CNAV funds because we do not absorb the majority of the expected future risk associated with the fund's assets, including interest rate, liquidity, credit and other relevant risks that are expected to affect the value of the assets.

Fair Value

Control Over Valuation Process and Procedures We have established a control framework which is designed to ensure that fair values are either determined or validated by a function independent of the risk-taker. See Note 26, "Fair Value Measurements," in the accompanying consolidated financial statements for further details on our valuation control framework.

Fair Value Hierarchy Fair value measurement accounting principles establish a fair value hierarchy structure that prioritizes the inputs to determine the fair value of an asset or liability (the "Fair Value Framework"). The Fair Value Framework distinguishes between inputs that are based on observed market data and unobservable inputs that reflect market participants' assumptions. It emphasizes the use of valuation methodologies that maximize observable market inputs. For financial instruments carried at fair value, the best evidence of fair value is a quoted price in an actively traded market (Level 1). Where the market for a financial instrument is not active, valuation techniques are used. The majority of our valuation techniques use market inputs that are either observable or indirectly derived from and corroborated by observable market data for substantially the full term of the financial instrument (Level 2). Because Level 1 and Level 2 instruments are determined by observable inputs, less judgment is applied in determining their fair values. In the absence of observable market inputs, the financial instrument is valued based on valuation techniques that feature one or more significant unobservable inputs (Level 3). The determination of the level of fair value hierarchy within which the fair value measurement of an asset or a liability is classified often requires judgment and may change over time as market conditions evolve. We consider the following factors in developing the fair value hierarchy:

- whether the asset or liability is transacted in an active market with a quoted market price;
- the level of bid-ask spreads;
- a lack of pricing transparency due to, among other things, complexity of the product and market liquidity;
- whether only a few transactions are observed over a significant period of time;
- whether the pricing quotations differ substantially among independent pricing services;
- whether inputs to the valuation techniques can be derived from or corroborated with market data; and
- whether significant adjustments are made to the observed pricing information or model output to determine the fair value.

Level 1 inputs are unadjusted quoted prices in active markets that the reporting entity has the ability to access for identical assets or liabilities. A financial instrument is classified as a Level 1 measurement if it is listed on an exchange or is an instrument actively traded in the OTC market where transactions occur with sufficient frequency and volume. We regard financial instruments such as debt securities, equity securities and derivative contracts listed on the primary exchanges of a country to be actively traded. Non-exchange-traded instruments classified as Level 1 assets include securities issued by the U.S. Treasury, to-be-announced securities, non-callable securities issued by U.S. GSEs and certain foreign government-backed debt.

Level 2 inputs are those that are observable either directly or indirectly but do not qualify as Level 1 inputs. We classify mortgage pass-through securities, agency and certain non-agency mortgage collateralized obligations, certain derivative contracts, asset-backed securities, obligations of U.S. states and political subdivisions, corporate debt, certain foreign government-backed debt,

preferred securities, securities purchased and sold under resale and repurchase agreements, precious metals, certain commercial loans held for sale, residential mortgage loans whose carrying amount was reduced based on the fair value of the underlying collateral and real estate owned as Level 2 measurements. Where possible, at least two quotations from independent sources are obtained based on transactions involving comparable assets and liabilities to validate the fair value of these instruments. We have established a process to understand the methodologies and inputs used by the third party pricing services to ensure that pricing information met the fair value objective. Where significant differences arise among the independent pricing quotes and the internally determined fair value, we investigate and reconcile the differences. If the investigation results in a significant adjustment to the fair value, the instrument will be classified as Level 3 within the fair value hierarchy. In general, we have observed that there is a correlation between the credit standing and the market liquidity of a non-derivative instrument.

Level 2 derivative instruments are generally valued based on discounted future cash flows or an option pricing model adjusted for counterparty credit risk and market liquidity. The fair value of certain derivative products is determined using valuation techniques based on inputs derived from observable indices traded in the OTC market. Appropriate control processes and procedures have been applied to ensure that the derived inputs are applied to value only those instruments that share similar risks to the relevant benchmark indices and therefore demonstrate a similar response to market factors.

Level 3 inputs are unobservable estimates that management expects market participants would use to determine the fair value of the asset or liability. That is, Level 3 inputs incorporate market participants' assumptions about risk and the risk premium required by market participants in order to bear that risk. We develop Level 3 inputs based on the best information available in the circumstances. At December 31, 2017 and 2016, our Level 3 measurements included the following: collateralized debt obligations ("CDOs") for which there is a lack of pricing transparency due to market illiquidity, certain structured deposits and structured notes for which the embedded credit, foreign exchange or equity derivatives have significant unobservable inputs (e.g., volatility or default correlations), asset-backed credit default swaps with certain inputs which are unobservable, certain residential mortgage and subprime mortgage loans held for sale, certain corporate debt securities, certain asset-backed securities, impaired commercial loans, derivatives referenced to illiquid assets of less desirable credit quality, swap agreements entered into in conjunction with the sales of certain Visa Class B Shares for which the fair value is dependent upon the final resolution of the related litigation and, at December 31, 2017, a contingent consideration receivable associated with the sale of a portion of our Private Banking business.

See Note 26, "Fair Value Measurements," in the accompanying consolidated financial statements for additional information on Level 3 inputs as well as a discussion of transfers between Level 1 and Level 2 measurements during 2017 and 2016.

Level 3 Measurements The following table provides information about Level 3 assets/liabilities in relation to total assets/liabilities measured at fair value at December 31, 2017 and 2016:

	December 31, 2017	December 31, 2016
	(dollars are in millions)	
Level 3 assets ⁽¹⁾⁽²⁾	\$ 2,650	\$ 4,611
Total assets measured at fair value ⁽¹⁾⁽³⁾	89,368	113,299
Level 3 liabilities ⁽¹⁾	1,690	2,114
Total liabilities measured at fair value ⁽¹⁾	68,270	81,176
Level 3 assets as a percent of total assets measured at fair value	3.0%	4.1%
Level 3 liabilities as a percent of total liabilities measured at fair value	2.5%	2.6%

⁽¹⁾ Presented without netting which allows the offsetting of amounts relating to certain contracts if certain conditions are met.

⁽²⁾ Includes \$2,359 million of recurring Level 3 assets and \$291 million of non-recurring Level 3 assets at December 31, 2017. Includes \$3,564 million of recurring Level 3 assets and \$1,047 million of non-recurring Level 3 assets at December 31, 2016.

⁽³⁾ Includes \$88,988 million of assets measured on a recurring basis and \$380 million of assets measured on a non-recurring basis at December 31, 2017. Includes \$112,104 million of assets measured on a recurring basis and \$1,195 million of assets measured on a non-recurring basis at December 31, 2016.

Significant Changes in Fair Value for Level 3 Assets and Liabilities During 2017, one of our unconsolidated VIEs was unwound and our investment in the VIE along with the related derivatives were terminated. Our investment in the VIE, which was a level 3 asset measured at fair value on a recurring basis, had a carrying value of \$1,081 million at the time of unwind. See Note 24, "Variable Interest Entities," in the accompanying consolidated financial statements for additional information.

Also during 2017, we sold the residential mortgage loans which were transferred to held for sale during 2016 and were level 3 assets measured at fair value on a non-recurring basis. See Note 7, "Loans Held for Sale," in the accompanying consolidated financial statements for additional information.

In addition to the above, we have entered into credit default swaps with a monoline insurer to hedge our credit exposure in certain asset-backed securities and synthetic CDOs. We made \$10 million positive credit risk adjustments to the fair value of our credit

default swap contracts during 2017 compared with positive adjustments of \$28 million during 2016. These adjustments to fair value are recorded in trading revenue in the consolidated statement of income (loss). We have recorded a cumulative credit adjustment reserve of \$12 million and \$22 million against our monoline exposure at December 31, 2017 and 2016, respectively. The fair value of our monoline exposure net of cumulative credit adjustment reserves equaled \$105 million and \$159 million at December 31, 2017 and 2016, respectively.

See Note 26, "Fair Value Measurements," in the accompanying consolidated financial statements for information on additions to and transfers into (out of) Level 3 measurements during 2017 and 2016 as well as for further details including the classification hierarchy associated with assets and liabilities measured at fair value.

Effect of Changes in Significant Unobservable Inputs The fair value of certain financial instruments is measured using valuation techniques that incorporate pricing assumptions not supported by, derived from or corroborated by observable market data. The resultant fair value measurements are dependent on unobservable input parameters which can be selected from a range of estimates and may be interdependent. Changes in one or more of the significant unobservable input parameters may change the fair value measurements of these financial instruments. For the purpose of preparing the financial statements, the final valuation inputs selected are based on management's best judgment that reflect the assumptions market participants would use in pricing similar assets or liabilities.

The unobservable input parameters selected are subject to the internal valuation control processes and procedures. When we perform a test of all the significant input parameters to the extreme values within the range at the same time, it could result in an increase of the overall fair value measurement of approximately \$147 million or a decrease of the overall fair value measurement of approximately \$23 million at December 31, 2017. The effect of changes in significant unobservable input parameters are primarily driven by the uncertainty in determining the fair value of credit derivatives executed against certain insurers as well as credit default swaps with a certain monoline insurer and certain asset-backed securities including CDOs.

Assets Underlying Asset-backed Securities The following tables summarize the types of assets underlying our asset-backed securities as well as certain collateralized debt obligations held at December 31, 2017:

		Total
		(in millions)
Rating of securities: ⁽¹⁾	Collateral type:	
AA.....	Other	\$ 50
A.....	Residential mortgages - Alt A.....	3
	Home equity - Alt A.....	51
	Student loans	91
	Other	460
	Total A	<u>605</u>
BBB	Collateralized debt obligations	129
CCC	Residential mortgages - Subprime.....	16
		<u>\$ 800</u>

⁽¹⁾ We utilize S&P as the primary source of credit ratings in the tables above. If S&P ratings are not available, ratings by Moody's and Fitch are used, in that order. Ratings for collateralized debt obligations represent the ratings associated with the underlying collateral.

Risk Management

Overview Managing risk effectively is fundamental to the delivery of our strategic priorities.

Our risk management framework We use a comprehensive risk management framework that is applied at all levels of the organization and across all risk types with effective governance and corresponding risk management tools to help ensure it is appropriately implemented. This framework fosters the continuous monitoring of the risk environment and an integrated evaluation of risks and their interactions. It is designed to ensure that we have a robust and consistent approach to risk management across all of our activities. Our risk management framework has been designed to provide robust controls and ongoing monitoring of our principal risks.

Our risk culture Our risk management framework is underpinned by a strong risk culture and reinforced by our values and principles, which are embedded through clear and consistent communication and appropriate training for all employees. Our values and principles are instrumental in aligning the behaviors of individuals with our culture of assuming and managing risk and ensuring that our risk profile remains in line with our risk appetite.

Maintaining a conservative risk profile is a core part of our philosophy. This philosophy encompasses: maintaining a strong capital position defined by regulatory and internal capital ratios; having effective liquidity and funding management; generating returns that are in line with risk taken; and maintaining a sustainable and diversified earnings mix, delivering consistent returns. Additionally, we have zero tolerance for the following:

- knowingly engaging in any business, activity or association where foreseeable reputational risk or damage has not been considered and/or mitigated;
- operating without the appropriate systems and controls in place to prevent and detect financial crime and no appetite to conduct business with individuals or entities we believe are engaged in illicit behavior;
- deliberately or knowingly causing detriment to consumers arising from our products, services or operations or incurring a breach of the letter or spirit of regulatory requirements; and
- inappropriate market conduct by a member of our staff or by any of our lines of business.

Risk governance Our Board of Directors has the ultimate responsibility for effective management of risk. Robust risk governance and accountability are embedded throughout our business through an established framework that helps to ensure appropriate oversight of and accountability for the effective management of risk.

Our Board of Directors and its committees, principally the Audit, Risk, and Compliance and Conduct Committees, have oversight responsibility for the effective management of risk and approves our risk appetite. The Risk Committee advises the Board of Directors on risk appetite and its alignment with our strategy, risk governance and internal controls as well as high-level risk related matters.

Management is accountable for the ongoing monitoring, assessment and management of the risk environment. Responsibility for assessment of the effectiveness of our risk management policies resides with our Risk Management Meeting of the HSBC USA Executive Committee ("RMM"). The HSBC USA Executive Committee is the senior most management committee at HSBC USA and the RMM is its meeting to discuss risk matters. Day-to-day risk management activities are the responsibility of senior managers of individual businesses, supported by HSBC global functions.

Our responsibilities All employees are responsible for identifying and managing risk within the scope of their role as part of the Three Lines of Defense ("LoD") model. We use an activity-based Three LoD model to delineate management accountabilities and responsibilities for risk management and the control environment. This model creates a robust control environment and underpins our approach to strong risk management by clarifying responsibilities, encouraging collaboration and enabling efficient coordination of risk and control activities. Under the Three LoD model, the first LoD owns the risks and is responsible for identifying, recording, reporting and managing them, and ensuring that the right controls and assessments are in place to mitigate them. The second LoD risk stewards set the policy and guidelines for managing specific risk areas, provide advice and guidance in relation to the risks and challenge the first LoD on effective risk management. The third LoD is our Internal Audit function, which provides independent and objective assurance of the adequacy of the design and operational effectiveness of our risk management framework and control governance process.

The principle of individual accountability is exercised across the organization and is fundamental to risk ownership and risk management. Decisions are not taken by committees, but by specific individuals, in accordance with the Three LoD model, to promote clear ownership of decisions. The Board and its sub-committees remain collective decision-making bodies. All employees are required to identify, assess and manage risk within the scope of their assigned responsibilities and, as such, they are critical to the effectiveness of the Three LoD model.

Risk function Our Risk Management function is headed by the HSBC North America Chief Risk Officer ("CRO"), who is responsible for the risk management framework. The CRO's responsibilities include establishing policies, monitoring of risk profiles and

forward-looking risk identification and management. Our Risk function is made up of sub-functions covering all risks to our operations. The Risk function forms part of the second LoD. It is independent from our lines of business, including sales and trading functions, to provide challenge, appropriate oversight and balance in risk/reward decisions. The HSBC North America CRO reports to the HSBC North America Chief Executive Officer ("CEO"), to the HSBC North America Board Risk Committee and to the HSBC Group CRO. Executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of risk management policies resides with the HSBC North America CRO, supported by the RMM.

Specific oversight of various risk management processes occurs through the following HUSI, HSBC North America or Risk Committees:

- the Asset and Liability Management Committee ("ALCO");
- the Financial Crime Risk Management Committee ("FCRMC");
- the Reputational Risk and Client Selection Committees ("RRCSCs"); and
- Line of Business Risk Management Meetings ("LoB RMMs").

Each of these committees, as well as the RMM, have separate charters which detail their respective roles and responsibilities.

The ALCO provides oversight of all liquidity, interest rate and market risk and is chaired by the HUSI Chief Financial Officer. Subject to the approval of our Board of Directors and HSBC Group, ALCO sets the limits of acceptable risk, monitors the adequacy of the tools used to measure risk and assesses the adequacy of reporting. In managing these risks, we seek to protect both our income stream and the value of our assets. ALCO also conducts contingency planning with regard to liquidity.

The FCRMC is the formal governance committee set up to ensure effective management of financial crime risk and to support the HSBC North America CEO in carrying out his financial crime risk responsibilities. Additionally, the HSBC North America Head of Financial Crime Risk serves as the designated Anti-Money Laundering Director and Bank Secrecy Act Compliance Officer for HUSI.

The RRCSC structure ensures appropriate consideration of customers and transactions that may adversely affect our public perception. RRCSCs exist in each Business and are comprised of senior members from the business, risk, legal, financial crimes, compliance and other invited parties. The RRCSCs provide decision-making and guidance in respect of reputational risks and customer selection matters, and are responsible for ensuring that issues are appropriately tracked and resolved.

Each LoB RMM is chaired by the respective line of business CRO. LoB RMMs provide recommendations and advice, as requested, to their respective CROs in the exercise of their powers, authorities and discretions in relation to the enterprise-wide management of all risks within or impacting their respective businesses.

Enterprise-wide risk management tools We use a range of tools to identify, monitor and manage risk. The key enterprise-wide tools are summarized below:

- Risk appetite - The HSBC North America CRO oversees the development of our risk appetite which defines, shapes and monitors our risk profile. The HSBC North America Risk Appetite Statement ("RAS") describes the aggregate level and types of risk that we are willing to accept in order to achieve our strategic business objectives. HSBC North America's conservative risk profile is articulated in the qualitative section of the RAS, which serves as guidance to embed risk appetite and supports strategic and operational decision making at HUSI. The quantitative section of the RAS contains a set of key metrics covering income generating risks that we accept as part of doing business, such as credit risk, and non-income generating risks, those which arise by virtue of our operations, such as operational risk.

Performance against the RAS metrics is monitored by senior management and reported to the RMM on a monthly basis, enabling senior management to monitor the risk profile and guide business activity to balance risk and return. All breaches of risk appetite thresholds are escalated and actions to remediate the breaches are documented. This process helps to embed a strong risk culture across our businesses. The risk appetite profile is one of the key tools in the wider enterprise risk management framework, which drives the core of our active risk management. The risk appetite profile is aligned to strategic and financial planning and therefore provides a top down view of risk and return objectives. Performance that falls outside of risk appetite is highlighted and appropriate mitigation actions are determined.

- Risk map - We utilize a risk map to provide a point-in-time view of our risk profile across a range of risk categories, including our principal banking risks. It assesses the potential of these risks to have a material impact on our financial results, reputation or sustainability of our business on a current and projected basis. Risks that are rated outside acceptable levels require monitoring and mitigating action plans to be either in place or initiated to manage the risk down to acceptable levels.
- Top and emerging risks - We use a top and emerging risks process to provide a forward-looking view of issues with the potential to threaten the execution of our strategy or operations over the medium to long term. The top and emerging risks framework enables us to take action which either stops these risks from materializing or limits their impact. We proactively

assess the internal and external risk environment as well as review the themes identified across our businesses and functions to update our top and emerging risks as necessary. We define a 'top risk' as a thematic issue that may form and crystallize in between six months and one year and that has the potential to materially affect our financial results, reputation or business model. The impact of a 'top risk' may be well understood by senior management and some mitigating actions may already be in place. An 'emerging risk' is a thematic issue with large unknown components that may form and crystallize beyond a one-year time horizon. If it were to materialize, it could have a material effect on our long-term strategy, profitability and/or reputation. Existing mitigating plans for an 'emerging risk' are likely to be minimal, reflecting the uncertain nature of these risks at this stage.

- Risk identification - Risk Identification is a tool that allows us to create a holistic view of risks facing the organization stemming from our unique business activities and associated exposures, including those that are difficult to quantify or only materialize under stressful conditions. The process is integrated with, built upon and continues to enhance existing risk management tools such as top and emerging risk reporting as well as risk and control assessments. Risk Identification is an established, formal process that takes place every quarter and involves senior representatives from all lines of defense. Senior management governance is provided by the RMM with results presented to the Board of Directors every quarter. Material risks identified are actively monitored and used to inform key aspects of our capital planning and stress testing program.
- Stress testing - Stress testing is an important tool we use to assess potential vulnerabilities in our businesses, business model or portfolios. We operate a comprehensive stress testing program that supports our risk management and capital planning. It includes execution of stress tests mandated by our regulators. It is supported by dedicated teams and infrastructure and is overseen by senior management. It demonstrates our capital strength and enhances our resilience to external shocks. It allows us to understand the sensitivities of the core assumptions in our strategic and capital plans and improve decision making through balancing risk and return. In addition to taking part in regulators' stress tests, we also conduct our own internal stress tests. Internal stress test scenarios are closely aligned to our assessment of top and emerging risks and help inform risk appetite thresholds. These may prompt management actions, including a reduction in limits or direct exposures, or closer monitoring of exposures sensitive to stress.
- Simulation models - In the course of our regular risk management activities, we use simulation models to help quantify the risk we are taking. The output from some of these models is included in this section of our filing. By their nature, models are based on various assumptions and relationships. We believe that the assumptions used in these models are reasonable, but events may unfold differently than what is assumed in the models. In actual stressed market conditions, these assumptions and relationships may no longer hold, causing actual experience to differ significantly from the results predicted in the model. Consequently, model results may be considered reasonable estimates, with the understanding that actual results may differ significantly from model projections.

Our material risks The principal risks associated with our operations include the following:

- *Credit risk* is the potential that a borrower or counterparty will default on a credit obligation, as well as the impact on the value of credit instruments due to changes in the probability of borrower default. Credit risk includes risk associated with cross-border exposures;
- *Liquidity risk* is the potential that an institution will be unable to meet its obligations as they become due or fund its customers because of inadequate cash flow or the inability to liquidate assets or obtain funding itself;
- *Interest rate risk* is the potential reduction of net interest income due to mismatched pricing between assets and liabilities as well as losses in value due to interest rate movements;
- *Market risk* is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios;
- *Operational risk* is the risk of loss resulting from inadequate or failed internal processes, people, or systems, or from external events (including legal risk);
- *Regulatory compliance risk* is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice causing us to incur fines, penalties and damage to our business and reputation;
- *Financial crime risk* is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity through the HSBC Group. It arises from day to day banking operations;
- *Fiduciary risk* is the risk of breaching fiduciary duties where we act in a fiduciary capacity as trustee, investment manager or as mandated by law or regulation;
- *Reputational risk* is the risk arising from failure to meet stakeholder expectations as a result of any event, behavior, action or inaction, either by us, our employees, the HSBC Group or those with whom it is associated, that may cause stakeholders

to form a negative view of us. This might also result in financial or non-financial impacts, loss of confidence or other consequences;

- *Strategic risk* is the risk that the business will fail to identify, execute and react appropriately to opportunities and/or threats arising from changes in the market, some of which may emerge over a number of years such as changing economic and political circumstances, customer requirements, demographic trends, regulatory developments or competitor action;
- *Security risk* is the risk to the business from terrorism, information security, incidents/disasters, cyberattacks, insider risk and groups hostile to HSBC interests;
- *Model risk* is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. This occurs primarily for two reasons: 1) the model may produce inaccurate outputs when compared with the intended business use and design objective; and 2) the model could be used incorrectly;
- *Pension risk* is the risk of increased costs from the post-employment benefit plans that we have established for our employees;
- *Sustainability risk* is the risk that financial services provided to customers indirectly result in unacceptable impacts on people or on the environment.

Credit Risk Management Credit risk is the potential that a borrower or counterparty will default on a credit obligation, as well as the impact on the value of credit instruments due to changes in the probability of borrower default. Credit risk includes risk associated with cross-border exposures.

Credit risk is inherent in various on- and off-balance sheet instruments and arrangements, such as:

- loan portfolios;
- investment portfolios;
- unfunded commitments such as letters of credit, lines of credit and unutilized credit card lines that customers can draw upon; and
- derivative financial instruments, such as interest rate swaps which, if more valuable today than when originally contracted, may represent an exposure to the counterparty to the contract.

While credit risk exists widely in our operations, diversification among various commercial and consumer portfolios helps to lessen risk exposure. Day-to-day management of credit and market risk is performed by the Chief Credit Officer/Head of Wholesale Credit and Market Risk North America and the HSBC North America Chief Retail Risk Officer, who report directly to the HSBC North America Chief Risk Officer and maintain independent risk functions. The credit risk associated with commercial portfolios is managed by the Chief Credit Officer, while credit risk associated with retail consumer loan portfolios, such as credit cards, installment loans and residential mortgages, is managed by the HSBC North America Chief Retail Risk Officer. Further discussion of credit risk can be found under the "Credit Quality" caption in this MD&A.

Our credit risk management procedures are designed for all stages of economic and financial cycles, including challenging periods of market volatility and economic uncertainty. The Credit Risk function continues to refine "early warning" indicators and reporting, including stress testing scenarios on the basis of recent experience. These risk management tools are embedded within our business planning process. Action has been taken, where necessary, to improve our resilience to risks associated with the current market conditions by selectively discontinuing business lines or products, closely managing underwriting criteria and investing in improved fraud prevention technologies.

The responsibilities of the Credit Risk function include:

- *Formulating credit risk policies* – Our policies are designed to ensure that all of our various retail and commercial business units operate within clear standards of acceptable credit risk. Our policies ensure that the HSBC standards are consistently implemented across all businesses and that all regulatory requirements are also considered. Credit policies are reviewed and approved annually at the RMM and the Board of Directors Risk Committee.
- *Approving new credit exposures and independently assessing large exposures annually* – The Chief Credit Officer delegates limited credit authority to our various lending units. However, most large credits are reviewed and approved centrally through a dedicated Credit Approval Unit that reports directly to the Chief Credit Officer. In addition, the Chief Credit Officer coordinates the review of material credits with the HSBC Group Credit Risk which, subject to certain agreed-upon limits, will concur on material new and renewal transactions.
- *Overseeing retail credit risk* – The HSBC North America Chief Retail Risk Officer manages the credit risk associated with retail portfolios and is supported by expertise from a dedicated advanced risk analytics unit.
- *Maintaining and developing the governance and operation of the commercial risk rating system* – A two-dimensional credit risk rating system is utilized in order to categorize exposures meaningfully and enable focused management of the risks involved. This ratings system is comprised of a 23 category customer risk rating, which considers the probability of default of an obligor and a separate assessment of a transaction's potential loss given default. Each credit grade has a

probability of default estimate. Rating methodologies are based upon a wide range of analytics and market data-based tools, which are core inputs to the assessment of counterparty risk. Although automated risk rating processes are increasingly used, for larger facilities the ultimate responsibility for setting risk grades rests in each case with the final approving executive. Risk grades are reviewed frequently and amendments, where necessary, are implemented promptly.

- *Measuring portfolio credit risk* – We continue to advance the measurement of the risk in our credit portfolios using techniques such as stress testing, economic capital and correlation analysis in certain internal and Board of Directors reporting. Efforts continue to refine both the inputs and assumptions used to increase the usefulness in the evaluation of large and small commercial and retail customer portfolio products and business unit return on risk.
- *Monitoring portfolio performance* – Credit data warehouses have been implemented to centralize the reporting of credit risk, support the analysis of risk using tools such as economic capital, and to calculate credit loss reserves. This data warehouse also supports HSBC's wider effort to meet the requirements of Basel III and to generate credit reports for management and the Board of Directors.
- *Establishing counterparty and portfolio limits* – We monitor and limit our exposure to individual counterparties and to the combined exposure of related counterparties. In addition, selected industry portfolios, such as real estate, are subject to caps that are recommended by the Chief Credit Officer and reviewed where appropriate by management committees and the Board of Directors. Counterparty credit exposure related to derivative activities is also managed under approved limits. Since the exposure related to derivatives is variable and uncertain, internal risk management methodologies are used to calculate the 95 percent worst-case potential future exposure for each customer. These methodologies take into consideration, among other factors, cross-product close-out netting, collateral received from customers under Collateral Support Annexes (CSAs), termination clauses, and off-setting positions within the portfolio.
- *Managing problem loans* – Special attention is paid to problem loans. When appropriate, our commercial Loan Management Unit and retail Default Services teams provide customers with intensive management and control support in order to help them avoid default wherever possible and maximize recoveries.
- *Establishing allowances for credit losses* – The Chief Credit Officer and the HSBC North America Chief Retail Risk Officer share responsibility with the Chief Financial Officer for establishing appropriate levels of allowances for credit losses inherent in various loan portfolios.

Credit Review is an independent and critical Second LoD function. Its mission is to identify and evaluate areas of credit risk within our business. Credit Review will focus on the review and evaluation of Wholesale and Retail lending activities and will identify risks and provide an ongoing assessment as to the effectiveness of the risk management framework and the related portfolios. Credit Review will independently assess the business units and risk management functions to ensure the portfolios are managed and operating in a manner that is consistent with HSBC Group strategy, risk appetite, appropriate local and HSBC Group credit policies and procedures and applicable regulatory requirements. For example, this includes the unilateral authority to independently assess and revise customer risk ratings, facility grades and loss given default estimates. To ensure its independent stature, the Credit Review charter is endorsed by the Risk Committee of our Board of Directors which grants the Head of Credit Review unhindered access to the Risk Committee and executive sessions at the discretion of the Head of Credit Review. Accordingly, our Board of Directors has oversight of the Credit Review annual and ongoing plan, quarterly plan updates and results of reviews.

Liquidity Risk Management Liquidity risk is the risk that an institution will be unable to meet its obligations as they become due or fund its customers because of an inability to liquidate assets or obtain adequate funding. We continuously monitor the impact of market events on our liquidity positions and will continue to adapt our liquidity framework to reflect market events and the evolving regulatory landscape and view as to best practices. Historically, we have seen the greatest strain in the wholesale market as opposed to the retail market (the latter being the market from which we source stable demand and time deposit accounts which are less sensitive to market events or changes in interest rates).

Liquidity is managed to provide the ability to generate cash to meet lending, deposit withdrawal and other commitments at a reasonable cost in a reasonable amount of time while maintaining routine operations and market confidence. Market funding is coordinated with other HSBC Group entities, as the markets increasingly view debt issuances from the separate companies within the context of our common parent company. Liquidity management is performed at both HSBC USA and HSBC Bank USA. Each entity is required to have sufficient liquidity for a crisis situation.

ALCO develops and implements policies and procedures to ensure that the minimum liquidity ratios and a strong overall liquidity position are maintained. ALCO projects cash flow requirements and determines the level of liquid assets and available funding sources to have at our disposal, with consideration given to anticipated deposit and balance sheet growth, contingent liabilities, and the ability to access wholesale funding markets. In addition to base case projections, multiple stress scenarios are generated to simulate crisis conditions, including:

- run-off of non-stable deposits;
- inability to renew maturing interbank fundings;
- draw-downs of committed loan facilities;

- decreases in the market value of liquid securities;
- additional collateral requirements for derivative transactions under existing collateral support agreements;
- rating downgrades of HSBC USA or HSBC Bank USA; and
- increased discount on security values for repos or disposals.

In addition, ALCO monitors the overall mix of deposit and funding concentrations to avoid undue reliance on individual funding sources and large deposit relationships.

As part of our approach towards liquidity risk management, we employ the measures discussed below to define, monitor and control our liquidity and funding risk in accordance with HSBC policy.

The Basel Committee based Liquidity Coverage Ratio ("LCR") is designed to be a short-term liquidity measure to ensure banks have sufficient High Quality Liquid Assets ("HQLA") to cover net stressed cash outflows over the next 30 days. At both December 31, 2017 and 2016, HSBC USA's LCR under the EU LCR rule exceeded 100 percent. A LCR of 100 percent or higher reflects an unencumbered HQLA balance that is equal to or exceeds liquidity needs for a 30 calendar day liquidity stress scenario. HQLA consists of cash or assets that can be converted into cash at little or no loss of value in private markets.

The European calibration of the Basel Committee based NSFR, which is a longer term liquidity measure with a 12-month time horizon to ensure a sustainable maturity structure of assets and liabilities, is still pending. Therefore, our calculation of NSFR is based on our current interpretation and understanding of the Basel Committee NSFR rule, which may differ in future periods depending on completion of the European calibration and further implementation guidance from regulators. At both December 31, 2017 and 2016, HSBC USA's estimated NSFR exceeded 100 percent. A NSFR of 100 percent or more reflects an available stable funding balance from liabilities and capital over the next 12 months that is equal to or exceeds the required amount of funding for assets and off-balance sheet exposures.

In 2014, the FRB, the OCC and the FDIC issued final regulations to implement the LCR in the United States, applicable to certain large banking institutions, including HSBC North America and HSBC Bank USA. The U.S. LCR rule is generally consistent with the Basel Committee guidelines, but is more stringent in several areas including the range of assets that qualify as HQLA and the assumed rate of outflows of certain kinds of funding. Under the U.S. rule, U.S. institutions, including HSBC North America and HSBC Bank USA, have been required to maintain a minimum LCR of 100 percent since January 1, 2017, two years ahead of the Basel Committee's timeframe for compliance by January 1, 2019, and report LCR to U.S. regulators on a daily basis. During the year ended December 31, 2017, HSBC Bank USA's LCR under the U.S. LCR rule remained above the 100 percent minimum requirement. The U.S. LCR rule does not address the U.S. NSFR requirement, which is currently in an international observation period. Based on the results of the observation period, the Basel Committee and U.S. banking regulators may make further changes to the NSFR. In April 2016, U.S. regulators issued for public comment a proposal to implement the NSFR in the United States, applicable to certain large banking organizations, including HSBC North America and HSBC Bank USA. The U.S. NSFR proposal is generally consistent with the Basel Committee guidelines, but similar to the U.S. LCR rule, is more stringent in several areas including the required stable funding factors applied to certain assets such as mortgage-backed securities. At both December 31, 2017 and 2016, HSBC Bank USA's estimated NSFR, based on our current interpretation and understanding of the proposed U.S. NSFR rule, exceeded 100 percent.

Enhanced prudential standard rules issued pursuant to Section 165 of the Dodd-Frank Act complement the LCR, capital planning, resolution planning, and stress testing requirements for U.S. bank holding companies and foreign banking organizations with total global consolidated assets of \$50 billion or more ("Covered Companies"). The rules require Covered Companies, such as HSBC North America, to comply with various liquidity risk management standards and to maintain a liquidity buffer of unencumbered highly liquid assets based on the results of internal liquidity stress testing. Covered Companies are also required to meet heightened liquidity requirements, which include qualitative liquidity standards, cash flow projections, internal liquidity stress tests, and liquidity buffer requirements. HSBC North America has implemented the standard and it does not have a significant impact to our business model.

HSBC North America and HSBC Bank USA have adjusted their liquidity profiles to support compliance with these rules. HSBC North America and HSBC Bank USA may need to make further changes to their liquidity profiles to support compliance with any future final rules.

ALCO also maintains a liquidity management and contingency funding plan ("Contingency Funding Plan"), which identifies certain potential early indicators of liquidity problems, and actions that can be taken both initially and in the event of a liquidity crisis, to minimize the long-term impact on our businesses and customer relationships. The Contingency Funding Plan is reviewed annually and approved by the Risk Committee of our Board of Directors. We recognize a liquidity crisis can either be specific to us, relating to our ability to meet our obligations in a timely manner, or market-wide, caused by a macro risk event in the broader financial system. A range of indicators are monitored to attain an early warning of any liquidity issues. These include widening of key spreads or indices used to track market volatility, material reductions or extreme volatility in customer deposit balances, increased utilization of credit lines, widening of our own credit spreads and higher borrowing costs. In the event of a cash flow

crisis, our objective is to fund cash requirements without access to the wholesale unsecured funding market for at least one year. Contingency funding needs will be satisfied primarily through sales of securities from the investment portfolio and secured borrowing using the mortgage portfolio as collateral. Securities may be sold or used as collateral in a repurchase agreement depending on the scenario. Portions of the mortgage portfolio may be used as collateral at the FHLB to increase borrowings. We maintain a Liquid Asset Buffer consisting of cash, short-term liquid assets and unencumbered government and other highly rated investment securities as a source of funding. Further, collateral is maintained at the Federal Reserve Bank discount window and the FHLB, providing additional secured borrowing capacity in a liquidity crisis.

In addition to the oversight provided by ALCO, Liquidity Risk Management ("LRM") is an oversight, Second LoD, function for liquidity which independently reports into the HSBC North America CRO. LRM's primary mandate is to strengthen our liquidity risk management framework through challenge and review of existing processes and recommending areas that need improvement to the RMM. LRM serves as an advisory function to senior management to ensure front line units with direct responsibility for managing liquidity risk are operating within their operating guidelines and defined risk appetite parameters. The LRM oversight mandate is carried out through critical evaluation and challenge of existing risk management processes including stress testing and ratio calculations.

Our liquidity risk management approach includes deposits, supplemented by wholesale borrowing to fund our balance sheet, and using security sales or secured borrowings for liquidity stress situations in our liquidity contingency plans. In addition, current regulatory initiatives require banks to retain a portfolio of high quality liquid assets. As such, we are maintaining a large portfolio of high quality sovereign and sovereign guaranteed securities. As previously discussed, HSBC Finance relies on its affiliates, including HSBC USA, to satisfy any of its incremental funding needs if required.

Our ability to regularly attract wholesale funds at a competitive cost is enhanced by strong ratings from the major credit ratings agencies. The following table reflects the short and long-term credit ratings of HSBC USA and HSBC Bank USA at December 31, 2017:

	Moody's	S&P	Fitch
HSBC USA:			
Short-term borrowings.....	P-1	A-1	F1+
Long-term/senior debt.....	A2	A	AA-
HSBC Bank USA:			
Short-term borrowings.....	P-1	A-1+	F1+
Long-term/senior debt.....	Aa3⁽¹⁾	AA-	AA-

⁽¹⁾ Moody's long-term deposit rating for HSBC Bank USA was Aa2 at December 31, 2017.

Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices and litigation matters, all of which could lead to adverse ratings actions.

Although we closely monitor and strive to manage factors influencing our credit ratings, there is no assurance that our credit ratings will not change in the future. At December 31, 2017, there were no pending actions in terms of changes to ratings on the debt of HSBC USA or HSBC Bank USA from any of the rating agencies.

Numerous factors, internal and external, may impact access to and costs associated with issuing debt in the global capital markets. These factors include our debt ratings, overall economic conditions, overall capital markets volatility and the effectiveness of the management of credit risks inherent in our customer base.

Cash resources, short-term investments and a trading asset portfolio are available to provide highly liquid funding for us. Additional liquidity is provided by available-for-sale and held-to-maturity debt securities. Approximately \$1,279 million of the debt securities in these portfolios at December 31, 2017 are expected to mature in 2018. The remaining \$43,221 million of debt securities not expected to mature in 2018 are available to provide liquidity by serving as collateral for secured borrowings, or if needed, by being sold. Further liquidity is available through our ability to sell or securitize loans in secondary markets through loan sales and securitizations. In 2017, in addition to the normal sales of agency eligible mortgage loan originations to PHH Mortgage, we sold residential mortgage loans of approximately \$812 million to third parties.

It is the policy of HSBC Bank USA to maintain both primary and secondary collateral in order to ensure precautionary borrowing availability from the Federal Reserve Bank. Primary collateral is collateral that is physically maintained at the Federal Reserve Bank, and serves as a safety net against any unexpected funding shortfalls that may occur. Secondary collateral is collateral that is acceptable to the Federal Reserve Bank, but is not maintained there. If unutilized borrowing capacity were to be low, secondary collateral would be identified and maintained as necessary. Further liquidity is available from the FHLB.

See "Liquidity and Capital Resources" in this MD&A for further discussion of our liquidity position, including additional information regarding our outstanding borrowings and the remaining availability of our debt issuance programs.

Interest Rate Risk Management Interest rate risk is the potential reduction of net interest income due to mismatched pricing between assets and liabilities. We are subject to interest rate risk associated with the repricing characteristics of our balance sheet assets and liabilities. Specifically, as interest rates change, amounts of interest earning assets and liabilities fluctuate, and interest earning assets reprice at intervals that do not correspond to the maturities or repricing patterns of interest bearing liabilities. This mismatch between assets and liabilities in repricing sensitivity results in changes to projected net interest income as interest rates move. To help manage the risks associated with changes in interest rates, and to manage net interest income within interest rate risk ranges management considers acceptable, we use derivative instruments such as interest rate swaps, options, futures and forwards as hedges to modify the repricing characteristics of specific assets, liabilities, forecasted transactions or firm commitments. Analysis of this risk is complicated by having to make assumptions on embedded optionality within certain product areas such as the incidence of mortgage prepayments, and from behavioral assumptions regarding the economic duration of liabilities which are contractually repayable on demand such as current accounts. These assumptions around behavioral features are captured in our interest rate behavioralization framework, which is described further below. Day-to-day management of interest rate risk is centralized principally in Balance Sheet Management ("BSM"), which includes the non-trading interest rate risk positions transferred to it as discussed further under "Market Risk Management" below.

We have significant, but historically well controlled, interest rate risk in large part due to our portfolio of residential mortgages and mortgage backed securities, which consumers can prepay without penalty, and our large base of demand and savings deposits. These deposits can be withdrawn by consumers at will, but historically they have been a stable source of relatively low cost funds. Market risk exists principally in the Markets business and to a lesser extent in the residential mortgage business, where the pipeline of forward mortgage sales are hedged. We have little foreign currency exposure from investments in overseas operations, which are limited in scope. Total equity investments, excluding stock owned in the Federal Reserve Bank and Federal Home Loan Bank, represent less than one percent of total available-for-sale securities.

In the course of managing interest rate risk, an economic value of equity ("EVE") analysis is utilized in conjunction with a combination of other risk assessment techniques to identify and assess the potential impact of interest rate movements and take appropriate action. This combination of techniques, with some focusing on the impact of interest rate movements on the valuation of the balance sheet (e.g. EVE, present value of a basis point ("PVBP"), repricing gap analysis, capital risk, VaR) and others focusing on the impact of interest rate movements on earnings (e.g. net interest income simulation modeling, basis risk analysis) allows for comprehensive analyses from different perspectives. Refer to "Market Risk Management" below for discussion regarding the use of VaR analyses to monitor and manage interest rate risk.

A key element of managing interest rate risk is the management of the convexity of the balance sheet, largely resulting from the mortgage related products on the balance sheet. Convexity risk arises as mortgage loan consumers change their payment behavior significantly in response to large movements in market rates, but do not change behavior appreciably for smaller changes in market rates. Certain interest rate management tools, such as EVE and net interest income simulation modeling described below, better capture the embedded convexity in the balance sheet, while measures such as PVBP are designed to capture the risk of smaller changes in rates.

The assessment techniques discussed below act as a guide for managing interest rate risk associated with balance sheet composition and off-balance sheet hedging strategy (the risk position). Calculated values within limit ranges reflect an acceptable risk position, although possible future unfavorable trends may prompt adjustments to on or off-balance sheet exposure. Calculated values outside of limit ranges will result in consideration of adjustment of the risk position, or consideration of temporary dispensation from making adjustments. Beginning in 2017, we began disclosing EVE instead of PVBP as we consider EVE to be a management measure for monitoring and controlling interest rate risk and also better aligns our disclosures with the HSBC Group. Historically, we have employed both of these measures as part of our approach towards interest rate risk management and will continue to do so in the future.

Economic value of equity ("EVE") EVE represents the present value of the banking book cash flows that could be provided to our equity holder under a managed run-off scenario. An EVE sensitivity represents the change in EVE due to a defined movement in interest rates. We manage to an immediate parallel upward shock of 200 basis points and an immediate parallel downward shock of 200 basis points to the market implied interest rates. At both December 31, 2017 and 2016, our economic value of equity remains higher than our book value of equity under the base case, up 200 basis points and down 200 basis points scenarios.

Repricing gap analysis The following table shows the repricing structure of our assets and liabilities at December 31, 2017. For assets and liabilities whose cash flows are subject to change due to movements in interest rates, such as the sensitivity of mortgage loans to prepayments, data is reported based on the earlier of expected repricing or maturity and reflects anticipated prepayments based on the current rate environment. The resulting "gaps" are reviewed to assess the potential sensitivity to earnings with respect to the direction, magnitude and timing of changes in market interest rates. Data shown is as of year-end, and one-day figures can be distorted by temporary swings in assets or liabilities.

December 31, 2017	Within One Year	After One But Within Five Years	After Five But Within Ten Years	After Ten Years	Total
	(in millions)				
Commercial loans.....	\$ 52,448	\$ 778	\$ 447	\$ 10	\$ 53,683
Residential mortgages and home equity mortgages.....	5,144	5,960	4,222	3,144	18,470
Credit card receivables.....	721	—	—	—	721
Other consumer loans.....	362	20	14	8	404
Total loans ⁽¹⁾	58,675	6,758	4,683	3,162	73,278
Securities available-for-sale and securities held-to-maturity.....	2,061	8,937	12,166	21,513	44,677
Other assets.....	67,078	2,202	—	—	69,280
Total assets.....	127,814	17,897	16,849	24,675	187,235
Domestic deposits:					
Savings and demand.....	58,765	19,569	11,523	1	89,858
Time deposits.....	21,649	863	5	1	22,518
Long-term debt.....	24,216	7,300	750	2,700	34,966
Other liabilities/equity.....	24,515	15,241	137	—	39,893
Total liabilities and equity.....	129,145	42,973	12,415	2,702	187,235
Total balance sheet gap.....	(1,331)	(25,076)	4,434	21,973	—
Effect of derivative contracts.....	(4,671)	10,009	(2,861)	(2,477)	—
Total gap position.....	\$ (6,002)	\$ (15,067)	\$ 1,573	\$ 19,496	\$ —

⁽¹⁾ Includes loans held for sale.

Various techniques are utilized to quantify and monitor risks associated with the repricing characteristics of our assets, liabilities and derivative contracts.

Net interest income simulation modeling techniques We utilize simulation modeling to monitor a number of interest rate scenarios for their impact on projected net interest income. These techniques simulate the impact on projected net interest income under various scenarios, such as rate shock scenarios, which assume immediate market rate movements by as much as 200 basis points, as well as scenarios in which rates gradually rise by as much as 200 basis point or fall by as much as 100 basis points over a twelve month period. In the gradual scenarios, 25 percent of the interest rate movement occurs at the beginning of each quarter. The following table reflects the impact on our projected net interest income of the scenarios utilized by these modeling techniques:

	December 31, 2017		December 31, 2016	
	Amount	%	Amount	%
(dollars are in millions)				
Estimated increase (decrease) in projected net interest income (reflects projected rate movements on January 1, 2018 and 2017, respectively):				
Resulting from a gradual 100 basis point increase in the yield curve.....	\$ 148	6%	\$ 123	5%
Resulting from a gradual 100 basis point decrease in the yield curve.....	(138)	(5)	(158)	(6)
Resulting from a gradual 200 basis point increase in the yield curve.....	243	9	208	8
Other significant scenarios monitored (reflects projected rate movements on January 1, 2018 and 2017, respectively):				
Resulting from an immediate 50 basis point decrease in the yield curve.....	(116)	(5)	(156)	(6)
Resulting from an immediate 100 basis point increase in the yield curve.....	216	8	209	8
Resulting from an immediate 100 basis point decrease in the yield curve.....	(323)	(13)	(347)	(14)
Resulting from an immediate 200 basis point increase in the yield curve.....	350	14	366	15

Projected net interest income sensitivity figures represent the effect of movements in net interest income based on the projected yield curve scenarios and our current interest rate risk profile. This effect, however, does not incorporate actions which would probably be taken by BSM or in the businesses to mitigate the effect of interest rate risk. In reality, BSM seeks proactively to change the interest rate risk profile to minimize losses and optimize net revenues. The net interest income simulation modeling calculations assume that interest rates of all maturities move by the same amount in the 'up-shock' scenario. Rates are not assumed to become negative in the 'down-shock' scenario which may effectively result in non-parallel shock. In addition, the net interest income simulation modeling calculations take account of the effect on net interest income of anticipated differences in changes between interbank interest rates and interest rates over which the entity has discretion in terms of the timing and extent of rate changes. The projections do not take into consideration possible complicating factors such as the effect of changes in interest rates on the credit quality, size and composition of the balance sheet. Therefore, although this provides a reasonable estimate of interest rate sensitivity, actual results will differ from these estimates, possibly by significant amounts.

Interest rate risk behavioralization Unlike liquidity risk which is assessed on the basis of a very severe stress scenario, interest rate risk is assessed and managed according to business-as-usual conditions. In many cases the contractual profile of our assets and liabilities does not reflect the behavior observed.

Behavioralization is therefore used to assess the interest rate risk of our assets and liabilities and this assessed risk is transferred to BSM, in accordance with the rules governing the transfer of interest rate risk from the global businesses to BSM.

Behavioralization is applied in three key areas:

- the assessed re-pricing frequency of managed rate balances;
- the assessed duration of non-interest bearing balances, typically capital and current accounts; and
- the base case expected prepayment behavior or pipeline take-up rate for fixed rate balances with embedded optionality.

Interest rate behavioralization policies have to be formulated in line with the HSBC Group's behavioralization policies and approved at least annually by ALCO, regional Asset, Liability and Capital Management ("ALCM") and global ALCM, in conjunction with local, regional and HSBC Group risk monitoring teams.

The extent to which balances can be behavioralized is driven by:

- the amount of the current balance that can be assessed as stable under business-as-usual conditions; and
- for managed rate balances the historic market interest rate re-pricing behavior observed; or
- for non-interest bearing balances the duration for which the balance is expected to remain under business-as-usual conditions. This assessment is often driven by the re-investment tenors available to BSM to neutralize the risk through the use of fixed rate government bonds or interest rate derivatives, and for derivatives the availability of cash flow hedging capacity.

Capital risk/sensitivity of other comprehensive loss Large movements of interest rates could directly affect some reported capital balances and ratios. The mark-to-market valuation of available-for-sale securities is recorded on a tax effected basis to accumulated other comprehensive loss. This valuation mark is included in two important accounting based capital ratios: common equity Tier 1 capital to risk-weighted assets and total equity to total assets. Under the final rule adopting the Basel III regulatory capital reforms, the valuation mark is being phased into common equity Tier 1 capital over five years beginning in 2014. At December 31, 2017, we had an available-for-sale securities portfolio of approximately \$30,700 million with a negative mark-to-market adjustment of \$281 million. An increase of 25 basis points in interest rates of all maturities would lower the mark-to-market by approximately \$291 million to a net loss of \$572 million with the following results on our capital ratios:

	December 31, 2017		December 31, 2016	
	Actual	Proforma ⁽¹⁾	Actual	Proforma ⁽¹⁾
Common equity Tier 1 capital to risk-weighted assets	14.2%	14.1%	13.7%	13.6%
Total equity to total assets	10.7	10.7	10.1	10.0

⁽¹⁾ Proforma percentages reflect a 25 basis point increase in interest rates.

Market Risk Management Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios. Exposure to market risk is separated into two portfolios:

- *Trading portfolios* comprise positions arising from market-making and warehousing of client-derived positions.
- *Non-trading portfolios* comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities and financial investments classified as available-for-sale and held-to-maturity.

We apply similar risk management policies and measurement techniques to both trading and non-trading portfolios. Our objective is to manage and control market risk exposures to optimize return on risk while maintaining a market profile consistent with our established risk appetite.

The nature of the hedging and risk mitigation strategies performed corresponds to the market risk management instruments available. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at the portfolio level.

Market risk governance Market risk is managed and controlled through limits approved by the Board and the RMM, as well as the various businesses, and also ratified by the HSBC Group Risk Management Meeting. These limits are allocated across business lines and to the HSBC Group legal entities, including HSBC USA and HSBC Bank USA.

We have an independent market risk management and control function in North America which is responsible for setting the risk appetite, measuring market risk exposures in accordance with the policies defined by HSBC Group Risk, and monitoring and reporting these exposures against the prescribed limits on a daily basis.

Model risk is governed through model oversight committees at the regional and global wholesale credit and market risk levels. The Committees have direct oversight and approval responsibility for all traded risk models utilized for risk measurement and management and stress testing. They prioritize the development of models, methodologies and practices used for traded risk management and ensure that they remain within our risk appetite and business plans. We are committed to the ongoing development and enhancement of our in-house risk models subject to regulatory approval. Refer to "Model Risk Management" below for further discussion regarding the management and monitoring of model risk across North America.

Our control of market risk in the trading and non-trading portfolios is based on a policy of restricting operations to trading within a list of permissible instruments ultimately approved by HSBC Group Risk as well as enforcing new product approval procedures through a dedicated committee.

Market risk measures We use a range of tools to monitor and limit market risk exposures, including:

Sensitivity analysis Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios, for example the impact of a one basis point change in the yield curve. We use sensitivity analysis to monitor the market risk positions within each risk type. Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being one of the principal factors in determining the level of limits set.

Value at Risk ("VaR") VaR is a technique for estimating potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and calculated for all trading positions regardless of how we capitalize them. In addition, we calculate VaR for non-trading portfolios to have a complete picture of risk. Where we do not calculate VaR explicitly, we use alternative tools as summarized in the 'Stress Testing' section below.

Our VaR models are predominantly based on historical simulation which incorporates the following features:

- historical market rates and prices are calculated with reference to foreign exchange rates, commodity prices, interest rates and the associated volatilities;
- potential market movements utilized for VaR are calculated with reference to data from the past two years; and
- scenario profit and losses are calculated utilizing the market scenarios for all relevant risk factors;
- VaR measures are calculated to a 99 percent confidence level and use a one-day holding period.

The models also incorporate the effect of option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly those which are extreme in nature;
- the use of a holding period assumes that all positions can be liquidated or the risks offset during that period, which may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99 percent confidence level does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

Risk not in VaR framework - The risks not in VaR ("RNIV") framework aims to capture and capitalize material market risks that are not adequately covered in the VaR model, such as the U.S. Treasury to U.S. Treasury Futures basis. Risk factors are reviewed

on a regular basis and either incorporated directly in the VaR models, where possible, or quantified through the RNIV. In 2017, the capital requirement derived from the RNIV has been immaterial.

Stressed VaR Stressed VaR is primarily used for regulatory capital purposes and is integrated into the risk management process to facilitate efficient capital management. Stressed VaR complements other risk measures by providing severe potential losses associated with stressed market conditions. Stressed VaR modeling follows the same approach as VaR, except Stressed VaR calculates potential loss at a 99 percent confidence level for a one-day holding period based on a one year historical period that is calibrated to the most volatile period for the trading portfolio.

Stress testing Stress testing is an important procedure that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be much greater than those predicted by VaR modeling.

A set of scenarios is used consistently across the HSBC Group. Scenarios are tailored to capture the relevant potential events or market movements at each level. The risk appetite around potential stress losses is set and monitored against corresponding limits.

The process is governed by the Stress Testing Review Group forum which, in conjunction with regional risk management, determines the scenarios to be applied. Main scenario types are as follows:

- single risk factor stress scenarios that are unlikely to be captured within the VaR models, such as the break of a currency peg;
- technical scenarios that incorporate the largest move in each risk factor independent from any underlying market correlation;
- hypothetical scenarios are mainly built on potential macroeconomic events, for example, the slowdown in mainland China and the potential effects of a sovereign debt default, including its wider contagion effects, curves steepening or flattening scenarios; and
- historical scenarios which incorporate past observations of market movements during periods of stress which are not captured within VaR.

Market risk reverse stress tests are undertaken on the premise that there is a fixed loss. The stress testing process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios which are beyond normal business conditions and could have contagion and systemic implications.

Stressed VaR and stress testing, together with reverse stress testing, provide management with insights regarding the 'tail risk' beyond VaR, for which our appetite is limited.

Back-testing We routinely validate the accuracy of our VaR models by back-testing them against hypothetical profit and loss that excludes non-modeled items such as fees, commissions and revenues of intra-day transactions from the actual reported profit and loss. We would expect, on average, to see two or three profits and two or three losses in excess of VaR at the 99 percent confident level over a one-year period. The actual number of profits or losses in excess of VaR over this period can therefore be used to gauge how well the models are performing. To ensure a conservative approach to calculating our risk exposures, it is important to note that profits in excess of VaR are only considered when back-testing the accuracy of models and are not used for capital purposes.

Market risk in 2017 The U.S. market risk environment in 2017 was characterized by two main themes: slow but steady improvement in the U.S. economy and Latin America political event driven price volatility.

Continued steady improvement in the U.S. labor market, stable production growth and low long-term interest rates have set a foundation for U.S. equity indices to reach new all-time highs. The FRB remained on the path of less accommodative monetary policy; it raised rates three times in 2017 and began an orderly reduction of its holdings of U.S. Treasury bonds and mortgage-backed securities. U.S. markets received a further boost in early December with the enactment of the Tax Legislation. These factors have contributed to a rise in the prospect of inflationary pressure in the U.S. and we expect this to be a major theme in financial markets in 2018.

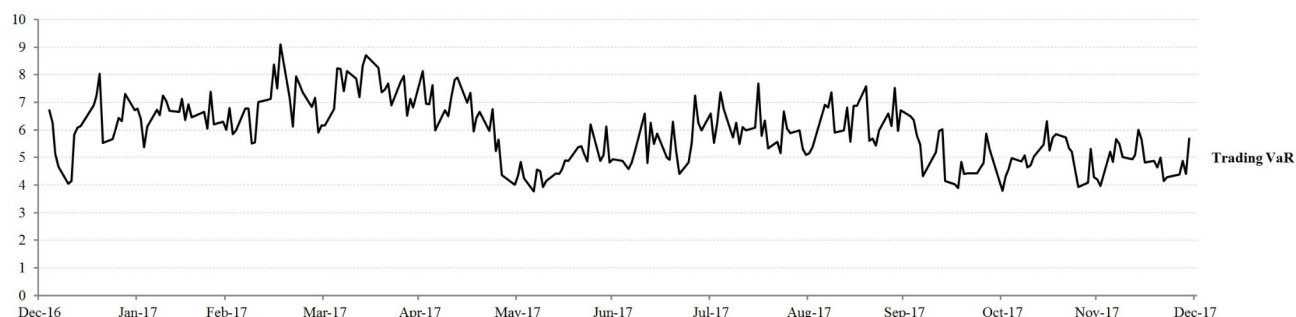
Against this backdrop of domestic stability, geopolitical events drove short term price volatility in the markets in which we operate. Allegations of bribery charges against the Brazilian President shook investors' confidence in Brazil in May. The market reaction resulted in a weaker Brazilian currency and higher interest rates. In November, the Bolivarian Republic of Venezuela missed an interest payment on international issued debt, triggering a legal credit event. While the market impact of these events was short term in nature, investor confidence was impacted, leading to reduced client demand and market liquidity in these areas. Political tensions between the U.S. and North Korea were a recurring source of world headlines, and while immediate market impacts have been muted, the threat of a global crisis remains.

Our Global Markets trading portfolio open risk exposures were generally low during 2017, as the business remained focused on customer facilitation and prudent risk management during times of market volatility.

Trading Portfolios Trading VaR generates from the Global Markets unit of the GB&M business segment. Portfolios are mainly comprised of foreign exchange products, interest rate swaps and precious metals (i.e. gold, silver, platinum) in both North America and emerging markets.

Trading VaR at December 31, 2017 was relatively flat as compared with December 31, 2016 as the Global Markets business in the U.S. continued to focus on customer facilitation and expanded further into high-yield credit and interest rate derivative markets. Interest rate and credit spread risk comprise the main drivers of exposure.

Daily VaR (trading portfolios), 99 percent 1 day (in millions):



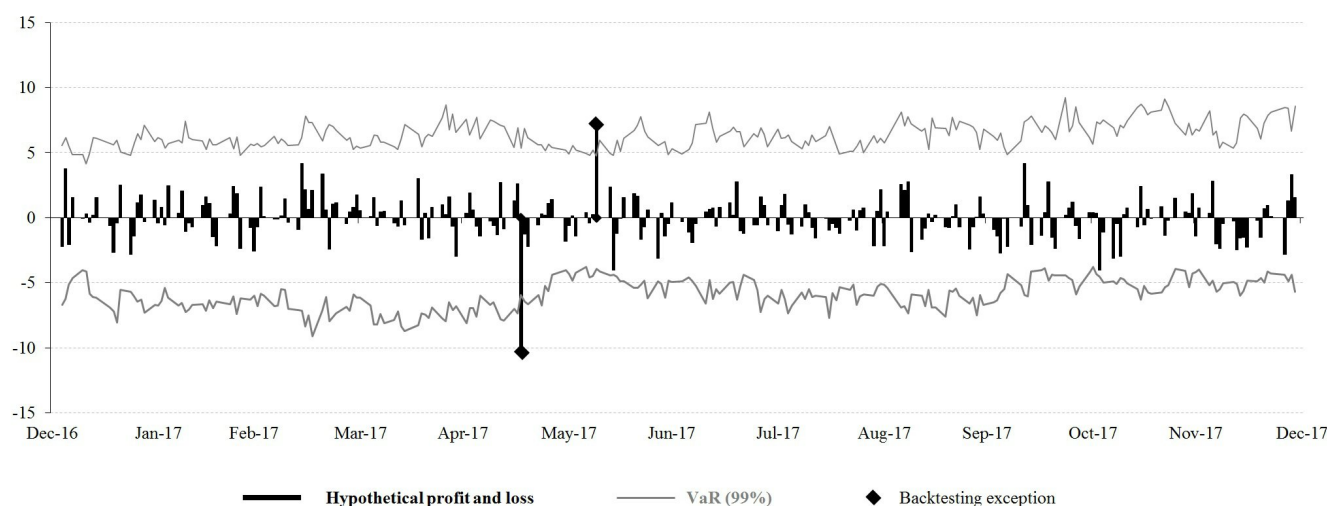
The following table summarizes our trading VaR for 2017 and 2016:

	Foreign exchange and commodity	Interest rate	Credit Spread	Portfolio diversification ⁽¹⁾	Total ⁽²⁾
	(in millions)				
At December 31, 2017	\$ 2	\$ 5	\$ 1	\$ (2)	\$ 6
Full Year 2017					
Average	2	6	1	(3)	6
Maximum	4	9	1		9
Minimum	—	4	1		4
At December 31, 2016	\$ 1	\$ 6	\$ 1	\$ (3)	\$ 5
Full Year 2016					
Average	1	5	2	(3)	5
Maximum	3	10	11		9
Minimum	1	2	1		3

⁽¹⁾ Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types, for example, foreign exchange, interest rate and credit spread, together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occur on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.

⁽²⁾ The total VaR is non-additive across risk types due to diversification effects. For presentation purposes, portfolio diversification of the VaR for trading portfolios includes VaR-based risk-not-in-VaR.

Back-testing In 2017, we experienced two back-testing exceptions. The first exception, a loss exception, occurred in May and was driven by political turmoil in Brazil, which sparked an increase in Brazilian interest rates that exceeded levels within our historical time series. The second exception, a profit exception, occurred in June and was driven by volatility observed in the Precious Metals market due to a liquidity squeeze. There was no impact to regulatory capital from these exceptions.

Back-testing of trading VaR against our hypothetical profit and loss (in millions):

Non-trading Portfolios Non-trading VaR predominantly relates to BSM and represents the potential negative changes in the investment portfolio market value (which includes available-for-sale and held-to-maturity assets) and associated hedges. Our investment portfolio holdings are mainly comprised of U.S. Treasury, U.S. Government agency mortgage-backed and U.S. Government sponsored mortgage-backed securities. Our non-trading VaR exposure is driven by interest rates, mortgage spreads, and asset swap spreads.

Non-trading VaR was lower in 2017 due primarily to a reduction of risk in our investment portfolio, specifically from reduced holdings of U.S. Treasuries and U.S. Government sponsored mortgage-backed securities.

The following table summarizes our non-trading VaR for 2017 and 2016:

	Interest rate	Credit Spread	Portfolio diversification ⁽¹⁾	Total ⁽¹⁾
	(in millions)			
At December 31, 2017	\$ 39	\$ 18	\$ (12)	\$ 45
Full Year 2017				
Average	49	21	(11)	59
Maximum	79	31		74
Minimum	36	17		44
At December 31, 2016	\$ 75	\$ 27	\$ (32)	\$ 70
Full Year 2016				
Average	60	24	(9)	76
Maximum	95	29		88
Minimum	35	20		46

⁽¹⁾ Refer to the Trading VaR table above for additional information.

Non-trading VaR also includes the interest rate risk of non-trading financial assets and liabilities held by the global businesses and transfer priced into Balance Sheet Management which has the mandate to centrally manage and hedge it. For a broader discussion on how interest rate risk is managed, please refer to the "Interest Rate Risk Management" section above.

Interest rate swaps used by BSM to hedge the interest rate risk of the investment portfolio and transfer price risk from the banking book are typically classified as either a fair value hedge or a cash flow hedge and included within our non-traded VaR. In case there is residual market risk that cannot be efficiently and conveniently hedged by BSM they are managed by ALCO in segregated ALCO books. ALCO books risk is calculated and monitored via the same framework described above for the trading books, namely sensitivities, VaR, stress testing and associated limits.

Stressed VaR The following table reflects stressed VaR at December 31, 2017 and 2016:

At December 31,	2017	2016
	(in millions)	
Stressed Value at Risk (1-day equivalent).....	\$ 14	\$ 13

Stressed VaR at December 31, 2017 was higher as compared with December 31, 2016 driven by increased inventory in rates and foreign exchange products.

Operational Risk Management Operational risk results from inadequate or failed internal processes, people and systems or from external events, including legal risk. Operational risk is relevant to every aspect of our business and covers a wide spectrum of risks. Our strategy is to manage operational risks in a cost effective manner, within targeted levels consistent with the risk appetite. Our Operational Risk Management Framework ensures minimum standards of governance and organization over operational risk and internal control throughout HSBC USA and covers all our businesses and operations (including all entities, activities, processes, systems and products). During 2017, we implemented a new Operational Risk Management Framework ("ORMF") and operational risk database. Under the new ORMF, risk and control assessments provide an end to end view of operational risk. Material risks are assigned an inherent risk assessment based on the likelihood and the direct (financial costs) and indirect impacts to the business. An assessment of the effectiveness of key controls that mitigate these risks is made and a residual risk assessment is determined. An operational risk database is used to record risk and control assessments and track related issues and mitigation action plans. The risk assessments, which are refreshed based on relevant triggers, provide an up-to-date view of the operational risk profile.

During 2017, our most material risks are in the compliance and information/cyber domains. The incidence of and response to regulatory proceedings and other adversarial proceedings against financial services firms is significant. We have prioritized resources to develop and execute remedial actions to regulatory matters, including enhancing or adding internal controls.

In addition, a failure of our defenses against a growing threat of cyberattacks could result in financial loss or the loss of customer data and other sensitive information which could undermine both our reputation and our ability to attract and retain our customers. See "Security Risk Management" below for further discussion.

We have established an independent operational risk management discipline in the United States which is led by the U.S. Head of Operational Risk and Risk Strategy, reporting to the HSBC North America CRO. The mission of the Operational Risk Management Meeting, chaired by the U.S. Head of Operational Risk and Risk Strategy, is to provide governance and strategic oversight of the ORMF, including the identification, assessment, monitoring and appetite of operational risk. Selected results and reports from this committee are communicated to the RMM and subsequently to the Risk Committee of the Board of Directors. Management in the First LoD is responsible for managing and controlling operational risk. In addition, the central Operational Risk function, in conjunction with the other Second LoD subject matter experts, provides functional oversight by coordinating the following activities:

- developing operational risk policies and procedures;
- developing and managing methodologies and tools to support the identification, assessment, and monitoring of operational risks;
- providing firm-wide operational risk and control reporting;
- identifying emerging risks;
- analyze root-cause of large operational risk losses;
- providing operational risk training and awareness programs for employees throughout the firm;
- communicating with the First LoD, including the Business Risk and Control Managers, to ensure the ORMF is executed within their respective business or function;
- independently reviewing the operational risk and control assessments, communicating results to business management and monitoring remedial actions that may be necessary to improve the assessments; and
- modeling operational risk losses and scenarios for capital management purposes.

Management of operational risk includes identification, assessment, monitoring, mitigation, rectification, and reporting of the results of risk events, including losses. These key components of the ORMF have been communicated by issuance of HSBC standards and procedures. Details and local application of the standards have been documented and communicated by issuance of a U.S. Operational Risk Policy. Key elements of the policy and our ORMF include:

- business and function management is responsible for the assessment, identification, management, and reporting of their operational risks and monitoring the ongoing effectiveness of key controls;
- material risks are assigned an inherent risk assessment based on the likelihood and the direct (financial costs) and indirect impacts to the business. An assessment of the effectiveness of key controls that mitigate these risks is made and a residual

risk is determined. An operational risk database is used to record risk and control assessments and track related issues and mitigation action plans. The risk assessments, which are refreshed based on relevant triggers, provide an up-to-date view of the operational risk profile;

- key risk indicators are established and monitored where appropriate; and
- the database is also used to track operational losses for analysis of root causes, comparison with risk assessments, lessons learned and capital modeling.

Management practices include standard reporting to senior management and the Operational Risk Management Meeting of material risks, significant control deficiencies, risk mitigation action plans, losses and key risk indicators. We also monitor external operational risk events to ensure that we remain in line with best practice and take into account lessons learned from publicized operational failures within the financial services industry. Operational risk management is an integral part of the new product development and approval process and the employee performance management process, as applicable.

Internal audit, which is the Third LoD, provides an important independent check on controls and test institutional compliance with the ORMF. Internal audit utilizes a risk-based approach to determine its audit coverage in order to provide an independent assessment of the design and effectiveness of key controls over our operations, regulatory compliance and reporting. This includes reviews of the ORMF, the effectiveness and accuracy of the risk assessment process, and the loss data collection and reporting activities.

Regulatory Compliance Risk Management Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice causing us to incur fines, penalties and damage to our business and reputation. It arises from the risks associated with breaching our duty to clients and other counter-parties, inappropriate market conduct, and breaching other regulatory requirements. Regulatory compliance risk is measured by reference to identified metrics, key risk indicators, testing of controls by the three lines of defense and through regulatory feedback. Regulatory compliance risks are assessed through detailed assessments and reported to the RMM and the Board through the reporting of RAS metrics and the Regulatory Compliance Enterprise Risk Assessment report. Regulatory compliance risk is managed by establishing and communicating appropriate policies and procedures, training employees in regulatory requirements, establishing controls, and monitoring and testing controls to help ensure that the regulatory requirements are being adhered to. Proactive risk control and/or remediation work is undertaken where required.

The second line of defense risk stewards provide independent, objective oversight and challenge and promote a compliance-orientated culture, supporting the businesses in delivering fair outcomes for customers, maintaining the integrity of financial markets and achieving our strategic objectives. Any actual or potential regulatory breaches require prompt identification and escalation to the Regulatory Compliance function or other applicable risk stewards. Any major breaches, gaps, issues and emerging risks are escalated to RMM and the Board, as appropriate.

During 2017, we restructured part of our Risk function. The Financial Crime Compliance sub-function ("FCC") became part of our new Financial Crime Risk function ("FCR"), which reports to the HSBC North America CEO as discussed further below. The Regulatory Compliance function remains part of Risk, and continues to oversee the management of Regulatory Compliance risk.

Previously, the Compliance Committee of the Board of Directors oversaw the remediation of our compliance risk management program. During 2017, the remit of the Compliance Committee of the Board of Directors was expanded and the committee was renamed the Compliance and Conduct Committee (the "CCC"). The CCC oversees the remediation of our compliance risk management program as well as compliance (both Regulatory Compliance and Financial Crime Risk) and fiduciary matters.

Compliance related regulatory findings In 2010, HSBC Bank USA entered into a consent cease and desist order with the OCC and our parent, HSBC North America, entered into a consent cease and desist order with the FRB. In 2012, HSBC Bank USA further entered into an enterprise-wide compliance consent order (each an "Order" and together, the "Orders"). These Orders required improvements to establish an effective compliance risk management program across our U.S. businesses, including risk management related to Bank Secrecy Act and Anti-Money Laundering compliance. While these Orders remain open, HSBC Bank USA and HSBC North America believe that they have taken appropriate steps to bring themselves into compliance with the requirements of the Orders. For additional discussion, see Note 27, "Litigation and Regulatory Matters," in the accompanying consolidated financial statements.

Financial Crime Risk Management Financial crime risk is the risk that we knowingly or unknowingly enable parties to commit or to further potentially illegal activity through the HSBC Group. Financial crime risk management is the framework in place to identify and deter potential illegal activity from occurring by, at, or through the HSBC Group. It is embedded in our day to day operations and culture.

As discussed above, during 2017, we established FCR and appointed the U.S. Head of FCC as the function lead for FCR. The U.S. Head of FCC reports to the HSBC North America CEO and the HSBC Global Head of FCC and Group Money Laundering Officer. The U.S. Head of FCC has delegated authority from the HSBC North America CEO over the FCRMC which escalates to the CCC on matters relating to financial crime. Further, there was a reorganization of certain risk activities to bring together all areas of

financial crime risk management to include activities related to financial crime and fraud risk management now performed by FCR.

FCR provides oversight to enable us to build on our achievements in managing financial crime risk effectively and to continue to strengthen financial crime detection, and AML, sanctions, and anti-bribery and corruption compliance. FCR includes FCC, Financial Crime Threat Mitigation ("FCTM"), Financial Crimes Operations, and Financial Crime Risk Assurance. FCTM is a global capability to proactively identify, analyze and investigate financial crime risk and ensure proper mitigation of these risks. It works closely with the lines of business and functions to provide the information needed to mitigate financial crime risk.

FCR continues to embed policies and procedures, introduce new technology solutions, and support a culture of compliance needed to effectively manage financial crime risk including the enterprise wide compliance risk management program.

Fiduciary Risk Management Fiduciary risk is the risk of breaching fiduciary duties where we act in a fiduciary capacity. It is the risk associated with failing to offer services honestly and properly to clients in that capacity. We define a fiduciary duty as any duty where we hold, manage, oversee or have responsibilities for assets of a third party that involves a legal and/or regulatory duty to act with the highest standard of care and with utmost good faith. A fiduciary must make decisions and act in the best interests of the third parties and must place the wants and needs of the client first, above the needs of the organization. Fiduciary duties can also be established by case law, statute or regulation. Fiduciary capacity is primarily defined in banking regulation as:

- serving traditional fiduciary duties such as trustee, executor, administrator, registrar of stocks and bonds, transfer agent, guardian, receiver or assigns;
- providing investment advice for a fee; or
- possessing investment discretion on behalf of another.

Fiduciary risks, as defined above, reside in our PB businesses (such as Investment Management, Personal Trust, Security Operation Services) and other business lines outside of PB (such as Corporate Trust) and are ruled/guided primarily (but, not exclusively) by OCC Fiduciary-targeted Regulations (i.e. Regulation 12 CFR 9, Regulation 12 CFR 12). Additionally, Fiduciary Risk also includes risk associated with certain SEC regulated Registered Investment Advisers ("RIA"), which lie outside of the traditional banking regulatory fiduciary risk definitions as described above. HSBC Global Asset Management (USA) Inc. would fall into that category as would HSBC Securities (USA) Inc./Private Client Services. The RIA definition of fiduciary capacity primarily applies in the following circumstances and is ruled/guided primarily (but, not exclusively) by SEC Fiduciary-targeted Regulations (i.e. Investment Advisers Act of 1940 and Investment Company Act of 1940):

- receiving fees for advising people, pension funds and institutions on investment matters;
- managing assets on behalf of another; or
- organizing organizations that engage in investing, reinvesting and trading securities (such as mutual funds) and whose own securities are offered to the investing public.

The fiduciary risks present in both the standard banking and RIA business lines almost always occur where we are entrusted to handle and execute client business affairs and transactions in a fiduciary capacity.

Previously, Fiduciary risk was governed by the Fiduciary Committee of the Board of Directors. During 2017, the Fiduciary Committee of the Board of Directors was demised and its responsibilities taken over by the CCC. The CCC has delegated day-to-day management and oversight responsibilities to management, with support and guidance from the U.S. Head of Volcker and Fiduciary Compliance who reports to the U.S. Head of Regulatory Compliance. Internal management risk meetings include fiduciary business line heads as well as representatives from legal, compliance and audit and other fiduciary support functions, as well as a Fiduciary Risk Officer/Specialist who has the requisite expertise to oversee and provide governance and advice on fiduciary risk matters. The Fiduciary Risk Officer/Specialist reports to the U.S. Head of Volcker and Fiduciary Compliance and partners with the lines of business and other functional areas performing these fiduciary activities, as well as interacts with regulators, on fiduciary matters.

Reputational Risk Management The safeguarding of our reputation is of paramount importance to our continued prosperity and is the responsibility of every member of our staff. Reputational risk can arise from social, ethical or environmental issues, or as a consequence of operational and other risk events. Our good reputation depends upon the way in which we conduct our business, but can also be affected by the way in which customers to whom we provide financial services conduct themselves.

Reputational risk relates to stakeholders' perceptions, whether based on fact or otherwise. Stakeholders expectations are constantly changing and thus, reputational risk is dynamic and will differ between geographies, groups and individuals.

We tolerate a limited degree of reputational risk arising from business activities or association where foreseeable reputational risk has been escalated to the appropriate level of management, carefully considered and/or mitigated and is determined to fall to acceptable risk thresholds as defined by the HSBC Group risk appetite statement. Since reputational risk can arise from all aspects of operations and activities, all businesses and functions are required to articulate and track reputational risk.

Reputational risk is considered and assessed by the HSBC Group Management Board, the HSBC Group and local Board of Directors and senior management during the establishment of standards for all major aspects of business and the formulation of policy and products. These policies, which are an integral part of the internal control systems, are communicated through manuals and statements of policy, internal communication and training. The policies set out operational procedures in all areas of reputational risk, including money laundering deterrence, economic sanctions, environmental impact, anti-corruption measures, employee relations, inappropriate market conduct and breach of regulatory duty and requirements.

We have taken steps over the past several years to de-risk our businesses and product offering to reduce reputational risk. In addition, we continue to strengthen our internal control structure to minimize the risk of operational and financial failure and to ensure that a full appraisal of reputational risk is made before strategic decisions are taken.

The RMM provides governance and oversight of reputational risk. The monthly Risk map process assesses the level and direction of reputational risk and helps ensure appropriate management action is taken when necessary. The Risk map is a reporting tool where management assesses the overall level and direction of several distinct risk categories, including management action necessary to control or address risks outside of an acceptable level or risk appetite. Each business reviews transactions and customers that may adversely affect our public perception via their RRCSC. The RRCSCs are chaired by a senior executive and are comprised of senior members from the business, risk, legal, financial crimes, compliance and other invited parties. The RRCSCs are responsible for reviewing the individual merits and involved parties in higher-risk transactions, and approving or declining customer relationships and transactions based on the potential risks to us. In addition to the RRCSCs, the responsibility of the practical implementation of such policies and the compliance with the letter and spirit of them rests with our CEO and senior management of our businesses.

Strategic Risk Management Strategic risk is the risk that the business will fail to identify, execute, and react appropriately to material opportunities and/or threats arising from changes in the market, some of which may emerge over a number of years such as changing economic and political circumstances, customer requirements, demographic trends, regulatory developments or competitor action. Risk may be mitigated by consideration of the potential opportunities and challenges through the strategic planning process.

This risk is also a function of the compatibility of our strategic goals, the business strategies developed to achieve those goals, the resources deployed against those goals and the quality of implementation.

We have established a strong internal control structure to minimize the impact of strategic risk to our earnings and capital. All changes in strategy as well as the process in which new strategies are implemented are subject to detailed reviews and approvals at business line, functional, regional, board and HSBC levels. This process is monitored by the Strategy and Planning function to ensure compliance with our policies and standards.

Security Risk Management The role of Security Risk Management ("SR") is the protection of people, property, assets and information by reducing the risk to the business from terrorism, incidents/disasters and groups hostile to HSBC interests. To achieve this, SR is organizationally part of the business it supports and they advise and assist senior executive management who have overall responsibility for security issues. As discussed above, activities related to financial crime and fraud risk management are no longer performed by SR, but are now performed by FCR. In addition, during 2017, SR was expanded to include insider risk which focuses holistically around managing, monitoring and controlling the risk related to all insiders, including employees, contractors and third parties.

Security risk issues are managed at the HSBC Group level by HSBC Global Security Risk. This unit, which has responsibility for information, contingency, physical, terrorism and insider risks are fully integrated within the HSBC Group Risk function. This enables management to identify and mitigate the permutations of these and other non-financial risks to its businesses across the jurisdictions in which we operate.

The security of our information and technology infrastructure is crucial for maintaining our applications and processes while protecting our customers and the HSBC brand. In common with other financial institutions and multinational organizations, we face a growing threat of cyberattacks that continue to increase in sophistication. A failure of our defenses against such attacks could result in financial loss or the loss of customer data or other sensitive information which could undermine both our reputation and our ability to attract and retain our customers. We experienced cyberattacks in 2017, none of which resulted in material financial loss or the loss of customer data. We continue to mature our cyber intelligence capabilities as the cyber threat landscape evolves. These intelligence monitoring capabilities increase our agility and ability to respond with increased detection and response capabilities reducing potential exposure to cyber threats. Regulators have listed cybersecurity as their top concern in 2017 and into 2018. Regulation continues to increase from multiple jurisdictions and perspectives, and is deployed without coordination with other regulators. HSBC is engaged with peer institutions working to address regulatory harmonization as it relates to cyber and information security. We have met with the U.S. Treasury Department and all regulatory bodies (e.g. the OCC, FRB, FDIC, Commodity Futures Trading Commission, etc.) to progress harmonization. This effort will continue in 2018. Cybersecurity will continue to be a strong focus of ongoing initiatives to strengthen the control environment and our readiness to respond in the event of an attack.

The *Information Security Risk* function is responsible for providing guidance, oversight and challenge of the cybersecurity program that addresses current and future threats and enables business growth as well as the businesses and functions to ensure they understand and manage the information risks they have.

The *Contingency Risk* function is responsible for ensuring that our critical business processes and functions have the business directed level of resilience to maintain continuity in the face of major disruptive events.

Within this wider risk, Business Continuity Management ("BCM") covers the planning for business recovery, seeking to minimize the adverse effects of major business disruption, either globally, regionally or within country, against a range of actual or emerging risks. The planning concentrates on the protection of customer services, our staff, revenue generation, minimization of incremental expenses, retention of data and documents, and meeting regulatory requirements.

Each business has its own business recovery plan, which is developed following the completion of a Business Impact Analysis ("BIA"). The BIA determines how much time the business can sustain an outage before the level of losses becomes unacceptable (i.e. its criticality). These BIAs and business recovery plans are updated and tested every year. The planning and testing is undertaken against HSBC Group policy and standards along with additional requirements under U.S. BCM policy and standards. Each business confirms in an annual compliance certificate that all requirements have been met. Should there be exceptions, these are raised and their short-term resolution is overseen by the HSBC Group and HSBC U.S. Contingency Risk teams.

It is important that business recovery plans are dynamic and meet all major risk threats, particularly those of an emerging nature such as possible pandemics and cyberattacks. The BCM standards and quarterly metrics are used to measure resilience to these risks and is confirmed to HSBC Group Contingency Risk and appropriate HSBC U.S. risk committees.

Business resilience is managed through various risk mitigation measures. These includes agreeing with our information technology area acceptable recovery times for critical systems, ensuring our major buildings have the correct infrastructure to enable ongoing operations, requiring critical vendors to have and test their own recovery plans and arranging with HSBC Group insurance appropriate cover for business interruption costs.

The *Physical Security Risk* function develops practical physical, electronic and operational countermeasures to ensure that the people, property and assets we manage are protected from crime, theft, attack and groups hostile to our interests.

The *Terrorism Risk* function provides both regular and ad hoc reporting to business executives and senior SR management on terrorism risk profiles and evolving threats in which we operate. This both enhances strategic business planning and provides an early view into developing security risks.

The *Insider Risk* function provides insider risk strategy, framework definition and threat analysis (within risk appetite) as well as assists risk stewards and stakeholders to update policies and procedures to enhance our ability to identify and mitigate insider risk. The function is also responsible for the operational management of vetting and oversight of all insider screening undertaken by HUSI.

Vetting is a key defense against Insider and other risks and screens potential employees and non-employees in order to a) confirm the candidate's identity, employment history and relevant qualifications with respect to the post for which they are applying; b) test their integrity in accordance with our values; and c) confirm that there are no legal or regulatory barriers to employing them. The vetting process also seeks to provide a level of assurance that an applicant's background does not raise reasonable concerns that their employment would expose us to unacceptable levels of risk.

Model Risk Management Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. This occurs primarily for two reasons: 1) the model may produce inaccurate outputs when compared to the intended business use and design objective; and 2) the model could be used incorrectly. In order to manage the risks arising out of the use of incorrect or misused model output or reports, a comprehensive model risk governance framework has been established that provides oversight and challenge to all models across HSBC North America. The framework includes a HSBC North America Model Standards Policy that aligns with model risk management regulations. Each area that uses models maintains model management procedures in accordance with the Model Standards Policy. A HSBC North America model and non-model inventory is maintained and updated on a quarterly basis. In addition, a model risk measurement framework is used to measure, mitigate and monitor model risk across HSBC North America. Model risk is managed on an ongoing basis by the CRO Meeting, which is chaired by the HSBC North America CRO with broad representation from across our businesses and support functions.

The Independent Model Review ("IMR") function, which reports directly to the HSBC North America CRO, is responsible for providing effective challenge of models and critical processes implemented for use within HSBC North America. Reviews are conducted in-line with supervisory guidance on model risk management issued by the OCC and FRB as well as other applicable internal and regulatory guidelines. Effective challenge is defined as a critical analysis by objective, informed parties who can identify model limitations and assumptions and produce appropriate changes. IMR activities are segregated from the model development process to ensure that incentives are aligned with the function's role to challenge models and identify model limitations, and the authority and access provided by the Board of Directors provides the function with the necessary influence to ensure that its recommendations are acted upon. The independent model review process assesses model development, implementation, use,

validation, and governance. IMR scope covers models reported on the HSBC North America model inventory and critical non model processes. Examples of models and processes that IMR reviews include: Credit Risk, Market Risk, Operational Risk, CCAR, ICAAP, Economic Capital, Allowance for Loan and Lease Losses, Loss Forecasting, AML, Counterparty Credit Risk, Interest Rate Risk, Risk Sensitivity, Hedging and Fair Value Adjustment.

Pension Risk Management Pension risk is the risk of increased costs from the post-employment benefit plans that we have established for our employees. Certain employees are eligible to participate in the HSBC North America qualified defined benefit pension plan which has been frozen. At December 31, 2017, plan assets were lower than projected plan liabilities resulting in an under-funded status. The accumulated benefit obligation exceeded the fair value of the plan assets by approximately \$265 million. As these obligations relate to the HSBC North America pension plan, only a portion of this deficit could be considered our responsibility. We and other HSBC North America affiliates with employees participating in this plan will be required to make up this shortfall over a number of years as specified under the Pension Protection Act. This can be accomplished through direct contributions, appreciation in plan assets and/or increases in interest rates resulting in lower liability valuations. See Note 20, "Pension and Other Postretirement Benefits," in the accompanying consolidated financial statements for further information concerning the HSBC North America defined benefit plan.

Sustainability Risk Management Sustainability risk is the risk that financial services provided to customers indirectly result in unacceptable impacts on people or on the environment. Sustainability risk is measured by assessing the potential sustainability effect of a customer's activities and assigning a sustainability risk rating. Sustainability risk is monitored by the RMM as well as Group Sustainability Risk. Sustainability risk managers in the Wholesale Credit Risk function, with input from Group Sustainability Risk, are responsible for advising our businesses on managing environmental and social risks. The Wholesale Credit Risk function's responsibilities in relation to sustainability risk include:

- overseeing our sustainability risk standards, our application of the Equator Principles and our sustainability policies (covering agricultural commodities, chemicals, defense, energy, forestry, freshwater infrastructure, mining and metals, and World Heritage Sites);
- undertaking an independent review of transactions, including escalating transactions to Group Sustainability Risk where sustainability risks are assessed to be high and approving transactions where sustainability risks are of a lower magnitude; and
- providing training and capacity building within our businesses to ensure sustainability risks are identified and mitigated consistently.

GLOSSARY OF TERMS

Balance Sheet Management – Is responsible for managing our liquidity and funding. Balance Sheet Management ("BSM") also manages our structural interest rate position within a limit structure.

Basis point – A unit that is commonly used to calculate changes in interest rates. The relationship between percentage changes and basis points can be summarized as a 1 percent change equals a 100 basis point change or .01 percent change equals 1 basis point.

CDS – Credit Default Swap.

Contractual Delinquency – A method of determining aging of past due accounts based on the past due status of payments under the loan. Delinquency status may be affected by customer account management policies and practices such as the re-age of accounts or modification arrangements.

Delinquency Ratio – Two-months-and-over contractual delinquency expressed as a percentage of loans and loans held for sale at a given date.

Efficiency Ratio – Total operating expenses expressed as a percentage of the sum of net interest income and other revenues.

First Line of Defense or First LoD – Part of the Three Lines of Defense ("LoD") model for managing risk. The First LoD is predominately comprised of management who are accountable and responsible for their day to day activities, processes and controls. The First LoD must ensure all key risks within their activities and operations are identified, mitigated and monitored by an appropriate control environment that is commensurate with our risk appetite.

FRB – The Federal Reserve Board; our principal regulator.

Futures Contract – An exchange-traded contract to buy or sell a stated amount of a financial instrument or index at a specified future date and price.

Global Bank Note Program – A \$40 billion note program, under which HSBC Bank USA issues senior and subordinated debt.

Goodwill – The excess of purchase price over the fair value of identifiable net assets acquired, reduced by liabilities assumed in a business combination.

Group Reporting Basis – A measure of reporting results using financial information prepared on the basis of HSBC Group's accounting and reporting policies which apply International Financial Reporting Standards as issued by the International Accounting Standards Board and endorsed by the European Union.

Interest Rate Swap – Contract between two parties to exchange interest payments on a stated principal amount (notional principal) for a specified period. Typically, one party makes fixed rate payments, while the other party makes payments using a variable rate.

LIBOR – London Interbank Offered Rate; A widely quoted market rate which is frequently the index used to determine the rate at which we borrow funds.

Liquidity – A measure of how quickly we can convert assets to cash or raise additional cash by issuing debt.

Loan-to-Value ("LTV") Ratio – For first liens, the current loan balance expressed as a percentage of the current property value. For second liens, the current loan balance plus the senior lien amount at origination expressed as a percentage of the current property value.

Mortgage Servicing Rights ("MSRs") – An intangible asset which represents the right to service mortgage loans. These rights are recognized at the time the related loans are sold or the rights are acquired.

Net Charge-off Ratio – Net charge-offs of loans expressed as a percentage of average loans outstanding for a given period.

Net Interest Income – Interest income earned on interest-bearing assets less interest expense on deposits and borrowed funds.

Net Interest Income to Total Assets – Net interest income expressed as a percentage of average total assets for a given period.

Net Interest Margin – Net interest income expressed as a percentage of average interest earning assets for a given period.

Nonaccruing Loans – Loans on which we no longer accrue interest because ultimate collection is unlikely.

OCC – The Office of the Comptroller of the Currency; the principal regulator for HSBC Bank USA.

Options – A contract giving the owner the right, but not the obligation, to buy or sell a specified item at a fixed price for a specified period.

Portfolio Seasoning – Relates to the aging of origination vintages. Loss patterns emerge slowly over time as new accounts are booked.

Rate of Return on Common Equity – Net income, reduced by preferred dividends, divided by average common equity for a given period.

Rate of Return on Risk-Weighted Assets - Net income divided by average risk-weighted assets for a given period.

Rate of Return on Total Assets – Net income divided by average total assets for a given period.

Residential Mortgage Loan – Closed-end loans and revolving lines of credit secured by first or second liens on residential real estate. Depending on the type of residential mortgage, interest can either be fixed or adjustable.

REO – Real Estate Owned

SEC – The Securities and Exchange Commission.

Second Line of Defense or Second LoD – Part of the Three LoD model for managing risk. The Second LoD is predominately comprised of various functions, such as Finance, Legal, Risk, Compliance and Human Resources, whose role is to ensure that we are operating in line with our risk appetite. These risk stewards must also maintain and monitor controls for which they are directly responsible.

Secured Financing – A Collateralized Funding Transaction in which the interests in a dedicated pool of consumer receivables, typically credit card, auto or personal non-credit card receivables, are sold to a special purpose entity which then issues securities that are sold to investors. These transactions do not receive sale treatment.

Tangible Common Equity to Total Tangible Assets – Common equity less goodwill, other intangibles and accumulated other comprehensive loss expressed as a percentage of total assets less goodwill and other intangibles.

TDR Loans – Troubled debt restructurings, which are loans for which the original contractual terms have been modified to provide for terms that are less than we would be willing to accept for new loans with comparable risk because of deterioration in the borrower's financial condition.

Third Line of Defense or Third LoD – Part of the Three LoD model for managing risk. The Third LoD is comprised of Internal Audit, who provides independent assurance as to the effectiveness of the design, implementation and embedding of the risk management frameworks as well as the management of the risks and controls by the First LoD and control oversight by the Second LoD.

Three Lines of Defense Model – This model is used to delineate management accountabilities and responsibilities for risk management and the control environment. This model creates a robust control environment and underpins our approach to strong risk management by clarifying responsibilities, encouraging collaboration and enabling efficient coordination of risk and control activities.

Total Equity to Total Assets – Total equity expressed as a percentage of total assets as of a given date.

U.S. GAAP – Generally accepted accounting principles in the United States.

CONSOLIDATED AVERAGE BALANCES AND INTEREST RATES

The following table summarizes the year-to-date average daily balances of the principal components of assets, liabilities and equity together with their respective interest amounts and rates earned or paid, presented on a taxable equivalent basis, which resulted in increases to interest income on securities of nil, \$1 million and \$12 million during the years ended December 31, 2017, 2016 and 2015, respectively. Net interest margin is calculated by dividing net interest income by the average interest earning assets from which interest income is earned. Loan interest for the years ended December 31, 2017, 2016 and 2015 included fees of \$74 million, \$80 million and \$68 million, respectively.

	2017			2016			2015		
	Average Balance	Interest	Rate	Average Balance	Interest	Rate	Average Balance	Interest	Rate
(dollars are in millions)									
Assets									
Interest bearing deposits with banks	\$ 38,811	\$ 447	1.15%	\$ 31,999	\$ 165	.52%	\$ 32,195	\$ 84	.26%
Federal funds sold and securities purchased under resale agreements	7,263	222	3.06	12,881	200	1.55	5,077	24	.47
Trading securities	10,646	209	1.96	11,556	262	2.27	11,916	340	2.86
Securities	47,492	952	2.01	52,469	957	1.82	48,899	910	1.86
Loans:									
Commercial	50,474	1,511	2.99	61,401	1,537	2.50	63,235	1,366	2.16
Consumer:									
Residential mortgages	17,418	583	3.35	18,001	596	3.31	17,274	571	3.31
Home equity mortgages.....	1,289	50	3.88	1,506	52	3.45	1,682	55	3.28
Credit cards.....	658	70	10.64	668	71	10.63	678	74	10.90
Other consumer	451	27	5.99	476	28	5.88	509	30	5.70
Total consumer	19,816	730	3.68	20,651	747	3.62	20,143	730	3.62
Total loans	70,290	2,241	3.19	82,052	2,284	2.78	83,378	2,096	2.51
Other	2,997	52	1.74	2,394	43	1.80	2,759	59	2.13
Total interest earning assets.....	\$ 177,499	\$ 4,123	2.32%	\$ 193,351	\$ 3,911	2.02%	\$ 184,224	\$ 3,513	1.91%
Allowance for credit losses	(888)			(1,012)			(679)		
Cash and due from banks	1,112			998			898		
Other assets.....	20,820			13,855			14,619		
Total assets	\$ 198,543			\$ 207,192			\$ 199,062		
Liabilities and Equity									
Domestic deposits:									
Savings deposits	\$ 49,635	\$ 237	.48%	\$ 50,949	\$ 135	.26%	\$ 46,790	\$ 99	.21%
Time deposits.....	22,709	357	1.57	25,594	264	1.03	26,904	142	.53
Other interest bearing deposits	11,023	53	.48	7,827	10	.13	4,401	5	.10
Foreign deposits:									
Foreign banks deposits	6,302	36	.57	8,747	45	.51	7,332	9	.13
Other interest bearing deposits	3,144	19	.60	4,099	14	.34	3,843	5	.13
Deposits held for sale	228	1	.53	—	—	—	—	—	—
Total interest bearing deposits	93,041	703	.76	97,216	468	.48	89,270	260	.29
Short-term borrowings	9,465	124	1.31	10,153	79	.78	13,576	46	.34
Long-term debt.....	37,155	998	2.69	36,204	864	2.39	31,643	709	2.24
Total interest bearing deposits and debt.....	139,661	1,825	1.31	143,573	1,411	.98	134,489	1,015	.76
Tax liabilities and other	1,284	25	1.95	821	15	1.83	654	16	2.29
Total interest bearing liabilities	\$ 140,945	\$ 1,850	1.31%	\$ 144,394	\$ 1,426	.99%	\$ 135,143	\$ 1,031	.76%
Net interest income/Interest rate spread		\$ 2,273	1.01%		\$ 2,485	1.03%		\$ 2,482	1.15%
Noninterest bearing deposits	29,686			31,682			32,244		
Other liabilities	7,149			10,168			11,699		
Total equity	20,763			20,948			19,976		
Total liabilities and equity	\$ 198,543			\$ 207,192			\$ 199,062		
Net interest margin on average earning assets			1.28%			1.28%			1.35%
Net interest income to average total assets			1.14%			1.20%			1.25%

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Information required by this Item is included within Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in the Risk Management section under the captions "Interest Rate Risk Management" and "Market Risk Management."

Item 8. Financial Statements and Supplementary Data

Our 2017 Financial Statements meet the requirements of Regulation S-X. The 2017 Financial Statements and supplementary financial information specified by Item 302 of Regulation S-K are set forth below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholder of
HSBC USA Inc.:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of HSBC USA Inc. and its subsidiaries ("the Company") as of December 31, 2017 and 2016, and the related consolidated statements of income (loss), comprehensive loss, changes in equity and cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for classification and measurement of financial liabilities measured under the fair value option in 2017.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 20, 2018

We have served as the Company's auditor since 2015.

CONSOLIDATED STATEMENT OF INCOME (LOSS)

Year Ended December 31,	2017	2016	2015
	(in millions)		
Interest income:			
Loans.....	\$ 2,241	\$ 2,284	\$ 2,096
Securities.....	952	956	898
Trading securities.....	209	262	340
Short-term investments.....	669	365	108
Other.....	52	43	59
Total interest income	4,123	3,910	3,501
Interest expense:			
Deposits.....	703	468	260
Short-term borrowings.....	124	79	46
Long-term debt.....	998	864	709
Other.....	25	15	16
Total interest expense	1,850	1,426	1,031
Net interest income.....	2,273	2,484	2,470
Provision for credit losses.....	(165)	372	361
Net interest income after provision for credit losses	2,438	2,112	2,109
Other revenues:			
Credit card fees.....	46	52	43
Trust and investment management fees.....	156	153	170
Other fees and commissions.....	669	721	743
Trading revenue.....	354	227	74
Other securities gains, net.....	52	70	48
Servicing and other fees from HSBC affiliates.....	348	289	276
Residential mortgage banking revenue (expense).....	(6)	16	62
Gain (loss) on instruments designated at fair value and related derivatives.....	43	(71)	264
Other income (loss).....	340	(53)	55
Total other revenues	2,002	1,404	1,735
Operating expenses:			
Salaries and employee benefits.....	1,077	981	1,000
Support services from HSBC affiliates.....	1,549	1,495	1,556
Occupancy expense, net.....	202	171	172
Other expenses.....	563	651	556
Total operating expenses	3,391	3,298	3,284
Income before income tax.....	1,049	218	560
Income tax expense.....	1,228	89	230
Net income (loss)	\$ (179)	\$ 129	\$ 330

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE LOSS

Year Ended December 31,	2017	2016	2015
	(in millions)		
Net income (loss)	\$ (179)	\$ 129	\$ 330
Net change in unrealized gains (losses), net of tax:			
Investment securities	211	(227)	(392)
Fair value option liabilities attributable to our own credit spread.....	(193)	—	—
Derivatives designated as cash flow hedges	(7)	13	(14)
Pension and post-retirement benefit plans	2	3	—
Total other comprehensive income (loss)	13	(211)	(406)
Comprehensive loss	\$ (166)	\$ (82)	\$ (76)

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

CONSOLIDATED BALANCE SHEET

At December 31,	2017	2016
	(in millions, except share data)	
Assets⁽¹⁾		
Cash and due from banks.....	\$ 1,115	\$ 1,235
Interest bearing deposits with banks.....	11,157	20,238
Federal funds sold and securities purchased under agreements to resell (includes \$80 million and \$770 million designated under fair value option at December 31, 2017 and 2016, respectively).....	32,618	30,023
Trading assets.....	16,150	16,850
Securities available-for-sale.....	30,700	36,910
Securities held-to-maturity (fair value of \$13.9 billion and \$12.8 billion at December 31, 2017 and 2016, respectively).....	13,977	12,809
Loans.....	72,563	73,875
Less – allowance for credit losses.....	681	1,017
Loans, net.....	<u>71,882</u>	<u>72,858</u>
Loans held for sale (includes \$471 million and \$725 million designated under fair value option at December 31, 2017 and 2016, respectively).....	715	1,809
Properties and equipment, net.....	185	202
Goodwill.....	1,607	1,612
Other assets.....	7,129	6,755
Total assets	<u>\$ 187,235</u>	<u>\$ 201,301</u>
Liabilities⁽¹⁾		
Debt:		
Domestic deposits:		
Noninterest bearing.....	\$ 28,153	\$ 26,932
Interest bearing (includes \$7.7 billion and \$7.5 billion designated under fair value option at December 31, 2017 and 2016, respectively).....	84,223	86,389
Foreign deposits:		
Noninterest bearing.....	322	741
Interest bearing.....	5,331	15,186
Deposits held for sale.....	673	—
Total deposits.....	<u>118,702</u>	<u>129,248</u>
Short-term borrowings (includes \$2.0 billion and \$2.7 billion designated under fair value option at December 31, 2017 and 2016, respectively).....	4,650	5,101
Long-term debt (includes \$12.9 billion and \$10.4 billion designated under fair value option at December 31, 2017 and 2016, respectively).....	34,966	37,739
Total debt.....	<u>158,318</u>	<u>172,088</u>
Trading liabilities.....	4,879	4,908
Interest, taxes and other liabilities.....	3,944	3,950
Total liabilities	<u>167,141</u>	<u>180,946</u>
Equity		
Preferred stock (no par value; 40,999,000 shares authorized; 1,265 shares issued and outstanding at both December 31, 2017 and 2016).....	1,265	1,265
Common equity:		
Common stock (\$5 par; 150,000,000 shares authorized; 714 shares issued and outstanding at both December 31, 2017 and 2016).....	—	—
Additional paid-in capital.....	18,130	18,148
Retained earnings.....	1,130	1,560
Accumulated other comprehensive loss.....	(431)	(618)
Total common equity.....	<u>18,829</u>	<u>19,090</u>
Total equity	<u>20,094</u>	<u>20,355</u>
Total liabilities and equity	<u>\$ 187,235</u>	<u>\$ 201,301</u>

⁽¹⁾ The following table summarizes assets and liabilities related to our consolidated variable interest entities ("VIEs") at December 31, 2017 and 2016 which are consolidated on our balance sheet. Assets and liabilities exclude intercompany balances that eliminate in consolidation. See Note 24, "Variable Interest Entities," for additional information.

At December 31,	2017	2016
	(in millions)	
<i>Assets</i>		
Other assets	\$ 154	\$ 231
Total assets	<u>\$ 154</u>	<u>\$ 231</u>
<i>Liabilities</i>		
Long-term debt	\$ 73	\$ 79
Interest, taxes and other liabilities	<u>59</u>	<u>60</u>
Total liabilities	<u>\$ 132</u>	<u>\$ 139</u>

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

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year Ended December 31,	2017	2016	2015
	(dollars are in millions)		
Preferred stock			
Balance at beginning of period	\$ 1,265	\$ 1,265	\$ 1,565
Preferred stock issuance	—	1,265	—
Preferred stock redemption	—	(1,265)	(300)
Balance at end of period	<u>1,265</u>	<u>1,265</u>	<u>1,265</u>
Common stock			
Balance at beginning and end of period	—	—	—
Additional paid-in capital			
Balance at beginning of period	18,148	18,169	14,170
Capital contribution from parent	—	—	4,000
Employee benefit plans	(18)	(21)	(1)
Balance at end of period	<u>18,130</u>	<u>18,148</u>	<u>18,169</u>
Retained earnings			
Balance at beginning of period, as previously reported	1,560	1,498	1,233
Reclassification to accumulated other comprehensive loss of cumulative effect adjustment to initially apply new accounting guidance for financial liabilities measured under the fair value option, net of tax	(174)	—	—
Balance at beginning of period, adjusted	<u>1,386</u>	<u>1,498</u>	<u>1,233</u>
Net income (loss)	(179)	129	330
Cash dividends declared on preferred stock	(77)	(67)	(65)
Balance at end of period	<u>1,130</u>	<u>1,560</u>	<u>1,498</u>
Accumulated other comprehensive loss			
Balance at beginning of period, as previously reported	(618)	(407)	(1)
Reclassification from retained earnings of cumulative effect adjustment to initially apply new accounting guidance for financial liabilities measured under the fair value option, net of tax	174	—	—
Balance at beginning of period, adjusted	<u>(444)</u>	<u>(407)</u>	<u>(1)</u>
Other comprehensive income (loss), net of tax	13	(211)	(406)
Balance at end of period	<u>(431)</u>	<u>(618)</u>	<u>(407)</u>
Total common equity	<u>18,829</u>	<u>19,090</u>	<u>19,260</u>
Total equity	<u>\$ 20,094</u>	<u>\$ 20,355</u>	<u>\$ 20,525</u>
Shares of preferred stock			
Number of shares at beginning of period	1,265	21,447,500	25,947,500
Number of shares of preferred stock issued to parent	—	1,265	—
Number of shares of preferred stock redeemed	—	(21,447,500)	(4,500,000)
Number of shares at end of period	<u>1,265</u>	<u>1,265</u>	<u>21,447,500</u>
Shares of common stock			
Number of shares at beginning of period	714	714	713
Number of shares of common stock issued to parent	—	—	1
Number of shares at end of period	<u>714</u>	<u>714</u>	<u>714</u>

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

CONSOLIDATED STATEMENT OF CASH FLOWS

Year Ended December 31,	2017	2016	2015
	(in millions)		
<i>Cash flows from operating activities</i>			
Net income (loss)	\$ (179)	\$ 129	\$ 330
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	(112)	(45)	158
Provision for credit losses	(165)	372	361
Deferred income tax provision	303	(140)	190
Net realized gains on securities available-for-sale	(52)	(70)	(48)
Net change in other assets and liabilities	(454)	1,726	386
Net change in loans held for sale:			
Originations and purchases of loans held for sale	(2,360)	(2,398)	(2,145)
Sales and collections of loans held for sale	2,522	2,581	2,371
Net change in trading assets and liabilities	671	(2,312)	3,298
Lower of amortized cost or fair value adjustments on loans held for sale	(18)	83	14
Gain (loss) on instruments designated at fair value and related derivatives	(43)	71	(264)
Net cash provided by (used in) operating activities	<u>113</u>	<u>(3)</u>	<u>4,651</u>
<i>Cash flows from investing activities</i>			
Net change in interest bearing deposits with banks	9,081	(12,760)	23,329
Net change in federal funds sold and securities purchased under agreements to resell	(2,596)	(10,176)	(18,434)
Securities available-for-sale:			
Purchases of securities available-for-sale	(9,229)	(22,815)	(23,375)
Proceeds from sales of securities available-for-sale	14,196	19,462	15,149
Proceeds from maturities of securities available-for-sale	1,800	1,930	1,954
Securities held-to-maturity:			
Purchases of securities held-to-maturity	(3,722)	(1,538)	(2,993)
Proceeds from maturities of securities held-to-maturity	2,512	2,704	2,408
Change in loans:			
Collections, net of originations	(19)	7,391	(7,145)
Loans sold to third parties	2,183	1,621	13
Net cash used for acquisitions of properties and equipment	(36)	(32)	(43)
Outflows related to the sale of a portion of our Private Banking business	(320)	—	—
Other, net	546	111	(386)
Net cash provided by (used in) investing activities	<u>14,396</u>	<u>(14,102)</u>	<u>(9,523)</u>

CONSOLIDATED STATEMENT OF CASH FLOWS (Continued)

Year Ended December 31,	2017	2016	2015
	(in millions)		
<i>Cash flows from financing activities</i>			
Net change in deposits	(10,290)	10,525	2,472
Debt:			
Net change in short-term borrowings	(449)	110	(7,806)
Issuance of long-term debt	5,158	8,694	16,586
Repayment of long-term debt	(8,953)	(4,869)	(9,937)
Preferred stock issuance	—	1,265	—
Preferred stock redemption	—	(1,265)	(300)
Capital contribution from parent	—	—	4,000
Other increases (decreases) in capital surplus	(18)	(21)	(1)
Dividends paid	(77)	(67)	(65)
Net cash provided by (used in) financing activities	<u>(14,629)</u>	<u>14,372</u>	<u>4,949</u>
Net change in cash and due from banks	(120)	267	77
Cash and due from banks at beginning of period	1,235	968	891
<i>Cash and due from banks at end of period</i>	<u>\$ 1,115</u>	<u>\$ 1,235</u>	<u>\$ 968</u>
<i>Supplemental disclosure of cash flow information</i>			
Interest paid during the period	\$ 1,811	\$ 1,446	\$ 942
Net income taxes paid (refunded) during the period	783	(289)	354
<i>Supplemental disclosure of non-cash investing activities</i>			
Transfer of loans to held for sale, net	1,253	1,588	1,850
Transfer of other assets to loans held for sale	—	78	—
Fair value of properties added to real estate owned upon foreclosure	12	41	40

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note	Page	Note	Page
1 Organization	129	15 Fair Value Option	172
2 Summary of Significant Accounting Policies and New Accounting Pronouncements	130	16 Income Taxes	175
3 Trading Assets and Liabilities	140	17 Preferred Stock	178
4 Securities	142	18 Accumulated Other Comprehensive Loss	179
5 Loans	147	19 Share-Based Plans	180
6 Allowance for Credit Losses	158	20 Pension and Other Postretirement Benefits	180
7 Loans Held for Sale	160	21 Related Party Transactions	182
8 Properties and Equipment, Net	161	22 Business Segments	186
9 Goodwill	162	23 Retained Earnings and Regulatory Capital Requirements	192
10 Sale of Certain Private Banking Client Relationships	162	24 Variable Interest Entities	193
11 Deposits	162	25 Guarantee Arrangements, Pledged Assets and Repurchase Agreements	195
12 Short-Term Borrowings	163	26 Fair Value Measurements	201
13 Long-Term Debt	164	27 Litigation and Regulatory Matters	217
14 Derivative Financial Instruments	165	28 Financial Statements of HSBC USA Inc. (Parent)	227

1. Organization

HSBC USA Inc. ("HSBC USA"), incorporated under the laws of Maryland, is a New York State based bank holding company and a wholly-owned subsidiary of HSBC North America Holdings Inc. ("HSBC North America"), which is an indirect wholly-owned subsidiary of HSBC Holdings plc ("HSBC" and, together with its subsidiaries, "HSBC Group"). HSBC USA (together with its subsidiaries, "HUSI") may also be referred to in these notes to the consolidated financial statements as "we," "us" or "our."

Through our subsidiaries, we offer a comprehensive range of consumer and commercial banking products and related financial services. HSBC Bank USA, National Association ("HSBC Bank USA"), our principal U.S. banking subsidiary, is a national banking association with banking branch offices and/or representative offices in 17 states and the District of Columbia. In addition to our domestic offices, we maintain foreign branch offices, subsidiaries and/or representative offices in Europe, Asia and Latin America. Our customers include individuals, including high net worth and ultra-high net worth individuals, small businesses, corporations, institutions and governments. HSBC Bank USA is also an international dealer in derivative instruments denominated in U.S. dollars and other currencies, focusing on structuring transactions to meet clients' needs.

During the year ended December 31, 2017, our results were impacted by an out of period adjustment to our estimated liability associated with certain medical benefits provided to employees on long-term disability which increased salaries and employee benefits expense by \$7 million.

2. Summary of Significant Accounting Policies and New Accounting Pronouncements

Significant Accounting Policies

Basis of Presentation The consolidated financial statements include the accounts of HSBC USA and all subsidiaries in which we hold, directly or indirectly, more than 50 percent of the voting rights, or where we exercise control, including all variable interest entities ("VIEs") in which we are the primary beneficiary. Investments in companies where we have significant influence over operating and financing decisions, which primarily are those where the percentage of ownership is at least 20 percent but not more than 50 percent, are accounted for under the equity method and reported as equity method investments in other assets. All significant intercompany accounts and transactions have been eliminated.

We assess whether an entity is a VIE and, if so, whether we are its primary beneficiary at the time of initial involvement with the entity and on an ongoing basis. A VIE is an entity in which the equity investment at risk is not sufficient to finance the entity's activities without additional subordinated financial support, or as a group, the holders of equity investment at risk lack either a) the power through voting rights or similar rights to direct the activities of the entity that most significantly impacts the entity's economic performance; or b) the obligation to absorb the entity's expected losses, the right to receive the expected residual returns, or both. A VIE must be consolidated by its primary beneficiary, which is the entity with the power to direct the activities of a VIE that most significantly impact its economic performance and the obligation to absorb losses of, or the right to receive benefits from, the VIE that could potentially be significant to the VIE.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. Areas which we consider to be critical accounting estimates and require a high degree of judgment and complexity include allowance for credit losses, goodwill impairment, valuation of financial instruments, derivatives held for hedging, deferred tax asset valuation allowances and contingent liabilities. Certain reclassifications have been made to prior period amounts to conform to the current period presentation.

Cash and Cash Equivalents For the purpose of reporting cash flows, cash and cash equivalents include cash on hand and amounts due from banks.

Resale and Repurchase Agreements We enter into purchases and borrowings of securities under agreements to resell (resale agreements) and sales of securities under agreements to repurchase (repurchase agreements) substantially identical securities. Resale and repurchase agreements are accounted for as secured lending and secured borrowing transactions, respectively.

With the exception of certain resale and repurchase agreements for which the fair value option has been elected and are further discussed in Note 15, "Fair Value Option," the amounts advanced under resale agreements and the amounts borrowed under repurchase agreements are carried on the consolidated balance sheet at the amount advanced or borrowed, plus accrued interest to date. Interest earned on resale agreements is reported as interest income. Interest paid on repurchase agreements is reported as interest expense. We offset resale and repurchase agreements executed with the same counterparty under legally enforceable netting agreements that meet the applicable netting criteria as permitted by generally accepted accounting principles.

Repurchase agreements may require us to deposit cash or other collateral with the lender. In connection with resale agreements, it is our policy to obtain possession of collateral, which may include the securities purchased, with market value in excess of the principal amount loaned. The market value of the collateral subject to the resale and repurchase agreements is regularly monitored, and additional collateral is obtained or provided when appropriate, to ensure appropriate collateral coverage of these secured financing transactions.

Trading Assets and Liabilities Financial instruments utilized in trading activities are stated at fair value. Fair value is generally based on quoted market prices. If quoted market prices are not available, fair values are estimated based on dealer quotes, pricing models, using observable inputs where available or quoted prices for instruments with similar characteristics. Where applicable, fair value is determined by reference to quotes provided by multiple independent pricing services. Fair value determined by internal pricing models is regularly substantiated by the price level executed in the market and the internal pricing models used are periodically validated by the Markets Independent Model Review ("IMR") function. Realized and unrealized gains and losses are recognized in trading revenues.

Securities Debt securities that we have the ability and intent to hold to maturity are reported at cost adjusted for amortization of premiums and accretion of discounts, which are recognized as adjustments to yield over the contractual lives of the related securities. Securities acquired principally for the purpose of selling them in the near term are classified as trading assets and reported at fair value. Fair value adjustments to trading securities and gains and losses on the sale of such securities are reported in trading revenue.

Equity securities that are not quoted on a recognized exchange are not considered to have a readily determinable fair value, and are recorded at cost, less any provisions for impairment. Unquoted equity securities, which include Federal Home Loan Bank stock, Federal Reserve Bank stock and Visa Class B securities, are recorded in other assets.

All other securities are classified as available-for-sale ("AFS") and carried at fair value, with unrealized gains and losses, net of related income taxes, recorded as adjustments to common equity as a component of accumulated other comprehensive loss.

Realized gains and losses on sales of securities available-for-sale and securities held-to-maturity are computed on a specific identified cost basis and are reported in other securities gains, net. When the fair value of a security has declined below its amortized cost basis, we evaluate the decline to assess if it is considered other-than-temporary. For debt securities that we intend to sell or for which it is more likely than not that we will be required to sell before the recovery of its amortized cost basis, the decline in fair value below the security's amortized cost is deemed to be other than temporary and we recognize an other-than-temporary impairment loss in earnings equal to the difference between the security's amortized cost and its fair value. We measure impairment loss for equity securities that are deemed other-than-temporarily impaired in the same manner. For a debt security that we do not intend to sell and for which it is not more likely than not that we will be required to sell prior to recovery of its amortized cost basis, but for which we nonetheless do not expect to recover the entire amortized cost basis of the security, we recognize the portion of the decline in the security's fair value below its amortized cost that represents a credit loss as an other-than-temporary impairment in earnings and the remaining portion of the decline as an other-than-temporary impairment in other comprehensive income (loss). For these debt securities, a new cost basis is established, which reflects the amount of the other-than-temporary impairment loss recognized in earnings.

Loans Loans are stated at amortized cost, which represents the principal amount outstanding, net of unearned income, charge-offs, unamortized purchase premium or discount, unamortized nonrefundable fees and related direct loan origination costs and purchase accounting fair value adjustments. The carrying amount of loans represents their amortized cost reduced by the allowance for credit losses.

Premiums and discounts and purchase accounting fair value adjustments are recognized as adjustments to yield over the estimated or contractual lives of the related loans. Interest income is recorded based on the effective interest method.

Troubled debt restructurings ("TDR Loans") are loans for which the original contractual terms have been modified to provide for terms that are less than we would be willing to accept for new loans with comparable risk because of deterioration in the borrower's financial condition. Interest on TDR Loans is recognized when collection is reasonably assured. For commercial nonaccrual TDR Loans, the resumption of interest accrual generally occurs when the borrower has complied with the modified payment terms and conditions for twelve months while maintaining compliance with other terms and conditions of that specific restructuring. For consumer nonaccrual TDR Loans, interest accruals are resumed when the loan becomes current or becomes less than 90 days delinquent and six months of consecutive payments have been made. Modifications resulting in TDR Loans may include changes to one or more terms of the loan, including but not limited to, a change in interest rate, an extension of the amortization period, a reduction in payment amount and partial forgiveness or deferment of principal, accrued interest or other loan covenants.

Nonrefundable fees and related direct costs associated with the origination of loans are deferred and netted against outstanding loan balances. The amortization of net deferred fees, which include points on real estate secured loans and costs, is recognized in interest income, generally by the interest method, based on the estimated or contractual lives of the related loans. Amortization periods are periodically adjusted for loan prepayments and changes in other market assumptions. Annual fees on MasterCard/Visa credit cards, net of direct lending costs, are deferred and amortized on a straight-line basis over one year.

Nonrefundable fees related to lending activities other than direct loan origination are recognized as other revenues over the period in which the related service is provided. This includes fees associated with the issuance of loan commitments where the likelihood of the commitment being exercised is considered remote. In the event of the exercise of the commitment, the remaining unamortized fee is recognized in interest income over the loan term using the interest method. Other credit-related fees, such as standby letter of credit fees, loan syndication and agency fees are recognized as other revenues over the period the related service is performed.

Allowance for Credit Losses We maintain an allowance for credit losses that is, in the judgment of management, adequate to absorb estimated probable incurred losses in our commercial and consumer loan portfolios. The adequacy of the allowance for credit losses is assessed in accordance with generally accepted accounting principles and is based, in part, upon an evaluation of various factors including:

- an analysis of individual exposures where applicable;
- current and historical loss experience;
- changes in the overall size and composition of the portfolio; and
- specific adverse situations and general economic conditions.

Loss estimates are reviewed periodically and adjustments are reported in earnings when they become known. As these estimates are influenced by factors outside of our control, such as borrower performance and economic conditions, there is uncertainty inherent in these estimates.

For individually assessed commercial loans, we conduct a periodic assessment on a loan-by-loan basis of losses we believe to be inherent in the loan portfolio. When it is deemed probable, based upon known facts and circumstances, that full contractual interest and principal on an individual loan will not be collected in accordance with its contractual terms, the loan is considered impaired.

An impairment reserve is established based on the present value of expected future cash flows, discounted at the loan's original effective interest rate, or as a practical expedient, the loan's observable market price or the fair value of the collateral if the loan is collateral dependent. Generally, impaired loans include loans in nonaccruing status, loans which have been assigned a specific allowance for credit losses, loans which have been partially charged off, and TDR Loans. Problem commercial loans are assigned various obligor grades, which are used in the allowance for credit losses methodology. In assigning the obligor ratings to a particular loan, among the risk factors considered are the obligor's debt capacity and financial position, the level of earnings, the amount and sources for repayment, the level of contingencies, management strength and the industry or geography in which the obligor operates.

Formula-based reserves are also established against commercial loans when, based upon an analysis of relevant data, it is probable that a loss has been incurred and the amount of that loss can be reasonably estimated, even though an actual loss has yet to be identified. This methodology uses the probability of default from the customer risk rating assigned to each counterparty together with the estimated loss emergence period (estimate of the period of time between a loss occurring and the confirming event of its charge-off) of the separate portfolios. The "Loss Given Default" rating assigned to each transaction or facility is based on the collateral securing the transaction and the measure of exposure based on the transaction. Specifically, the presence of collateral (secured vs. unsecured), the loan-to-value ratio and the quality of the collateral are the primary drivers of Loss Given Default. A separate reserve for credit losses associated with off-balance sheet exposures, including unfunded lending commitments such as letters of credit, guarantees to extend credit and financial guarantees, is also maintained which is recorded as a component of other expense and included in other liabilities, which incorporates estimates of the probability that customers will actually draw upon off-balance sheet obligations. These reserves are determined by reference to continuously monitored and updated historical loss rates or factors, derived from a migration analysis which considers net charge-off experience by loan and industry type in relation to internal customer credit grading.

We estimate probable losses for pools of homogeneous consumer loans and certain small business loans which do not qualify as TDR Loans using a roll rate migration analysis that estimates the likelihood that a loan will progress through the various stages of delinquency, or buckets, and ultimately charge-off. This migration analysis incorporates estimates of the period of time between a loss occurring and the confirming event of its charge-off. This analysis also considers delinquency status, loss experience and severity and takes into account whether borrowers have filed for bankruptcy or have been subject to account management actions, such as the re-age or modification of accounts. We also take into consideration the loss severity expected based on the underlying collateral, if any, for the loan in the event of default based on historical and recent trends which are updated monthly based on a rolling average of several months' data using the most recently available information.

In addition, loss reserves on consumer and commercial loans are maintained to reflect our judgment of portfolio risk factors which may not be fully reflected in the statistical calculations or when historical trends are not reflective of current inherent losses in the portfolio. Portfolio risk factors considered in establishing the allowance for credit losses on loans include, as appropriate, growth, including new lending markets and customer concentrations, product mix and risk selection, unemployment rates, bankruptcy trends, loan product features such as adjustable rate loans, economic conditions such as industry and business performance and trends in housing markets and interest rates, portfolio seasoning, account management policies and practices, model imprecision, changes in underwriting practices, current levels of charge-off and delinquencies, changes in laws and regulations, customer concentration and other factors which can affect payment patterns on outstanding loans such as natural disasters. We also consider key ratios such as allowance as a percentage of loans, allowance as a percentage of nonperforming loans and allowance as a percentage of net charge-offs in developing our allowance estimates.

For loans which have been identified as TDR Loans, provisions for credit losses are maintained based on the present value of expected future cash flows discounted at the loans' original effective interest rate or in the case of certain loans which are solely dependent on the collateral for repayment, the estimated fair value of the collateral less costs to sell. TDR Loans are considered to be impaired loans. Interest income on TDR Loans is recognized in the same manner as loans which are not TDR Loans. For consumer loans, once a loan is classified as a TDR Loan, it continues to be reported as such until it is paid off or charged-off. For commercial loans, if a TDR Loan subsequently performs in accordance with the new terms and such terms represent current market rates at the time of restructure, such loan will be no longer be reported as a TDR Loan beginning in the year after restructure.

Charge-Off and Nonaccrual Policies and Practices Our charge-off and nonaccrual policies differ by product and are summarized below:

Product	Charge-off Policies and Practices	Nonaccrual Policies and Practices
Commercial Loans <i>Real estate, including construction</i> <i>Business and corporate banking</i> <i>Global banking</i> <i>Other commercial</i>	Commercial loan balances are charged off at the time all or a portion of the balance is deemed uncollectible.	Loans are generally categorized as nonaccruing when contractually delinquent for more than three months and in the opinion of management, reasonable doubt exists with respect to the ultimate collectibility of interest or principal based on certain factors including the period of time past due and adequacy of collateral. When classified as nonaccruing, any accrued interest recorded on the loan is generally deemed uncollectible and reversed against income. Interest income is subsequently recognized only to the extent of cash received until the loan is placed on accrual status. In instances where there is doubt as to collectibility of principal, interest payments received are applied to principal. Loans are not reclassified as accruing until interest and principal payments are current and future payments are reasonably assured.
Residential Mortgage Loans	Carrying amounts in excess of fair value less costs to sell are generally charged off at the time foreclosure is initiated or when settlement is reached with the borrower, but not to exceed the end of the month in which the account becomes six months contractually delinquent. If foreclosure is not pursued and there is no reasonable expectation for recovery, the account is generally charged off no later than the end of the month in which the account becomes six months contractually delinquent. ⁽¹⁾	Loans are generally designated as nonaccruing when contractually delinquent for more than three months. When classified as nonaccruing, any accrued interest on the loan is generally deemed uncollectible and reversed against income. Interest accruals are resumed when the loan either becomes current or becomes less than three months delinquent and six months of consecutive payments have been made.
Credit Cards	Loan balances are generally charged off by the end of the month in which the account becomes six months contractually delinquent.	Interest generally accrues until charge-off.
Other Consumer Loans	Loan balances are generally charged off by the end of the month in which the account becomes four months contractually delinquent.	Interest generally accrues until charge-off.

⁽¹⁾ Values are determined based upon broker price opinions or appraisals which are updated at least every 180 days less estimated costs to sell. During the quarterly period between updates, real estate price trends are reviewed on a geographic basis and additional downward adjustments are recorded as necessary. Fair values of foreclosed properties at the time of acquisition are initially determined based upon broker price opinions. Subsequent to acquisition, a more detailed property valuation is performed, reflecting information obtained from a walk-through of the property in the form of a listing agent broker price opinion as well as an independent broker price opinion or appraisal. A valuation is determined from this information within 90 days and any additional write-downs required are recorded through charge-off at that time. In determining the appropriate amounts to charge-off when a property is acquired in exchange for a loan, we do not consider losses on sales of foreclosed properties resulting from deterioration in value during the period the collateral is held because these losses result from future loss events which cannot be considered in determining the fair value of the collateral at the acquisition date.

Charge-offs involving a bankruptcy for credit card receivables occurs by the end of the month, 60 days after notification or 180 days contractually delinquent, whichever comes first.

Delinquency status for loans is determined using the contractual method which is based on the status of payments under the loan. An account is generally considered to be contractually delinquent when payments have not been made in accordance with the loan terms. Delinquency status may be affected by customer account management policies and practices such as the restructure, re-age or modification of accounts.

Payments received on commercial nonaccrual loans are generally applied to reduce the principal balance of such loans. For consumer nonaccrual loans, payments are generally applied first to reduce the current interest on the earliest payment due with any remainder applied to reduce the principal balance associated with that payment date.

Loans Held for Sale Loans are classified as held for sale when they are not expected to be held for the foreseeable future because of management's lack of intent to hold. With the exception of certain commercial loans for which the fair value option has been elected and are further discussed in Note 15, "Fair Value Option," loans classified as held for sale are recorded at the lower of amortized cost or estimated fair value, which is not in excess of their carrying value at the time of designation. Consumer loans are valued on an aggregate portfolio basis while commercial loans are generally valued on an individual loan basis, depending on the facts and circumstances of the specific transaction. The fair value estimates of consumer loans are determined primarily using the discounted cash flow method with estimated inputs in prepayment rates, default rates, loss severity, and market rate of return. The fair value estimates of commercial loans held for sale are determined primarily using observable market consensus pricing obtained from independent sources, relevant broker quotes or observed market prices of instruments with similar characteristics. Where available, we measure held for sale residential mortgage whole loans based on transaction prices of similar loan portfolios observed in the whole loan market with adjustments made to reflect differences in collateral location, loan-to-value ratio, FICO scores, vintage year, default rates, the completeness of the loan documentation and other risk characteristics. For loans other than those classified as nonaccrual, interest income is determined by applying each loan's contractual rate to the loan's outstanding customer balance, exclusive of unearned income, deferred fees, deferred costs, premium and discount. Periodic adjustments to fair value are recognized in other income in the consolidated statement of income (loss) except for those related to residential mortgage loans held for sale that we originate which are recorded as a component of residential mortgage banking revenue (expense).

Transfers of Financial Assets Transfers of financial assets in which we have surrendered control over the transferred assets are accounted for as sales. In assessing whether control has been surrendered, we consider whether the transferee would be a consolidated affiliate, the existence and extent of any continuing involvement in the transferred financial assets and the impact of all arrangements or agreements made contemporaneously with, or in contemplation of, the transfer, even if they were not entered into at the time of transfer.

If the sale criteria are met, the transferred financial assets are removed from our balance sheet and a gain or loss on sale is recognized. If the sale criteria are not met, the transfer is recorded as a secured borrowing in which the assets remain on our balance sheet and the proceeds from the transaction are recognized as a liability. For the majority of financial asset transfers, it is clear whether or not we have surrendered control. For other transfers, such as in connection with complex transactions or where we have continuing involvement such as servicing responsibilities, we generally obtain a legal opinion as to whether the transfer results in a true sale by law.

Properties and Equipment, Net Properties and equipment are recorded at cost, net of accumulated depreciation. Depreciation is recorded on a straight-line basis over the estimated useful lives of the related assets, which generally range from 3 to 40 years. Leasehold improvements are depreciated over the shorter of the useful life of the improvement or the term of the lease. The costs of maintenance and repairs are expensed as incurred. Impairment testing is performed whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable.

Mortgage Servicing Rights In 2016, we completed the sale of our remaining residential mortgage servicing rights ("MSRs") to a third party. Previously, MSRs were measured at fair value at each reporting date with changes in fair value reflected in earnings in the period that the changes occurred.

MSRs were subject primarily to interest rate risk, in that their fair value would fluctuate as a result of changes in the interest rate environment. Fair value was determined based upon the application of valuation models and other inputs. The valuation models incorporated assumptions market participants would use in estimating future cash flows. These assumptions included expected prepayments, default rates and market based option adjusted spreads.

We used certain derivative financial instruments, including futures, options and interest rate swaps, to protect against a decline in the economic value of MSRs. These instruments were not designated as qualifying hedges and were therefore recorded as trading assets that are marked-to-market through earnings.

Goodwill Goodwill, representing the excess of purchase price over the fair value of identifiable net assets acquired, results from business combinations. Goodwill is not amortized, but is reviewed for impairment at a minimum on an annual basis at the reporting unit level using discounted cash flow and market approaches. The market approach focuses on valuation multiples for reasonably similar publicly traded companies and also considers recent market transactions, while the discounted cash flows method utilizes cash flow estimates based on recent internal forecasts and discount rates that we believe adequately reflect the risk and uncertainty in our internal forecasts and are appropriate based on the implicit market rates in current comparable transactions. Impairment is reviewed as of an interim date if circumstances indicate that it is more likely than not that the carrying amount of a reporting unit is above fair value. The carrying amount of a reporting unit is determined on the basis of capital invested in the unit including attributable goodwill. We determine the invested capital of a reporting unit by applying to the reporting unit's risk-weighted assets a capital charge consistent with the Basel III framework, and additionally, allocating to each reporting unit the remaining carrying amount of HUSI's net assets. Accordingly, the entire carrying amount of HUSI's net assets is allocated to our reporting units. We

consider significant and long-term changes in industry and economic conditions to be examples of primary indicators of potential impairment.

Repossessed Collateral Non-financial collateral acquired in satisfaction of a loan is initially recognized at the lower of amortized cost or the collateral's fair value less estimated costs to sell and is reported in other assets. Once a property is classified as real estate owned ("REO"), we do not consider the losses on past sales of foreclosed properties when determining the fair value of any collateral during the period it is held in REO. Any subsequent declines in fair value less estimated costs to sell are recorded through a valuation allowance. Recoveries in fair value less estimated costs to sell are recognized as a reduction of the valuation allowance but not in excess of cumulative losses previously recognized subsequent to the date of repossession. Adjustments to the valuation allowance, costs of holding repossessed collateral, and any gain or loss on disposition are credited or charged to operating expense.

Collateral We pledge assets as collateral as required for various transactions involving security repurchase agreements, public deposits, Treasury tax and loan notes, derivative financial instruments, short-term borrowings and long-term borrowings. Non-cash assets that have been pledged as collateral, including those that can be sold or repledged by the secured party, continue to be reported on our consolidated balance sheet.

We also accept collateral, primarily as part of various transactions involving security resale agreements. Non-cash collateral accepted by us, including collateral that we can sell or re-pledge, is excluded from our consolidated balance sheet. If we resell the collateral, we recognize the proceeds and a liability to return the collateral.

The market value of collateral we have accepted or pledged is regularly monitored and additional collateral is obtained or provided as necessary to ensure appropriate collateral coverage in these transactions.

Derivative Financial Instruments Derivative financial instruments are recognized on the consolidated balance sheet at fair value. On the date a derivative contract is entered into, we designate it as either:

- a qualifying hedge of the fair value of a recognized asset or liability or of an unrecognized firm commitment (fair value hedge);
- a qualifying hedge of the variability of cash flows to be received or paid related to a recognized asset, liability or forecasted transaction (cash flow hedge); or
- a trading instrument or a non-qualifying (economic) hedge.

Changes in the fair value of a derivative designated as a fair value hedge, along with the changes in the fair value of the hedged asset or liability that is attributable to the hedged risk (including losses or gains on firm commitments), are recorded in current period earnings. Changes in the fair value of a derivative that has been designated as a cash flow hedge, to the extent effective as a hedge, are recorded in accumulated other comprehensive loss, net of income taxes, and reclassified into earnings in the period during which the hedged item affects earnings. Ineffectiveness in the hedging relationship is reflected in current period earnings. Changes in the fair value of derivatives held for trading purposes or which do not qualify for hedge accounting are reported in current period earnings.

At the inception of each designated qualifying hedge, we formally document all relationships between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions, the nature of the hedged risk, and how hedge effectiveness will be assessed and how ineffectiveness will be measured. This process includes linking all derivatives that are designated as fair value or cash flow hedges to specific assets and liabilities on the balance sheet or to specific firm commitments or forecasted transactions. We also formally assess both at inception and on a quarterly basis, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items and whether they are expected to continue to be highly effective in future periods. This assessment is conducted using statistical regression analysis.

Earnings volatility may result from the on-going mark to market of certain economically viable derivative contracts that do not satisfy the hedging requirements in accordance with accounting principles generally accepted in the United States ("U.S. GAAP") as well as from the hedge ineffectiveness associated with the qualifying hedges.

Embedded Derivatives We may acquire or originate a financial instrument that contains a derivative instrument embedded within it. Upon origination or acquisition of any such instrument, we assess whether the economic characteristics of the embedded derivative are clearly and closely related to the economic characteristics of the principal component of the financial instrument (i.e., the host contract) and whether a separate instrument with the same terms as the embedded instrument would meet the definition of a derivative instrument.

When we determine that: (1) the embedded derivative possesses economic characteristics that are not clearly and closely related to the economic characteristics of the host contract; and (2) a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is either separated from the host contract (bifurcated), carried at fair value, and designated as a trading instrument or the entire financial instrument is carried at fair value with all changes in fair value recorded to current period earnings. If bifurcation is elected, the consideration for the hybrid financial instrument that is allocated to the bifurcated

derivative reduces the consideration that is allocated to the host contract with the difference being recognized over the life of the financial instrument.

Hedge Discontinuation We discontinue hedge accounting prospectively when:

- the derivative is no longer effective or expected to be effective in offsetting changes in the fair value or cash flows of a hedged item (including firm commitments or forecasted transactions) related to the designated risk;
- the derivative expires or is sold, terminated, or exercised;
- it is unlikely that a forecasted transaction will occur;
- the hedged firm commitment no longer meets the definition of a firm commitment; or
- the designation of the derivative as a hedging instrument is no longer appropriate.

When hedge accounting is discontinued because it is determined that the derivative no longer qualifies as an effective fair value or cash flow hedge, the hedging relationship will cease. The hedging instrument will continue to be carried on the balance sheet at fair value, with changes in fair value recognized in current period earnings.

In the case of a discontinued fair value hedge of a recognized asset or liability, as long as the hedged item continues to exist on the balance sheet, the hedged item will no longer be adjusted for changes in fair value attributable to the hedged risk. The basis adjustment that had previously been recorded to the hedged item during the period from the hedge designation date to the hedge discontinuation date is recognized as an adjustment to the yield of the hedged item over the remaining life of the hedged item.

In the case of a discontinued cash flow hedge of a recognized asset or liability, as long as the hedged item continues to exist on the balance sheet, further changes in fair value of the hedging derivative will no longer be recorded in other comprehensive income (loss). The balance applicable to the discontinued hedging relationship will be recognized in earnings over the remaining life of the hedged item as an adjustment to yield. If the discontinued hedged item was a forecasted transaction where it is probable the forecasted transaction will not occur at the end of the original specified time period or within an additional two-month period thereafter, any amounts recorded in accumulated other comprehensive loss are immediately reclassified to current period earnings.

In the case of a cash flow hedge, if the previously hedged item is sold or extinguished, the basis adjustment to the underlying asset or liability or any remaining unamortized other comprehensive income (loss) balance will be reclassified to current period earnings.

In all other situations in which hedge accounting is discontinued, the derivative will be carried at fair value on the consolidated balance sheet, with changes in its fair value recognized in current period earnings unless redesignated in a qualifying cash flow hedge.

Interest Rate Lock Commitments We enter into commitments to originate residential mortgage loans whereby the interest rate on the loan is set prior to funding (rate lock commitments). The interest rate lock commitments on residential mortgage loans that are classified as held for sale are considered to be derivatives and are recorded at fair value in other assets or other liabilities in the consolidated balance sheet. Changes in fair value are recorded in residential mortgage banking revenue (expense) in the consolidated statement of income (loss).

Share-Based Compensation We use the fair value based method of accounting for awards of HSBC stock granted to employees under various restricted share and employee stock purchase plans. Stock compensation costs are recognized prospectively for all new awards granted under these plans. Compensation expense relating to restricted share rights, restricted shares and restricted share units is based upon the fair value on the date of grant and is charged to earnings over the requisite service period (e.g., vesting period), less estimated forfeitures. When modeling awards with vesting that is dependent on performance targets, these performance targets are incorporated into the model using Monte Carlo simulation. The expected life of these awards depends on the behavior of the award holders, which is incorporated into the model consistent with historical observable data.

Beginning January 1, 2017, all excess tax benefits and tax deficiencies for share-based payment awards are recorded within income tax expense in the statement of income (loss), rather than directly to additional paid-in capital.

Pension and Other Postretirement Benefits We recognize the funded status of the postretirement benefit plans on the consolidated balance sheet. Net postretirement benefit cost charged to current earnings related to these plans is based on various actuarial assumptions regarding expected future experience.

Certain employees are participants in various defined contribution, defined benefit and other supplemental retirement plans sponsored by HSBC North America. Our portion of the expense related to these plans is allocated to us and charged to current earnings.

We maintain various 401(k) plans covering substantially all employees. Employer contributions to the plan, which are charged to current earnings, are based on employee contributions.

Income Taxes HSBC USA is included in HSBC North America's consolidated Federal income tax return and in various combined State income tax returns. As such, we have entered into a tax allocation agreement with HSBC North America and its subsidiary entities (the "HNAH Group") which governs the current amount of taxes to be paid or received by the various entities included in

the consolidated return filings. Generally, such agreements allocate taxes to members of the HNAH Group based on the calculation of tax on a separate return basis, adjusted for the utilization or limitation of credits of the consolidated group. To the extent all the tax attributes available cannot be currently utilized by the consolidated group, the proportionate share of the utilized attribute is allocated based on each affiliate's percentage of the available attribute computed in a manner that is consistent with the taxing jurisdiction's laws and regulations regarding the ordering of utilization. In addition, we file some separate company State tax returns.

We recognize deferred tax assets and liabilities for the future tax consequences related to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and for State tax credits and State net operating losses. Deferred tax assets and liabilities are measured using the enacted tax rates and laws that will be in effect when the deferred tax items are expected to be realized. If applicable, valuation allowances are recorded to reduce deferred tax assets to the amounts we conclude are more likely than not to be realized. Since we are included in HSBC North America's consolidated Federal tax return and various combined State tax returns, the related evaluation of the recoverability of the deferred tax assets is performed at the HSBC North America consolidated level. We consider the HNAH Group's consolidated deferred tax assets and various sources of taxable income in reaching conclusions on recoverability of deferred tax assets. The HNAH Group evaluates deferred tax assets for recoverability using a consistent approach which considers the relative impact of negative and positive evidence, including historical financial performance, projections of future taxable income, future reversals of existing taxable temporary differences, tax planning strategies and any available carryback capacity. In evaluating the need for a valuation allowance, the HNAH Group estimates future taxable income based on management approved business plans. This process involves significant management judgment about assumptions that are subject to change from period to period.

Where a valuation allowance is determined to be necessary at the HSBC North America consolidated level, such allowance is allocated to principal subsidiaries within the HNAH Group in a manner that is systematic, rational and consistent with the broad principles of accounting for income taxes. The methodology generally allocates the valuation allowance to the principal subsidiaries based primarily on the entity's relative contribution to the HNAH Group's consolidated deferred tax asset against which the valuation allowance is being recorded.

Further evaluation is performed at the HSBC USA legal entity level to evaluate the need for a valuation allowance where we file separate company State income tax returns. Foreign taxes paid are applied as credits to reduce Federal income taxes payable, to the extent that such credits can be utilized.

Payments associated with any incremental Base Erosion and Anti-Abuse Tax are reflected in tax expense in the period incurred.

We recognize accrued interest related to uncertain tax positions in interest expense in the consolidated statement of income (loss) and recognize penalties, if any, related to uncertain tax positions as a component of other expenses in the consolidated statement of income (loss).

Transactions with Related Parties In the normal course of business, we enter into transactions with HSBC and its subsidiaries. These transactions occur at prevailing market rates and terms and include funding arrangements, derivative, servicing arrangements, information technology, centralized support services, banking and other miscellaneous services.

New Accounting Pronouncements

The following new accounting pronouncements were adopted effective January 1, 2017:

- ***Financial Instruments - Classification and Measurement of Financial Liabilities Measured Under the Fair Value Option*** In January 2016, the Financial Accounting Standards Board ("FASB") issued an Accounting Standards Update ("ASU") which, for financial liabilities measured under the fair value option, requires recognizing the change in fair value attributable to our own credit spread in other comprehensive income (loss). We elected to early adopt this guidance, which required a cumulative effect adjustment to the consolidated balance sheet, resulting in a reclassification from retained earnings to accumulated other comprehensive loss of an after tax gain of approximately \$174 million as of January 1, 2017. The adoption of this guidance did not require financial statements for periods prior to 2017 to be restated.
- ***Compensation - Stock Compensation*** In March 2016, the FASB issued an ASU that requires all excess tax benefits and tax deficiencies for share-based payment awards to be recorded within income tax expense in the statement of income (loss), rather than directly to additional paid-in capital, and for excess tax benefits to be classified as an operating activity in the statement of cash flows. The adoption of this guidance did not have a material impact on our financial position and results of operations.

The following are accounting pronouncements which will be adopted in future periods:

- ***Recognition of Revenue from Contracts with Customers*** In May 2014, the FASB issued an ASU which provides a principles-based framework for revenue recognition. Additionally, the ASU requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. The core principle of the five-step revenue recognition framework is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in

exchange for those goods or services. The ASU is effective for all annual and interim periods beginning January 1, 2018. The scope of the new guidance is limited to certain revenues classified as fee based income. We conducted an analysis of the impact the new ASU will have on our operations and did not identify any material changes in revenue recognition. Therefore, the adoption of this guidance will not have a material impact on our financial position or results of operations.

- **Financial Instruments - Classification and Measurement (Excluding Financial Liabilities Measured Under the Fair Value Option)** In January 2016, the FASB issued an ASU which changes aspects of its guidance on classification and measurement of financial instruments. The ASU requires equity investments (except those accounted for under the equity method or those that result in consolidation) to be measured at fair value with changes in fair value recognized in net income. Under a practicability exception, entities may measure equity investments that do not have readily determinable fair values at cost adjusted for changes in observable prices minus impairment. Under this exception, a qualitative assessment for impairment will be required and, if impairment exists, the carrying amount of the investments must be adjusted to their fair value and an impairment loss recognized in net income. Additionally, the ASU requires new disclosure related to equity investments and modifies certain disclosure requirements related to the fair value of financial instruments. The ASU is effective for all annual and interim periods beginning January 1, 2018 and the guidance should be applied by recording a cumulative effect adjustment to the balance sheet or, as it relates to equity investments without readily determinable fair values, prospectively. The adoption of this guidance will not have a material impact on our financial position or results of operations. However, in the first quarter of 2018, the adoption of this guidance required a cumulative effect adjustment to the consolidated balance sheet as of January 1, 2018, resulting in an increase in retained earnings of \$8 million, after tax, to reflect the impact of recording certain equity investments at fair value which were previously measured at cost as well as a reclassification from accumulated other comprehensive loss to retained earnings of an after tax loss of \$4 million related to equity investments which were previously classified as available-for-sale. The adoption of this guidance will result in all equity investments being recorded together as a component of other assets and, as a result, we will reclassify \$12 million and \$177 million of equity investments which were previously classified as trading and available-for-sale, respectively, to other assets as of January 1, 2018.
- **Leases** In February 2016, the FASB issued an ASU which requires a lessee to recognize a lease liability and a right-of-use asset on its balance sheet for all leases, including operating leases, with a term greater than 12 months. Lease classification will determine whether a lease is reported as a financing transaction in the income statement and statement of cash flows. The ASU does not substantially change lessor accounting, but it does make certain changes related to leases for which collectability of the lease payments is uncertain or there are significant variable payments. Additionally, the ASU makes several other targeted amendments including a) revising the definition of lease payments to include fixed payments by the lessee to cover lessor costs related to ownership of the underlying asset such as for property taxes or insurance; b) narrowing the definition of initial direct costs which an entity is permitted to capitalize to include only those incremental costs of a lease that would not have been incurred if the lease had not been obtained; c) requiring seller-lessees in a sale-leaseback transaction to recognize the entire gain from the sale of the underlying asset at the time of sale rather than over the leaseback term; and d) expanding disclosures to provide quantitative and qualitative information about lease transactions. The ASU is effective for all annual and interim periods beginning January 1, 2019 and is required to be applied retrospectively to the earliest period presented at the date of initial application, with early adoption permitted. We have conducted a review of our existing lease contracts and service contracts which may contain embedded leases and currently expect a gross-up of our balance sheet as a result of recognizing lease liabilities and corresponding right of use assets upon adoption. The adoption of this guidance will also require a cumulative effect adjustment to the consolidated balance sheet to recognize the previously deferred gain on the sale and leaseback of our 452 Fifth Avenue property, which will result in an increase in the opening balance of retained earnings at January 1, 2017. However, the adoption of this guidance is not expected to result in material changes to the recognition of operating lease expense. While early adoption is permitted, we currently do not expect to elect early adoption.
- **Financial Instruments - Credit Impairment** In June 2016, the FASB issued an ASU that significantly changes how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The ASU requires entities to estimate and recognize an allowance for lifetime expected credit losses for loans (including TDR Loans), held-to-maturity debt securities, off-balance sheet credit exposures and certain other financial assets measured at amortized cost. The ASU also requires entities to recognize an allowance for credit losses on AFS debt securities and revises the accounting model for purchased credit impaired loans and debt securities. Additionally, existing disclosures will also be revised under the ASU. The ASU is effective for all annual and interim periods beginning January 1, 2020, with early adoption permitted beginning January 1, 2019, and is required to be applied by recording a cumulative effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. We have begun our implementation efforts, leveraging our participation in support of HSBC's implementation of IFRS 9, "Financial Instruments" ("IFRS 9") where feasible, to identify key interpretive issues and are assessing existing credit loss forecasting models and processes against the new guidance to determine what modifications may be required. While we continue to evaluate the impact the new guidance will have on our financial position and results of operations, we currently expect the

new guidance will result in an increase to our allowance for credit losses given the change to estimated losses over the contractual life of the loan portfolio as well as the adoption of an allowance for debt securities. The amount of the increase to our allowance is still under review and will depend, in part, upon the composition of our loan and held-to-maturity securities portfolios at the adoption date as well as economic conditions and loss forecasts at that date. While early adoption is permitted beginning in the first quarter of 2019, we currently do not expect to elect early adoption.

- **Statement of Cash Flows - Classification of Certain Cash Receipts and Cash Payments** In August 2016, the FASB issued an ASU that provides targeted amendments to clarify how certain cash receipts and cash payments should be classified in the statement of cash flows. Under the ASU, the portion of the cash payments attributable to accreted interest for the settlement of zero-coupon bonds should be classified as cash outflows for operating activities rather than financing activities and cash proceeds from the settlement of bank-owned life insurance policies should be classified as cash inflows from investing activities rather than operating activities. The ASU is effective for all annual and interim periods beginning January 1, 2018 and is required to be applied retrospectively to all periods presented. While the adoption of this guidance will result in a change in classification in the statement of cash flows, it will not have a material impact as either we are already in compliance with the new guidance or the balances to which the new guidance will be applied are immaterial, and it will not have any impact on our financial position or results of operations.
- **Statement of Cash Flows - Restricted Cash** In November 2016, the FASB issued an ASU that clarifies how restricted cash and restricted cash equivalents should be presented in the statement of cash flows. The ASU requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. The ASU is effective for all annual and interim periods beginning January 1, 2018 and is required to be applied retrospectively to all periods presented. While the adoption of this guidance will result in a change in classification in the statement of cash flows, to include our required reserve balance with the Federal Reserve Bank within a new line item called cash, due from banks and restricted cash, it will not have any impact on our financial position or results of operations. The change in classification in the statement of cash flows upon adoption in 2018 will result in a decrease in cash provided by investing activities of \$210 million and an increase in cash provided by investing activities of \$951 million during the years ended December 31, 2017 and 2016, respectively, as compared with the amounts previously reported.
- **Business Combinations - Clarifying the Definition of a Business** In January 2017, the FASB issued an ASU which provides clarification on the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The amendments in the ASU provide a screen to determine when an integrated set of activities and assets (a "set") is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen reduces the number of transactions that need to be further evaluated, and therefore are considered businesses. The amendments also provide a framework to assist entities in evaluating whether both an input and a substantive process are present. The ASU is effective for all annual and interim periods beginning January 1, 2018 and should be applied prospectively.
- **Goodwill Impairment Testing** In January 2017, the FASB issued an ASU that simplifies the accounting for goodwill impairment by removing step 2 of the goodwill impairment test. Under step 2, an entity was required to determine the fair value of individual assets and liabilities of a reporting unit (including unrecognized assets and liabilities) using the procedure for determining fair values in a business combination. Under the new guidance, goodwill impairment will now be measured at the amount by which a reporting unit's carrying amount, including those with a zero or negative carrying amount, exceeds its fair value. Any resulting impairment is limited to the carrying amount of goodwill. An entity must also disclose the amount of goodwill allocated to each reporting unit with a zero or negative carrying amount. The ASU is effective for all annual and interim periods beginning January 1, 2020 and is required to be applied prospectively with early adoption permitted. The adoption of this guidance is not expected to have a material impact on the results of our goodwill impairment testing, our financial position or results of operations.
- **Compensation - Retirement Benefits** In March 2017, the FASB issued an ASU that requires only the service cost component of net periodic pension and postretirement benefit costs to be reported in salaries and employee benefits in the statement of income (loss) while the other components of net periodic pension and postretirement benefit costs are required to be reported separately from the service cost component. The ASU is effective for all annual and interim periods beginning January 1, 2018 and is required to be applied retrospectively. The adoption of this guidance will not have a material impact on our financial statement presentation.
- **Premium Amortization on Purchased Callable Debt Securities** In March 2017, the FASB issued an ASU that shortens the premium amortization period for purchased non-contingently callable debt securities by requiring the premium to be amortized to the earliest call date, rather than the contractual maturity date. After the earliest call date, if the call option is not exercised, the effective yield will be reset using the payment terms of the debt security. The new guidance does not change the discount amortization period for purchased debt securities. The discount continues to be amortized to the contractual maturity date. The ASU is effective for all annual and interim periods beginning January 1, 2019, with early

adoption permitted, and is required to be applied by recording a cumulative effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The adoption of this guidance is not expected to have a material impact on our financial position or results of operations.

- **Derivatives and Hedging - Targeted Improvements to Accounting for Hedging Activities** In August 2017, the FASB issued an ASU amending its hedge accounting guidance to expand an entity's ability to hedge nonfinancial and financial risk components, reduce complexity in fair value hedges of interest rate risk and ease the requirements for effectiveness testing and hedge documentation. The new guidance also eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. Existing disclosures will also be revised. The ASU is effective for all annual and interim periods beginning January 1, 2019, with early adoption permitted, and is required to be applied by recording a cumulative effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. We are currently evaluating the impact of adopting this ASU.
- **Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Loss** In February 2018, the FASB issued an ASU that allows reclassification from accumulated other comprehensive loss to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act ("Tax Legislation") which was signed into law on December 22, 2017. The new guidance also requires certain disclosures about stranded tax effects. The ASU is effective for all annual and interim periods beginning January 1, 2019, with early adoption permitted, and the guidance should be applied either in the period of adoption or retrospectively to each period impacted by the change in the Federal corporate income tax rate change in the Tax Legislation. We currently expect to early adopt the new guidance in the first quarter of 2018, which will result in a cumulative effect adjustment to the consolidated balance sheet as of January 1, 2018 to reclass approximately \$91 million of tax benefits from accumulated other comprehensive loss to retained earnings.

There have been no additional accounting pronouncements issued that are expected to have or could have a material impact on our financial position or results of operations.

3. Trading Assets and Liabilities

Trading assets and liabilities consisted of the following:

At December 31,	2017	2016
	(in millions)	
Trading assets:		
U.S. Treasury.....	\$ 3,391	\$ 3,560
U.S. Government agency issued or guaranteed.....	122	24
U.S. Government sponsored enterprises	210	222
Asset-backed securities	236	365
Corporate and foreign bonds	6,180	6,481
Other securities.....	12	15
Precious metals.....	2,274	1,772
Derivatives, net.....	3,725	4,411
Total trading assets	<u>\$ 16,150</u>	<u>\$ 16,850</u>
Trading liabilities:		
Securities sold, not yet purchased	\$ 1,722	\$ 1,060
Payables for precious metals	524	62
Derivatives, net.....	2,633	3,786
Total trading liabilities	<u>\$ 4,879</u>	<u>\$ 4,908</u>

At December 31, 2017 and 2016, the fair value of derivatives included in trading assets is net of \$3,423 million and \$4,462 million, respectively, relating to amounts recognized for the obligation to return cash collateral received under master netting agreements with derivative counterparties.

At December 31, 2017 and 2016, the fair value of derivatives included in trading liabilities is net of \$3,680 million and \$3,826 million, respectively, relating to amounts recognized for the right to reclaim cash collateral paid under master netting agreements with derivative counterparties.

See Note 14, "Derivative Financial Instruments," for further information on our trading derivatives and related collateral.

4. Securities

Our securities available-for-sale and securities held-to-maturity portfolios consisted of the following:

December 31, 2017	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
(in millions)				
Securities available-for-sale:				
U.S. Treasury	\$ 15,340	\$ 153	\$ (329)	\$ 15,164
U.S. Government sponsored enterprises:				
Mortgage-backed securities	3,616	—	(77)	3,539
Collateralized mortgage obligations	648	—	(24)	624
Direct agency obligations	3,369	85	—	3,454
U.S. Government agency issued or guaranteed:				
Mortgage-backed securities	5,152	1	(87)	5,066
Collateralized mortgage obligations	792	1	(18)	775
Direct agency obligations	419	19	—	438
Asset-backed securities collateralized by:				
Home equity	54	—	(3)	51
Other	506	4	—	510
Foreign debt securities ⁽¹⁾	902	—	—	902
Equity securities	183	—	(6)	177
Total available-for-sale securities	<u>\$ 30,981</u>	<u>\$ 263</u>	<u>\$ (544)</u>	<u>\$ 30,700</u>
Securities held-to-maturity:				
U.S. Government sponsored enterprises:				
Mortgage-backed securities	\$ 2,113	\$ 10	\$ (12)	\$ 2,111
Collateralized mortgage obligations	1,281	41	(18)	1,304
U.S. Government agency issued or guaranteed:				
Mortgage-backed securities	2,485	4	(13)	2,476
Collateralized mortgage obligations	8,083	18	(106)	7,995
Obligations of U.S. states and political subdivisions	12	1	—	13
Asset-backed securities collateralized by residential mortgages	3	—	—	3
Total held-to-maturity securities	<u>\$ 13,977</u>	<u>\$ 74</u>	<u>\$ (149)</u>	<u>\$ 13,902</u>

December 31, 2016	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in millions)			
Securities available-for-sale:				
U.S. Treasury	\$ 21,366	\$ 102	\$ (559)	\$ 20,909
U.S. Government sponsored enterprises:				
Mortgage-backed securities	4,535	4	(122)	4,417
Collateralized mortgage obligations	2,139	—	(36)	2,103
Direct agency obligations	3,709	118	(10)	3,817
U.S. Government agency issued or guaranteed:				
Mortgage-backed securities	3,102	2	(58)	3,046
Collateralized mortgage obligations	1,370	2	(15)	1,357
Direct agency obligations	423	1	(4)	420
Asset-backed securities collateralized by:				
Home equity	69	—	(8)	61
Other	108	—	(3)	105
Foreign debt securities ⁽¹⁾	522	—	(1)	521
Equity securities	159	—	(5)	154
Total available-for-sale securities	<u>\$ 37,502</u>	<u>\$ 229</u>	<u>\$ (821)</u>	<u>\$ 36,910</u>
Securities held-to-maturity:				
U.S. Government sponsored enterprises:				
Mortgage-backed securities	\$ 2,465	\$ 11	\$ (9)	\$ 2,467
Collateralized mortgage obligations	1,591	59	(12)	1,638
U.S. Government agency issued or guaranteed:				
Mortgage-backed securities	2,557	11	(10)	2,558
Collateralized mortgage obligations	6,176	34	(56)	6,154
Obligations of U.S. states and political subdivisions	15	1	—	16
Asset-backed securities collateralized by residential mortgages	5	—	—	5
Total held-to-maturity securities	<u>\$ 12,809</u>	<u>\$ 116</u>	<u>\$ (87)</u>	<u>\$ 12,838</u>

⁽¹⁾ Foreign debt securities represent public sector entity, bank or corporate debt.

Net unrealized losses decreased within the available-for-sale portfolio in 2017 due primarily to decreasing yields as well as favorable movements associated with fair value hedged U.S. Treasury securities.

The following table summarizes gross unrealized losses and related fair values at December 31, 2017 and 2016 classified as to the length of time the losses have existed:

December 31, 2017	One Year or Less			Greater Than One Year		
	Number of Securities	Gross Unrealized Losses	Aggregate Fair Value of Investment	Number of Securities	Gross Unrealized Losses	Aggregate Fair Value of Investment
(dollars are in millions)						
Securities available-for-sale:						
U.S. Treasury	3	\$ (3)	\$ 463	48	\$ (326)	\$ 10,285
U.S. Government sponsored enterprises	83	(7)	883	77	(94)	3,109
U.S. Government agency issued or guaranteed	52	(85)	5,161	23	(20)	573
Asset-backed securities	—	—	—	4	(3)	51
Foreign debt securities	10	—	733	1	—	44
Equity securities	—	—	—	1	(6)	177
Securities available-for-sale	<u>148</u>	<u>\$ (95)</u>	<u>\$ 7,240</u>	<u>154</u>	<u>\$ (449)</u>	<u>\$ 14,239</u>
Securities held-to-maturity:						
U.S. Government sponsored enterprises	264	\$ (5)	\$ 1,126	284	\$ (25)	\$ 1,020
U.S. Government agency issued or guaranteed	116	(48)	5,973	506	(71)	2,962
Obligations of U.S. states and political subdivisions	1	—	—	2	—	—
Securities held-to-maturity	<u>381</u>	<u>\$ (53)</u>	<u>\$ 7,099</u>	<u>792</u>	<u>\$ (96)</u>	<u>\$ 3,982</u>
(dollars are in millions)						
December 31, 2016	One Year or Less			Greater Than One Year		
	Number of Securities	Gross Unrealized Losses	Aggregate Fair Value of Investment	Number of Securities	Gross Unrealized Losses	Aggregate Fair Value of Investment
Securities available-for-sale:						
U.S. Treasury	40	\$ (378)	\$ 13,707	32	\$ (181)	\$ 3,908
U.S. Government sponsored enterprises	316	(155)	6,474	18	(13)	427
U.S. Government agency issued or guaranteed	57	(66)	3,941	7	(11)	252
Asset-backed securities	—	—	—	8	(11)	166
Foreign debt securities	7	—	343	1	(1)	178
Equity securities	1	(5)	154	—	—	—
Securities available-for-sale	<u>421</u>	<u>\$ (604)</u>	<u>\$ 24,619</u>	<u>66</u>	<u>\$ (217)</u>	<u>\$ 4,931</u>
Securities held-to-maturity:						
U.S. Government sponsored enterprises	434	\$ (21)	\$ 2,013	45	\$ —	\$ 21
U.S. Government agency issued or guaranteed	179	(65)	4,734	503	(1)	112
Obligations of U.S. states and political subdivisions	1	—	—	3	—	—
Securities held-to-maturity	<u>614</u>	<u>\$ (86)</u>	<u>\$ 6,747</u>	<u>551</u>	<u>\$ (1)</u>	<u>\$ 133</u>

Although the fair value of a particular security may be below its amortized cost, it does not necessarily result in a credit loss and hence an other-than-temporary impairment. The decline in fair value may be caused by, among other things, the illiquidity of the market. We have reviewed the securities for which there is an unrealized loss for other-than-temporary impairment in accordance with our accounting policies, discussed further below. At December 31, 2017 and 2016, we do not consider any of our debt securities to be other-than-temporarily impaired as we expect to recover their amortized cost basis and we neither intend nor expect to be required to sell these securities prior to recovery, even if that equates to holding securities until their individual maturities. However, other-than-temporary impairments may occur in future periods if the credit quality of the securities deteriorates.

Other-Than-Temporary Impairment On a quarterly basis, we perform an assessment to determine whether there have been any events or economic circumstances to indicate that a security with an unrealized loss has suffered other-than-temporary impairment. A debt security is considered impaired if its fair value is less than its amortized cost at the reporting date. If impaired, we assess whether the impairment is other-than-temporary.

If we intend to sell the debt security or if it is more-likely-than-not that we will be required to sell the debt security before the recovery of its amortized cost basis, the impairment is considered other-than-temporary and the unrealized loss is recorded in earnings. An impairment is also considered other-than-temporary if a credit loss exists (i.e., the present value of the expected future cash flows is less than the amortized cost basis of the debt security). In the event a credit loss exists, the credit loss component of an other-than-temporary impairment is recorded in earnings while the remaining portion of the impairment loss attributable to factors other than credit loss is recognized, net of tax, in other comprehensive income (loss).

For all securities held in the available-for-sale or held-to-maturity portfolios for which unrealized losses attributed to factors other than credit existed, we do not have the intention to sell and believe we will not be required to sell the securities for contractual, regulatory or liquidity reasons as of the reporting date. In determining whether a credit loss exists and the period over which the debt security is expected to recover, we considered the following factors:

- The length of time and the extent to which the fair value has been less than the amortized cost basis;
- The credit protection features embedded within the instrument, which includes but is not limited to credit subordination positions, payment structure, over collateralization, protective triggers and financial guarantees provided by third parties;
- Changes in the near term prospects of the issuer or the underlying collateral of a security such as changes in default rates, loss severities given default and significant changes in prepayment assumptions;
- The level of excess cash flows generated from the underlying collateral supporting the principal and interest payments of the debt securities; and
- Any adverse change to the credit conditions of the issuer, the monoline insurer or the security such as credit downgrades by the rating agencies.

We use a standard valuation model to measure the credit loss for non-U.S. Government asset-backed securities. The valuation model captures the composition of the underlying collateral and the cash flow structure of the security. We make reference to external forecasts on key economic data and consider internal assessments on credit quality in developing significant inputs to the impairment model. Significant inputs to the model include delinquencies, collateral types and related contractual features, estimated rates of default, loss given default and prepayment assumptions. Using the inputs, the model estimates cash flows generated from the underlying collateral and distributes those cash flows to respective tranches of securities considering credit subordination and other credit enhancement features. The projected future cash flows attributable to the debt security held are discounted using the effective interest rates determined at the original acquisition date if the security bears a fixed rate of return. The discount rate is adjusted for the floating index rate for securities which bear a variable rate of return, such as LIBOR-based instruments.

During 2017, 2016 and 2015, none of our debt securities were determined to have either initial other-than-temporary impairment or changes to previous other-than-temporary impairment estimates relating to the credit component, as such, there were no other-than-temporary impairment losses recognized related to credit loss.

Other securities gains, net The following table summarizes realized gains and losses on investment securities transactions attributable to available-for-sale securities:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Gross realized gains.....	\$ 65	\$ 142	\$ 126
Gross realized losses.....	(13)	(72)	(78)
Net realized gains.....	\$ 52	\$ 70	\$ 48

Contractual Maturities and Yields The following table summarizes the amortized cost and fair values of securities available-for-sale and securities held-to-maturity at December 31, 2017 by contractual maturity. Expected maturities differ from contractual maturities because borrowers have the right to prepay obligations without prepayment penalties in certain cases. Securities available-for-sale amounts exclude equity securities as they do not have stated maturities. The table below also reflects the distribution of maturities of debt securities held at December 31, 2017, together with the approximate taxable equivalent yield of the portfolio. The yields shown are calculated by dividing annualized interest income, including the accretion of discounts and the amortization of premiums, by the amortized cost of securities outstanding at December 31, 2017. Yields on tax-exempt obligations have been computed on a taxable equivalent basis using applicable statutory tax rates.

Taxable Equivalent Basis	Within One Year		After One But Within Five Years		After Five But Within Ten Years		After Ten Years	
	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
(dollars are in millions)								
Available-for-sale:								
U.S. Treasury	\$ —	—%	\$ 3,878	2.14%	\$ 7,939	1.97%	\$ 3,523	2.88%
U.S. Government sponsored enterprises	148	3.52	2,754	3.04	1,972	2.61	2,759	2.70
U.S. Government agency issued or guaranteed	50	1.89	131	2.14	18	3.98	6,164	2.48
Asset-backed securities	400	2.64	—	—	—	—	160	4.02
Foreign debt securities	679	.13	223	1.93	—	—	—	—
Total amortized cost	<u>\$ 1,277</u>	1.38%	<u>\$ 6,986</u>	2.49%	<u>\$ 9,929</u>	2.10%	<u>\$ 12,606</u>	2.66%
Total fair value	<u>\$ 1,278</u>		<u>\$ 7,060</u>		<u>\$ 9,706</u>		<u>\$ 12,479</u>	
Held-to-maturity:								
U.S. Government sponsored enterprises	\$ —	—%	\$ 322	2.39%	\$ 325	2.78%	\$ 2,747	2.86%
U.S. Government agency issued or guaranteed	—	—	21	3.99	27	2.53	10,520	2.38
Obligations of U.S. states and political subdivisions	1	4.29	4	4.24	6	4.26	1	4.41
Asset-backed securities	—	—	—	—	—	—	3	6.57
Total amortized cost	<u>\$ 1</u>	4.29%	<u>\$ 347</u>	2.51%	<u>\$ 358</u>	2.78%	<u>\$ 13,271</u>	2.48%
Total fair value	<u>\$ 1</u>		<u>\$ 349</u>		<u>\$ 359</u>		<u>\$ 13,193</u>	

Investments in Federal Home Loan Bank stock and Federal Reserve Bank stock of \$201 million and \$631 million, respectively, at December 31, 2017 and \$338 million and \$631 million, respectively, at December 31, 2016 were included in other assets.

5. Loans

Loans consisted of the following:

At December 31,	2017	2016
	(in millions)	
Commercial loans:		
Real estate, including construction.....	\$ 10,533	\$ 10,890
Business and corporate banking.....	12,504	14,080
Global banking ⁽¹⁾⁽²⁾	20,088	23,481
Other commercial ⁽²⁾	9,910	5,765
Total commercial.....	<u>53,035</u>	<u>54,216</u>
Consumer loans:		
Residential mortgages.....	17,273	17,181
Home equity mortgages.....	1,191	1,408
Credit cards.....	721	688
Other consumer.....	343	382
Total consumer.....	<u>19,528</u>	<u>19,659</u>
Total loans.....	<u>\$ 72,563</u>	<u>\$ 73,875</u>

⁽¹⁾ Represents large multinational firms including globally focused U.S. corporate and financial institutions, U.S. dollar lending to multinational banking clients managed by HSBC on a global basis and complex large business clients supported by Global Banking and Markets relationship managers.

⁽²⁾ During 2017, in conjunction with the creation of the new Corporate Center segment as discussed further in Note 22, "Business Segments," we reclassified loans to HSBC affiliates from global banking to other commercial and revised prior periods to conform with the current year presentation. As a result, other commercial includes loans to HSBC affiliates which totaled \$6,750 million and \$3,274 million at December 31, 2017 and 2016, respectively. All tables below have been restated to reflect this reclassification, as applicable. See Note 21, "Related Party Transactions," for additional information regarding loans to HSBC affiliates.

We have loans outstanding to certain executive officers and directors. The loans were made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with other persons and do not involve more than normal risk of collectibility. The aggregate amount of such loans did not exceed 5 percent of total equity at either December 31, 2017 or 2016.

Net deferred origination costs (fees) totaled \$81 million and \$(48) million at December 31, 2017 and 2016, respectively. At December 31, 2017 and 2016, we had a net unamortized premium (discount) on our loans of \$8 million and \$(5) million, respectively.

Aging Analysis of Past Due Loans The following table summarizes the past due status of our loans, excluding loans held for sale, at December 31, 2017 and 2016. The aging of past due amounts is determined based on the contractual delinquency status of payments under the loan. An account is generally considered to be contractually delinquent when payments have not been made in accordance with the loan terms. Delinquency status is affected by customer account management policies and practices such as re-age, which results in the re-setting of the contractual delinquency status to current.

At December 31, 2017	Past Due		Total Past Due 30 Days or More	Current ⁽¹⁾	Total Loans
	30 - 89 Days	90+ Days			
(in millions)					
Commercial loans:					
Real estate, including construction	\$ 27	\$ 9	\$ 36	\$ 10,497	\$ 10,533
Business and corporate banking	25	5	30	12,474	12,504
Global banking	—	25	25	20,063	20,088
Other commercial	43	—	43	9,867	9,910
Total commercial	<u>95</u>	<u>39</u>	<u>134</u>	<u>52,901</u>	<u>53,035</u>
Consumer loans:					
Residential mortgages	369	344	713	16,560	17,273
Home equity mortgages	11	36	47	1,144	1,191
Credit cards	8	9	17	704	721
Other consumer	5	7	12	331	343
Total consumer	<u>393</u>	<u>396</u>	<u>789</u>	<u>18,739</u>	<u>19,528</u>
Total loans	<u>\$ 488</u>	<u>\$ 435</u>	<u>\$ 923</u>	<u>\$ 71,640</u>	<u>\$ 72,563</u>

At December 31, 2016	Past Due		Total Past Due 30 Days or More	Current ⁽¹⁾	Total Loans
	30 - 89 Days	90+ Days			
(in millions)					
Commercial loans:					
Real estate, including construction	\$ 17	\$ 6	\$ 23	\$ 10,867	\$ 10,890
Business and corporate banking	35	9	44	14,036	14,080
Global banking	1	64	65	23,416	23,481
Other commercial	4	7	11	5,754	5,765
Total commercial	<u>57</u>	<u>86</u>	<u>143</u>	<u>54,073</u>	<u>54,216</u>
Consumer loans:					
Residential mortgages	402	317	719	16,462	17,181
Home equity mortgages	10	43	53	1,355	1,408
Credit cards	9	10	19	669	688
Other consumer	7	7	14	368	382
Total consumer	<u>428</u>	<u>377</u>	<u>805</u>	<u>18,854</u>	<u>19,659</u>
Total loans	<u>\$ 485</u>	<u>\$ 463</u>	<u>\$ 948</u>	<u>\$ 72,927</u>	<u>\$ 73,875</u>

⁽¹⁾ Loans less than 30 days past due are presented as current.

Contractual Maturities Contractual maturities of loans outstanding at December 31, 2017 were as follows:

	2018	2019	2020	2021	2022	Thereafter	Total
	(in millions)						
Commercial loans:							
Real estate, including construction.....	\$ 4,870	\$ 1,538	\$ 1,231	\$ 1,098	\$ 977	\$ 819	\$ 10,533
Business and corporate banking.....	5,781	1,825	1,461	1,304	1,160	973	12,504
Global banking.....	9,287	2,932	2,347	2,095	1,863	1,564	20,088
Other commercial.....	6,710	866	693	616	539	486	9,910
Consumer loans:							
Residential mortgages.....	1,214	485	452	456	452	14,214	17,273
Home equity mortgages ⁽¹⁾	505	261	158	96	62	109	1,191
Credit cards ⁽²⁾	—	721	—	—	—	—	721
Other consumer.....	149	162	14	8	4	6	343
Total.....	<u>\$ 28,516</u>	<u>\$ 8,790</u>	<u>\$ 6,356</u>	<u>\$ 5,673</u>	<u>\$ 5,057</u>	<u>\$ 18,171</u>	<u>\$ 72,563</u>

⁽¹⁾ Home equity mortgage maturities reflect estimates based on historical payment patterns.

⁽²⁾ As credit card receivables do not have stated maturities, the table reflects estimates based on historical payment patterns.

As a substantial portion of consumer loans, based on our experience, will be renewed or repaid prior to contractual maturity, the above maturity schedule should not be regarded as a forecast of future cash collections. The following table summarizes contractual maturities of loans outstanding at December 31, 2017 due after one year by repricing characteristic:

December 31, 2017	After One But	
	Within Five Years	After Five Years
	(in millions)	
Receivables at predetermined interest rates.....	\$ 1,535	\$ 4,496
Receivables at floating or adjustable rates.....	24,341	13,675
Total.....	<u>\$ 25,876</u>	<u>\$ 18,171</u>

Nonaccrual Loans Nonaccrual loans, including nonaccrual loans held for sale, and accruing loans 90 days or more delinquent consisted of the following:

At December 31,	2017	2016
	(in millions)	
Nonaccrual loans:		
Commercial:		
Real estate, including construction.....	\$ 12	\$ 56
Business and corporate banking.....	215	187
Global banking.....	385	546
Other commercial.....	1	1
Commercial nonaccrual loans held for sale.....	—	11
Total commercial.....	<u>613</u>	<u>801</u>
Consumer:		
Residential mortgages ⁽¹⁾⁽²⁾⁽³⁾	414	435
Home equity mortgages ⁽¹⁾⁽²⁾	67	75
Consumer nonaccrual loans held for sale.....	1	369
Total consumer.....	<u>482</u>	<u>879</u>
Total nonaccruing loans	<u>1,095</u>	<u>1,680</u>
Accruing loans contractually past due 90 days or more:		
Commercial:		
Business and corporate banking.....	1	1
Total commercial.....	<u>1</u>	<u>1</u>
Consumer:		
Credit cards.....	9	10
Other consumer.....	8	7
Total consumer.....	<u>17</u>	<u>17</u>
Total accruing loans contractually past due 90 days or more	<u>18</u>	<u>18</u>
Total nonperforming loans	<u>\$ 1,113</u>	<u>\$ 1,698</u>

⁽¹⁾ At December 31, 2017 and 2016, nonaccrual consumer mortgage loans held for investment include \$360 million and \$382 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell.

⁽²⁾ Nonaccrual consumer mortgage loans held for investment include all loans which are 90 or more days contractually delinquent as well as loans discharged under Chapter 7 bankruptcy and not re-affirmed and second lien loans where the first lien loan that we own or service is 90 or more days contractually delinquent.

⁽³⁾ Nonaccrual consumer mortgage loans for all periods does not include guaranteed loans purchased from the Government National Mortgage Association. Repayment of these loans are predominantly insured by the Federal Housing Administration and as such, these loans have different risk characteristics from the rest of our consumer loan portfolio.

The following table provides additional information on our nonaccrual loans:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Interest income that would have been recorded if the nonaccrual loans had been current in accordance with contractual terms during the period.....	68	91	85
Interest income that was recorded on nonaccrual loans and included in interest income during the period.....	24	22	22

Impaired Loans A loan is considered to be impaired when it is deemed probable that not all principal and interest amounts due according to the contractual terms of the loan agreement will be collected. Probable losses from impaired loans are quantified and recorded as a component of the overall allowance for credit losses. Commercial and consumer loans for which we have modified the loan terms as part of a troubled debt restructuring are considered to be impaired loans. Additionally, commercial loans in nonaccrual status, or that have been partially charged-off or assigned a specific allowance for credit losses are also considered impaired loans.

Troubled debt restructurings TDR Loans represent loans for which the original contractual terms have been modified to provide for terms that are less than what we would be willing to accept for new loans with comparable risk because of deterioration in the borrower's financial condition.

Modifications for consumer or commercial loans may include changes to one or more terms of the loan, including, but not limited to, a change in interest rate, extension of the amortization period, reduction in payment amount and partial forgiveness or deferment of principal, accrued interest or other loan covenants. A substantial amount of our modifications involve interest rate reductions on consumer loans which lower the amount of interest income we are contractually entitled to receive in future periods. Through lowering the interest rate and other loan term changes, we believe we are able to increase the amount of cash flow that will ultimately be collected from the loan, given the borrower's financial condition. TDR Loans are reserved for either based on the present value of expected future cash flows discounted at the loans' original effective interest rates which generally results in a higher reserve requirement for these loans or in the case of certain secured loans, the estimated fair value of the underlying collateral. Once a consumer loan is classified as a TDR Loan, it continues to be reported as such until it is paid off or charged-off. For commercial loans, if subsequent performance is in accordance with the new terms and such terms reflect current market rates at the time of restructure, they will no longer be reported as a TDR Loan beginning in the year after restructuring. During the years ended 2017, 2016 and 2015 there were no commercial loans that met this criteria and were removed from TDR Loan classification.

The following table presents information about loans which were modified during 2017, 2016 and 2015 as a result of this action became classified as TDR Loans:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Commercial loans:			
Real estate, including construction.....	\$ —	\$ —	\$ 4
Business and corporate banking.....	40	323	162
Global banking.....	160	—	67
Total commercial.....	<u>200</u>	<u>323</u>	<u>233</u>
Consumer loans:			
Residential mortgages.....	34	62	168
Home equity mortgages.....	9	8	4
Credit cards.....	4	4	4
Total consumer.....	<u>47</u>	<u>74</u>	<u>176</u>
Total.....	<u>\$ 247</u>	<u>\$ 397</u>	<u>\$ 409</u>

The weighted-average contractual rate reduction for consumer loans which became classified as TDR Loans during 2017, 2016 and 2015 was 1.91 percent, 1.48 percent and 1.74 percent, respectively. The weighted-average contractual rate reduction for commercial loans was not significant in either the number of loans or rate.

The following table presents information about our TDR Loans and the related allowance for credit losses for TDR Loans:

	December 31, 2017		December 31, 2016	
	Carrying Value	Unpaid Principal Balance	Carrying Value	Unpaid Principal Balance
	(in millions)			
TDR Loans: ⁽¹⁾⁽²⁾				
Commercial loans:				
Real estate, including construction	\$ —	\$ —	\$ 32	\$ 33
Business and corporate banking	194	266	300	363
Global banking.....	175	180	150	152
Total commercial ⁽³⁾	<u>369</u>	<u>446</u>	<u>482</u>	<u>548</u>
Consumer loans:				
Residential mortgages ⁽⁴⁾	683	779	708	797
Home equity mortgages ⁽⁴⁾	33	66	27	59
Credit cards.....	4	4	5	5
Total consumer.....	<u>720</u>	<u>849</u>	<u>740</u>	<u>861</u>
Total TDR Loans ⁽⁵⁾	<u>\$ 1,089</u>	<u>\$ 1,295</u>	<u>\$ 1,222</u>	<u>\$ 1,409</u>
Allowance for credit losses for TDR Loans: ⁽⁶⁾				
Commercial loans:				
Real estate, including construction	\$ —		\$ —	
Business and corporate banking	12		37	
Global banking.....	19		—	
Total commercial.....	<u>31</u>		<u>37</u>	
Consumer loans:				
Residential mortgages.....	7		9	
Home equity mortgages.....	1		1	
Credit cards.....	1		1	
Total consumer.....	<u>9</u>		<u>11</u>	
Total allowance for credit losses for TDR Loans	<u>\$ 40</u>		<u>\$ 48</u>	

⁽¹⁾ TDR Loans are considered to be impaired loans. For consumer loans, all such loans are considered impaired loans regardless of accrual status. For commercial loans, impaired loans include other loans in addition to TDR Loans which totaled \$329 million and \$571 million at December 31, 2017 and 2016, respectively.

⁽²⁾ The carrying value of TDR Loans includes basis adjustments on the loans, such as unearned income, unamortized deferred fees and costs on originated loans, partial charge-offs and premiums or discounts on purchased loans.

⁽³⁾ Additional commitments to lend to commercial borrowers whose loans have been modified in TDR Loans totaled \$245 million and \$184 million at December 31, 2017 and 2016, respectively.

⁽⁴⁾ At December 31, 2017 and 2016, the carrying value of consumer mortgage TDR Loans held for investment includes \$655 million and \$672 million, respectively, of loans that are recorded at the lower of amortized cost or fair value of the collateral less cost to sell.

⁽⁵⁾ At December 31, 2017 and 2016, the carrying value of TDR Loans includes \$559 million and \$645 million, respectively, of loans which are classified as nonaccrual.

⁽⁶⁾ Included in the allowance for credit losses.

The following table presents information about average TDR Loans and interest income recognized on TDR Loans:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Average balance of TDR Loans:			
Commercial loans:			
Real estate, including construction	\$ 19	\$ 69	\$ 136
Business and corporate banking	246	292	76
Global banking	154	121	44
Total commercial	<u>419</u>	<u>482</u>	<u>256</u>
Consumer loans:			
Residential mortgages	704	740	1,017
Home equity mortgages	31	25	21
Credit cards	4	5	6
Total consumer	<u>739</u>	<u>770</u>	<u>1,044</u>
Total average balance of TDR Loans	<u>\$ 1,158</u>	<u>\$ 1,252</u>	<u>\$ 1,300</u>
Interest income recognized on TDR Loans:			
Commercial loans:			
Real estate, including construction	\$ —	\$ 4	\$ 4
Business and corporate banking	7	8	3
Global banking	2	1	—
Total commercial	<u>9</u>	<u>13</u>	<u>7</u>
Consumer loans:			
Residential mortgages	28	25	37
Home equity mortgages	2	1	1
Total consumer	<u>30</u>	<u>26</u>	<u>38</u>
Total interest income recognized on TDR Loans	<u>\$ 39</u>	<u>\$ 39</u>	<u>\$ 45</u>

The following table presents consumer loans which were classified as TDR Loans during the previous 12 months which subsequently became 60 days or greater contractually delinquent during the years ended December 31, 2017 and 2016 and 2015:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Consumer loans:			
Residential mortgages	\$ 9	\$ 24	\$ 36
Home equity mortgages	2	—	1
Total consumer	<u>\$ 11</u>	<u>\$ 24</u>	<u>\$ 37</u>

During the years ended 2017, 2016 and 2015, there were no commercial TDR Loans which were classified as TDR Loans during the previous 12 months which subsequently became 90 days or greater contractually delinquent.

Impaired commercial loans The following table presents information about impaired commercial loans and the related impairment reserve for impaired commercial loans:

	Amount with Impairment Reserves ⁽¹⁾	Amount without Impairment Reserves ⁽¹⁾	Total Impaired Commercial Loans ⁽¹⁾⁽²⁾	Impairment Reserve	Unpaid Principal Balance
(in millions)					
At December 31, 2017					
Real estate, including construction.....	\$ —	\$ 11	\$ 11	\$ —	\$ 11
Business and corporate banking	121	129	250	45	311
Global banking	262	175	437	82	520
Other commercial	—	—	—	—	—
Total commercial	<u>\$ 383</u>	<u>\$ 315</u>	<u>\$ 698</u>	<u>\$ 127</u>	<u>\$ 842</u>
At December 31, 2016					
Real estate, including construction.....	\$ 2	\$ 41	\$ 43	\$ 1	\$ 45
Business and corporate banking	176	166	342	55	397
Global banking	417	244	661	251	674
Other commercial	1	6	7	1	7
Total commercial	<u>\$ 596</u>	<u>\$ 457</u>	<u>\$ 1,053</u>	<u>\$ 308</u>	<u>\$ 1,123</u>

⁽¹⁾ Reflects the carrying value of impaired commercial loans and includes basis adjustments on the loans, such as partial charge-offs, unamortized deferred fees and costs on originated loans and any premiums or discounts on purchased loans.

⁽²⁾ Includes impaired commercial loans that are also considered TDR Loans which totaled \$369 million and \$482 million at December 31, 2017 and 2016, respectively.

The following table presents information about average impaired commercial loans and interest income recognized on impaired commercial loans:

Year Ended December 31,	2017	2016	2015
(in millions)			
Average balance of impaired commercial loans:			
Real estate, including construction.....	\$ 32	\$ 83	\$ 151
Business and corporate banking	304	344	125
Global banking.....	554	487	44
Other commercial	4	7	7
Total average balance of impaired commercial loans.....	<u>\$ 894</u>	<u>\$ 921</u>	<u>\$ 327</u>
Interest income recognized on impaired commercial loans:			
Real estate, including construction.....	\$ —	\$ 4	\$ 4
Business and corporate banking	9	9	4
Global banking.....	2	—	—
Total interest income recognized on impaired commercial loans.....	<u>\$ 11</u>	<u>\$ 13</u>	<u>\$ 8</u>

Commercial Loan Credit Quality Indicators The following credit quality indicators are monitored for our commercial loan portfolio:

Criticized loans Criticized loan classifications presented in the table below are determined by the assignment of various criticized facility grades based on the risk rating standards of our regulator. The following table summarizes criticized commercial loans:

	Special Mention	Substandard	Doubtful	Total
(in millions)				
At December 31, 2017				
Real estate, including construction	\$ 467	\$ 117	\$ 1	\$ 585
Business and corporate banking	477	519	44	1,040
Global banking	452	1,612	82	2,146
Other commercial	11	—	—	11
Total commercial	<u>\$ 1,407</u>	<u>\$ 2,248</u>	<u>\$ 127</u>	<u>\$ 3,782</u>
At December 31, 2016				
Real estate, including construction	\$ 445	\$ 152	\$ 1	\$ 598
Business and corporate banking	597	803	58	1,458
Global banking	899	2,478	298	3,675
Other commercial	—	6	1	7
Total commercial	<u>\$ 1,941</u>	<u>\$ 3,439</u>	<u>\$ 358</u>	<u>\$ 5,738</u>

Nonperforming The following table summarizes the status of our commercial loan portfolio, excluding loans held for sale:

	Performing Loans	Nonaccrual Loans	Accruing Loans Contractually Past Due 90 days or More	Total
(in millions)				
At December 31, 2017				
Real estate, including construction	\$ 10,521	\$ 12	\$ —	\$ 10,533
Business and corporate banking	12,288	215	1	12,504
Global banking	19,703	385	—	20,088
Other commercial	9,909	1	—	9,910
Total commercial	<u>\$ 52,421</u>	<u>\$ 613</u>	<u>\$ 1</u>	<u>\$ 53,035</u>
At December 31, 2016				
Real estate, including construction	\$ 10,834	\$ 56	\$ —	\$ 10,890
Business and corporate banking	13,892	187	1	14,080
Global banking	22,935	546	—	23,481
Other commercial	5,764	1	—	5,765
Total commercial	<u>\$ 53,425</u>	<u>\$ 790</u>	<u>\$ 1</u>	<u>\$ 54,216</u>

Credit risk profile The following table shows the credit risk profile of our commercial loan portfolio:

	Investment Grade ⁽¹⁾	Non-Investment Grade	Total
	(in millions)		
At December 31, 2017			
Real estate, including construction	\$ 7,456	\$ 3,077	\$ 10,533
Business and corporate banking	5,752	6,752	12,504
Global banking.....	13,218	6,870	20,088
Other commercial	8,341	1,569	9,910
Total commercial	<u>\$ 34,767</u>	<u>\$ 18,268</u>	<u>\$ 53,035</u>
At December 31, 2016			
Real estate, including construction	\$ 7,857	\$ 3,033	\$ 10,890
Business and corporate banking	6,348	7,732	14,080
Global banking.....	14,205	9,276	23,481
Other commercial	4,473	1,292	5,765
Total commercial	<u>\$ 32,883</u>	<u>\$ 21,333</u>	<u>\$ 54,216</u>

⁽¹⁾ Investment grade includes commercial loans with credit ratings of at least BBB- or above or the equivalent based on our internal credit rating system.

Consumer Loan Credit Quality Indicators The following credit quality indicators are utilized for our consumer loan portfolio:

Delinquency The following table summarizes dollars of two-months-and-over contractual delinquency and as a percent of total loans and loans held for sale ("delinquency ratio") for our consumer loan portfolio:

	December 31, 2017		December 31, 2016	
	Delinquent Loans	Delinquency Ratio	Delinquent Loans	Delinquency Ratio
	(dollars are in millions)			
Residential mortgages ⁽¹⁾⁽²⁾	\$ 425	2.46%	\$ 765	4.23%
Home equity mortgages ⁽¹⁾⁽²⁾	39	3.27	46	3.26
Credit cards	12	1.66	14	2.03
Other consumer	10	2.48	11	2.43
Total consumer	<u>\$ 486</u>	<u>2.48%</u>	<u>\$ 836</u>	<u>4.05%</u>

⁽¹⁾ At December 31, 2017 and 2016, consumer mortgage loan delinquency includes \$342 million and \$711 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell, including \$1 million and \$358 million, respectively, relating to loans held for sale.

⁽²⁾ At December 31, 2017 and 2016, consumer mortgage loans and loans held for sale include \$159 million and \$474 million, respectively, of loans that were in the process of foreclosure.

Nonperforming The following table summarizes the status of our consumer loan portfolio, excluding loans held for sale:

	Performing Loans	Nonaccrual Loans	Accruing Loans Contractually Past Due 90 days or More	Total
(in millions)				
At December 31, 2017				
Residential mortgages	\$ 16,859	\$ 414	\$ —	\$ 17,273
Home equity mortgages.....	1,124	67	—	1,191
Credit cards.....	712	—	9	721
Other consumer	335	—	8	343
Total consumer	<u>\$ 19,030</u>	<u>\$ 481</u>	<u>\$ 17</u>	<u>\$ 19,528</u>
At December 31, 2016				
Residential mortgages	\$ 16,746	\$ 435	\$ —	\$ 17,181
Home equity mortgages.....	1,333	75	—	1,408
Credit cards.....	678	—	10	688
Other consumer	375	—	7	382
Total consumer	<u>\$ 19,132</u>	<u>\$ 510</u>	<u>\$ 17</u>	<u>\$ 19,659</u>

Troubled debt restructurings See discussion of impaired loans above for further details on this credit quality indicator.

Concentration of Credit Risk At December 31, 2017 and 2016, our loan portfolios included interest-only residential mortgage and home equity mortgage loans totaling \$3,424 million and \$3,589 million, respectively. An interest-only residential mortgage loan allows a customer to pay the interest-only portion of the monthly payment for a period of time which results in lower payments during the initial loan period. However, subsequent events affecting a customer's financial position could affect the ability of customers to repay the loan in the future when the principal payments are required which increases the credit risk of this loan type.

6. Allowance for Credit Losses

The following table summarizes the changes in the allowance for credit losses by product and the related loan balance by product during the years ended December 31, 2017, 2016 and 2015:

	Commercial				Consumer				Total
	Real Estate, including Construction	Business and Corporate Banking	Global Banking	Other Comm'l	Residential Mortgages	Home Equity Mortgages	Credit Cards	Other Consumer	
(in millions)									
Year Ended December 31, 2017									
Allowance for credit losses – beginning of period	\$ 92	\$ 317	\$ 508	\$ 13	\$ 26	\$ 20	\$ 34	\$ 7	\$ 1,017
Provision charged (credited) to income.....	(3)	(59)	(116)	6	(7)	(8)	22	—	(165)
Charge-offs	(7)	(37)	(141)	(1)	(4)	(6)	(30)	(4)	(230)
Recoveries	—	23	13	—	10	5	6	2	59
Net (charge-offs) recoveries	(7)	(14)	(128)	(1)	6	(1)	(24)	(2)	(171)
Allowance for credit losses – end of period	<u>\$ 82</u>	<u>\$ 244</u>	<u>\$ 264</u>	<u>\$ 18</u>	<u>\$ 25</u>	<u>\$ 11</u>	<u>\$ 32</u>	<u>\$ 5</u>	<u>\$ 681</u>
Ending balance: collectively evaluated for impairment	\$ 82	\$ 199	\$ 182	\$ 18	\$ 18	\$ 10	\$ 31	\$ 5	\$ 545
Ending balance: individually evaluated for impairment	—	45	82	—	7	1	1	—	136
Total allowance for credit losses	<u>\$ 82</u>	<u>\$ 244</u>	<u>\$ 264</u>	<u>\$ 18</u>	<u>\$ 25</u>	<u>\$ 11</u>	<u>\$ 32</u>	<u>\$ 5</u>	<u>\$ 681</u>
Loans:									
Collectively evaluated for impairment ⁽¹⁾ ...	\$ 10,522	\$ 12,254	\$ 19,651	\$ 9,910	\$ 16,308	\$ 1,121	\$ 717	\$ 343	\$ 70,826
Individually evaluated for impairment ⁽²⁾ ...	11	250	437	—	57	4	4	—	763
Loans carried at lower of amortized cost or fair value less cost to sell	—	—	—	—	908	66	—	—	974
Total loans	<u>\$ 10,533</u>	<u>\$ 12,504</u>	<u>\$ 20,088</u>	<u>\$ 9,910</u>	<u>\$ 17,273</u>	<u>\$ 1,191</u>	<u>\$ 721</u>	<u>\$ 343</u>	<u>\$ 72,563</u>
Year Ended December 31, 2016									
Allowance for credit losses – beginning of period	\$ 86	\$ 407	\$ 267	\$ 19	\$ 68	\$ 24	\$ 32	\$ 9	\$ 912
Provision charged (credited) to income ⁽³⁾ ..	—	10	348	(6)	(9)	(1)	26	4	372
Charge-offs ⁽³⁾⁽⁴⁾	(1)	(110)	(107)	—	(45)	(8)	(30)	(8)	(309)
Recoveries	7	10	—	—	12	5	6	2	42
Net (charge-offs) recoveries	6	(100)	(107)	—	(33)	(3)	(24)	(6)	(267)
Allowance for credit losses – end of period	<u>\$ 92</u>	<u>\$ 317</u>	<u>\$ 508</u>	<u>\$ 13</u>	<u>\$ 26</u>	<u>\$ 20</u>	<u>\$ 34</u>	<u>\$ 7</u>	<u>\$ 1,017</u>
Ending balance: collectively evaluated for impairment	\$ 91	\$ 262	\$ 257	\$ 12	\$ 17	\$ 19	\$ 33	\$ 7	\$ 698
Ending balance: individually evaluated for impairment	1	55	251	1	9	1	1	—	319
Total allowance for credit losses	<u>\$ 92</u>	<u>\$ 317</u>	<u>\$ 508</u>	<u>\$ 13</u>	<u>\$ 26</u>	<u>\$ 20</u>	<u>\$ 34</u>	<u>\$ 7</u>	<u>\$ 1,017</u>
Loans:									
Collectively evaluated for impairment ⁽¹⁾ ...	\$ 10,847	\$ 13,738	\$ 22,820	\$ 5,758	\$ 16,165	\$ 1,335	\$ 683	\$ 382	\$ 71,728
Individually evaluated for impairment ⁽²⁾ ...	43	342	661	7	60	3	5	—	1,121
Loans carried at lower of amortized cost or fair value less cost to sell	—	—	—	—	956	70	—	—	1,026
Total loans	<u>\$ 10,890</u>	<u>\$ 14,080</u>	<u>\$ 23,481</u>	<u>\$ 5,765</u>	<u>\$ 17,181</u>	<u>\$ 1,408</u>	<u>\$ 688</u>	<u>\$ 382</u>	<u>\$ 73,875</u>

	Commercial				Consumer				Total
	Real Estate, including Construction	Business and Corporate Banking	Global Banking	Other Comm'l	Residential Mortgages	Home Equity Mortgages	Credit Cards	Other Consumer	
(in millions)									
Year Ended December 31, 2015									
Allowance for credit losses – beginning of period	\$ 89	\$ 251	\$ 131	\$ 21	\$ 107	\$ 32	\$ 39	\$ 10	\$ 680
Provision charged (credited) to income.....	2	215	136	(2)	(15)	(4)	20	9	361
Charge-offs	(10)	(69)	—	(1)	(35)	(8)	(32)	(12)	(167)
Recoveries	5	10	—	1	11	4	5	2	38
Net (charge-offs) recoveries	(5)	(59)	—	—	(24)	(4)	(27)	(10)	\$ (129)
Allowance for credit losses – end of period	\$ 86	\$ 407	\$ 267	\$ 19	\$ 68	\$ 24	\$ 32	\$ 9	\$ 912
Ending balance: collectively evaluated for impairment	\$ 85	\$ 355	\$ 267	\$ 18	\$ 35	\$ 23	\$ 31	\$ 9	\$ 823
Ending balance: individually evaluated for impairment	1	52	—	1	33	1	1	—	89
Total allowance for credit losses	\$ 86	\$ 407	\$ 267	\$ 19	\$ 68	\$ 24	\$ 32	\$ 9	\$ 912
Loans:									
Collectively evaluated for impairment ⁽¹⁾ ...	\$ 9,890	\$ 14,148	\$ 29,786	\$ 8,176	\$ 16,112	\$ 1,523	\$ 694	\$ 407	\$ 80,736
Individually evaluated for impairment ⁽²⁾ ...	110	217	119	7	197	5	5	—	660
Loans carried at lower of amortized cost or fair value less cost to sell	—	—	—	—	1,449	72	—	—	1,521
Total loans	\$ 10,000	\$ 14,365	\$ 29,905	\$ 8,183	\$ 17,758	\$ 1,600	\$ 699	\$ 407	\$ 82,917

- (1) During 2017, in conjunction with the creation of the new Corporate Center segment as discussed further in Note 22, "Business Segments," we reclassified loans to HSBC affiliates from global banking to other commercial and revised prior periods to conform with the current year presentation. As a result, other commercial includes loans to HSBC affiliates totaling \$6,750 million, \$3,274 million and \$4,815 million at December 31, 2017, 2016 and 2015, respectively, for which we do not carry an associated allowance for credit losses.
- (2) For consumer loans and certain small business loans, these amounts represent TDR Loans for which we evaluate reserves using a discounted cash flow methodology. Each loan is individually identified as a TDR Loan and then grouped together with other TDR Loans with similar characteristics. The discounted cash flow analysis is then applied to these groups of TDR Loans. Loans individually evaluated for impairment exclude TDR Loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell which totaled \$655 million, \$672 million and \$881 million at December 31, 2017, 2016 and 2015, respectively.
- (3) The provision for credit losses and charge-offs for residential mortgage loans during 2016 includes \$11 million related to the lower of amortized cost or fair value adjustment attributable to credit factors for loans transferred to held for sale. See Note 7, "Loans Held for Sale," for additional information.
- (4) For collateral dependent loans that are transferred to held for sale, the existing allowance for credit losses at the time of transfer are recognized as a charge-off. We transferred to held for sale certain residential mortgage loans during 2016 and, accordingly, we recognized the existing allowance for credit losses on these loans as additional charge-offs totaling \$22 million during 2016.

7. Loans Held for Sale

Loans held for sale consisted of the following:

At December 31,	2017	2016
	(in millions)	
Commercial loans:		
Real estate, including construction.....	\$ 115	\$ 17
Global banking	533	827
Total commercial.....	<u>648</u>	<u>844</u>
Consumer loans:		
Residential mortgages	6	890
Home equity mortgages	—	4
Other consumer	61	71
Total consumer	<u>67</u>	<u>965</u>
Total loans held for sale	<u>\$ 715</u>	<u>\$ 1,809</u>

Commercial Loans Commercial loans held for sale primarily consists of certain global banking loans that we have elected to designate under the fair value option which include loans that we originate in connection with our participation in a number of syndicated credit facilities with the intent of selling them to unaffiliated third parties as well as loans that we purchase from the secondary market and hold as hedges against our exposure to certain total return swaps. The fair value of these loans totaled \$471 million and \$725 million at December 31, 2017 and 2016, respectively. See Note 15, "Fair Value Option," for additional information.

We also originate loans in commercial real estate with the intention of selling them to third parties which totaled \$115 million and \$17 million at December 31, 2017 and 2016, respectively. Commercial loans held for sale also includes certain loans that we no longer intend to hold for investment and transferred to held for sale which totaled \$62 million and \$102 million at December 31, 2017 and 2016, respectively. During 2017, we reversed \$5 million of the lower of amortized cost or fair value adjustment previously recorded on commercial loans held for sale as a component of other income (loss) in the consolidated statement of income (loss) as a result of an increase in fair value due to improved pricing compared with recording \$35 million and \$16 million of lower of amortized cost or fair value adjustments associated with the write-down of commercial loans held for sale during 2016 and 2015, respectively.

In 2016, we sold a portfolio of commercial real estate loans to a third party which totaled \$1,161 million and recognized a loss on sale of approximately \$3 million, including transaction costs. Upon completion of the sale, certain loans which had a carrying value of \$612 million were transferred back to held for investment as we now intend to hold these loans for the foreseeable future.

Consumer Loans During 2017, we completed the sale of the portfolio of residential mortgage loans that we previously purchased from HSBC Finance and transferred to held for sale during 2016 to third parties. These residential mortgage loans had an unpaid principal balance of \$581 million (aggregate carrying value of \$536 million) at the time of sale and we recognized a gain on sale of approximately \$50 million, including transaction costs. During 2017, we reversed \$1 million of the lower of amortized cost or fair value adjustment previously recorded on this portfolio of loans as a component of other income (loss) in the consolidated statement of income (loss) as a result of an increase in fair value due to improved pricing.

During 2016, we transferred these residential mortgage loans and associated home equity mortgage loans, with a total unpaid principal balance of approximately \$648 million at the time of transfer, to held for sale. The carrying value of these loans prior to transfer, after considering the fair value of the property less costs to sell, as applicable, was approximately \$628 million, including accrued interest. During 2016, we recorded an initial lower of cost or fair value adjustment of \$11 million associated with the newly transferred loans, all of which was attributed to credit factors and recorded as a component of the provision for credit losses in the consolidated statement of income (loss). During 2016, we also recorded \$4 million of additional lower of amortized cost or fair value adjustment on these loans held for sale as a component of other income (loss) in the consolidated statement of income (loss) as a result of a reduction in the estimated pricing on specific pools of loans.

In addition to the residential mortgage loans discussed above, in March 2017 we completed the sale of certain residential mortgage loans which previously had been written down to the lower of amortized cost or fair value of the collateral less cost to sell (generally 180 days past due) in accordance with our existing charge-off policies and were transferred to held for sale during 2016 to a third party. These residential mortgage loans had an unpaid principal balance of \$364 million (aggregate carrying value of \$276 million) at the time of sale and we recognized a loss on sale of approximately \$2 million, largely reflecting transaction costs. During the first quarter of 2017, we reversed \$5 million of the lower of amortized cost or fair value adjustment previously recorded on these

loans as a component of other income (loss) in the consolidated statement of income (loss) as a result of an increase in fair value due to improved pricing.

During 2016, we transferred these residential mortgage loans, with a total unpaid principal balance of approximately \$568 million at the time of transfer, to held for sale. The carrying value of these loans prior to transfer, after considering the fair value of the property less costs to sell, was approximately \$473 million, including related escrow advances. During 2016, we recorded an initial lower of amortized cost or fair value adjustment of \$45 million associated with the newly transferred loans, all of which was attributed to non-credit factors and recorded as a component of other income (loss) in the consolidated statement of income (loss). During 2016, we also recorded \$8 million of additional lower of amortized cost or fair value adjustment on these loans held for sale as a component of other income (loss) in the consolidated statement of income (loss) as a result of a reduction in the estimated pricing on specific pools of loans subsequent to the initial transfer.

During 2017, we also continued to sell agency eligible residential mortgage loan originations on a servicing released basis directly to PHH Mortgage ("PHH Mortgage"). Gains and losses from the sale of these residential mortgage loans are reflected as a component of residential mortgage banking revenue (expense) in the accompanying consolidated statement of income (loss). Beginning with January 2018 applications, PHH Mortgage is no longer obligated to purchase these loans from us directly upon origination and instead we now market these loans for sale to other third parties. Residential mortgage loans held for sale also includes subprime residential mortgage loans with a fair value of \$2 million and \$3 million at December 31, 2017 and 2016, respectively, which were previously acquired from unaffiliated third parties and from HSBC Finance with the intent of securitizing or selling the loans to third parties.

Loans held for sale are subject to market risk, liquidity risk and interest rate risk, in that their value will fluctuate as a result of changes in market conditions, as well as the credit environment. PHH Mortgage was obligated to purchase agency eligible loans from us as of the earlier of when the customer locks the mortgage loan pricing or when the mortgage loan application is approved. As such, we retained none of the risk of market changes in mortgage rates for these loans purchased by PHH Mortgage. As discussed above, beginning with January 2018 applications, we now market these loans for sale to other third parties. As a result, beginning in the first quarter of 2018, we have reinstated an economic hedging program to offset changes in the fair value of these mortgage loans held for sale attributable to changes in market interest rates, partially mitigating the interest rate risk for these mortgage loans held for sale.

Other consumer loans held for sale reflects student loans which we no longer originate.

Valuation Allowances Excluding the commercial loans designated under fair value option discussed above, loans held for sale are recorded at the lower of amortized cost or fair value, with adjustments to fair value being recorded as a valuation allowance through other revenues. The valuation allowance on consumer loans held for sale was \$5 million and \$57 million at December 31, 2017 and 2016, respectively. The valuation allowance on commercial loans held for sale was \$10 million and \$55 million at December 31, 2017 and 2016, respectively.

8. Properties and Equipment, Net

Properties and equipment, net is summarized in the following table:

At December 31,	2017	2016
	(in millions)	
Land	\$ 8	\$ 8
Buildings and improvements	609	594
Furniture and equipment	145	142
Total.....	<u>762</u>	<u>744</u>
Accumulated depreciation and amortization.....	(577)	(542)
Properties and equipment, net.....	<u>\$ 185</u>	<u>\$ 202</u>

Depreciation and amortization expense totaled \$51 million, \$60 million and \$59 million in 2017, 2016 and 2015, respectively.

9. Goodwill

Goodwill was \$1,607 million and \$1,612 million at December 31, 2017 and 2016, respectively. Goodwill for these periods reflects accumulated impairment losses of \$670 million, which were recognized in prior periods. During the third quarter of 2017, \$5 million of goodwill was allocated to the portion of our Private Banking business sold to UBS. See Note 10, “Sale of Certain Private Banking Client Relationships,” for further discussion.

During the third quarter of 2017, we completed our annual impairment test of goodwill and determined that the fair value of all of our reporting units exceeded their carrying amounts.

10. Sale of Certain Private Banking Client Relationships

In August 2017, our Private Banking business entered into an agreement to refer parts of its Latin America portfolio, consisting primarily of clients based in areas where we do not have a corporate presence, including Central America and the Andean Pact, to UBS Wealth Management Americas (“UBS”). Our Private Banking business has made a decision to no longer service clients based in those markets and renew its focus on clients and prospects based in markets where we can leverage HSBC’s global connectivity, including the United States, Argentina, Brazil, Chile and Mexico. These markets are consistent with HSBC’s global strategy and allow us to better serve clients through collaboration with other HSBC businesses based in these markets.

Under the terms of the agreement, we facilitate the referral of these client relationships to UBS, including the transfer of their client assets as well as the transfer of the relationship managers and client service employees that support these clients. At the time the agreement was signed, total client assets associated with these relationships consisted of approximately \$3.5 billion in client investments (which are not reported on our balance sheet) and \$1.7 billion in client deposits (which are reported on our balance sheet). Loans associated with these client relationships were not included in the agreement. UBS will pay us a fee of 0.5 percent of the aggregate client assets transferred during the first two years after the agreement was signed. Therefore, the consideration we expect to receive is contingent upon the clients’ decisions to transfer their accounts to UBS, the timing and amounts of client assets transferred and the acceptance of the client assets by UBS. As a result of entering into the agreement, we recorded the contingent consideration expected to be received of \$15 million (the maximum of which could be as high as \$26 million based on total clients assets at the time the agreement was signed) as a receivable at estimated fair value within other assets and recognized a pre-tax gain on sale, net of allocated goodwill and transaction costs, of \$8 million in other income (loss) during the third quarter of 2017. The fair value of the contingent consideration was estimated using a discounted cash flow methodology and changes in fair value in future periods will be recognized in other income (loss).

During the fourth quarter of 2017, we completed the transfers of approximately \$0.5 billion of client investments and \$0.3 billion of client deposits to UBS. We have estimated the amount of remaining client deposits that we expect will be transferred to UBS, which was approximately \$0.7 billion at December 31, 2017, and have classified them as held for sale in our consolidated balance sheet. No lower of cost or fair value adjustment was required as a result of the transfer of deposits to held for sale. An additional \$0.4 billion of deposits at December 31, 2017 could be transferred in the event all remaining client deposits associated with these client relationships were to be transferred.

11. Deposits

Total deposits was \$118,702 million and \$129,248 million at December 31, 2017 and 2016, respectively, of which \$7,693 million and \$7,526 million, respectively, were carried at fair value. At December 31, 2017, total deposits included \$673 million of deposits classified as held for sale.

The following table presents the aggregate amount of time deposit accounts exceeding \$250,000 at December 31, 2017 and 2016:

At December 31,	2017	2016
	(in millions)	
Domestic deposits	\$ 13,875	\$ 14,419
Foreign deposits	629	4,225
Total	<u>\$ 14,504</u>	<u>\$ 18,644</u>

The scheduled maturities of all time deposits at December 31, 2017 are summarized in the following table:

	Domestic Deposits	Foreign Deposits	Total
	(in millions)		
2018:			
0-90 days.....	\$ 8,538	\$ 527	\$ 9,065
91-180 days.....	2,553	124	2,677
181-365 days.....	3,315	—	3,315
	<u>14,406</u>	<u>651</u>	<u>15,057</u>
2019	1,450	1	1,451
2020	796	1	797
2021	1,212	—	1,212
2022	1,051	—	1,051
Thereafter	3,603	—	3,603
	<u>\$ 22,518</u>	<u>\$ 653</u>	<u>\$ 23,171</u>

Overdraft deposits, which are classified as loans, were approximately \$321 million and \$442 million at December 31, 2017 and 2016, respectively.

Federal Deposit Insurance Corporation ("FDIC") assessment fees, which are recorded as a component of other expenses in the consolidated statement of income (loss), totaled \$138 million, \$168 million and \$120 million during 2017, 2016 and 2015, respectively.

12. Short-Term Borrowings

Short-term borrowings consisted of the following:

	December 31,					
	2017	Rate	2016	Rate	2015	Rate
	(dollars are in millions)					
Securities sold under repurchase agreements ⁽¹⁾	\$ 3,365	2.10%	\$ 3,672	1.17%	\$ 2,986	.48%
Average during year.....	\$ 8,100	1.28	\$ 7,272	.72	\$ 9,839	.34
Maximum month-end balance.....	11,351		11,950		14,582	
Commercial paper.....	1,154	1.56	1,251	1.20	1,978	.46
Average during year.....	1,256	1.37	2,551	.82	3,408	.30
Maximum month-end balance.....	1,377		3,687		4,870	
Other	131		178		31	
Total short-term borrowings	<u>\$ 4,650</u>		<u>\$ 5,101</u>		<u>\$ 4,995</u>	

⁽¹⁾ The following table presents the quarter end and average quarterly balances of securities sold under repurchase agreements:

	2017				2016				2015			
	Fourth	Third	Second	First	Fourth	Third	Second	First	Fourth	Third	Second	First
	(in millions)											
Quarter end balance.....	\$ 3,365	\$ 6,494	\$ 7,558	\$ 4,069	\$ 3,672	\$ 3,986	\$ 3,969	\$ 5,529	\$ 2,986	\$ 5,870	\$ 7,689	\$12,217
Average quarterly balance.....	5,457	12,566	9,272	5,050	4,593	5,959	10,461	8,117	7,513	6,914	12,761	12,251

13. Long-Term Debt

The composition of long-term debt is presented in the following table. Interest rates on floating rate notes are determined periodically by formulas based on certain money market rates or, in certain instances, by minimum interest rates as specified in the agreements governing the issues. Interest rates and maturity dates in effect at December 31, 2017 are shown in the below table.

	Maturity Date Range	Interest Rate Range	Interest Rate Weighted Average	At December 31,	
				2017	2016
(in millions)					
Issued or acquired by HSBC USA:					
Senior debt:					
Fixed-rate notes	2018-2024	1.63% - 3.50%	2.30%	\$ 10,185	\$ 11,423
Floating-rate notes	2018-2019	2.02% - 2.55%	2.22%	849	1,748
Structured notes	2018-2045	1.54% - 3.99%	2.38%	9,137	7,849
Total senior debt				<u>20,171</u>	<u>21,020</u>
Subordinated debt:					
Fixed-rate notes	2020-2097	5.00% - 9.30%	6.15%	1,170	1,171
Floating-rate notes	2025	3.66%	3.66%	850	850
Total subordinated debt				<u>2,020</u>	<u>2,021</u>
Mark-to-market adjustment on fair value option debt				1,125	337
Total issued or acquired by HSBC USA				<u>23,316</u>	<u>23,378</u>
Issued or acquired by HSBC Bank USA and its subsidiaries:					
Senior debt:					
Floating-rate notes	2019-2040	0.93% - 3.13%	2.88%	4,031	4,031
Structured notes	2018-2024	1.54% - 4.74%	1.98%	393	218
FHLB advances - floating-rate	2018-2036	1.42% - 2.18%	1.84%	3,100	5,700
Total senior debt				<u>7,524</u>	<u>9,949</u>
Subordinated fixed-rate notes	2018-2039	4.88% - 7.00%	5.90%	3,572	4,103
Long term debt issued by VIE - fixed-rate	2018	17.20%	17.20%	73	79
Mark-to-market adjustment on fair value option debt				481	230
Total issued or acquired by HSBC Bank USA and its subsidiaries				<u>11,650</u>	<u>14,361</u>
Total long-term debt				<u>\$ 34,966</u>	<u>\$ 37,739</u>

At December 31, 2017 and 2016, we had structured notes totaling \$10,656 million and \$8,372 million, respectively, and subordinated debt totaling \$2,230 million and \$2,012 million, respectively, for which we have elected fair value option accounting and are therefore carried at fair value. See Note 15, "Fair Value Option," for further details.

As a member of the Federal Home Loan Bank of New York ("FHLB") and the Federal Reserve Bank of New York, we have secured borrowing facilities which are collateralized by loans and investment securities. At December 31, 2017 and 2016, borrowings from the FHLB facility totaled \$3,100 million and \$5,700 million, respectively, which is included in long-term debt. Based upon the amounts pledged as collateral under these facilities, we have additional borrowing capacity of up to \$15,920 million at December 31, 2017.

Maturities of long-term debt at December 31, 2017 were as follows:

	(in millions)
2018	\$ 8,548
2019	5,103
2020	6,994
2021	3,599
2022	1,647
Thereafter	9,075
Total	<u>\$ 34,966</u>

14. Derivative Financial Instruments

In the normal course of business, the derivative instruments entered into are for trading, market making and risk management purposes. For financial reporting purposes, derivative instruments are designated in one of the following categories: (a) hedging instruments designated as qualifying hedges under derivative and hedge accounting principles, (b) financial instruments held for trading or (c) non-qualifying economic hedges. The derivative instruments held are predominantly swaps, futures, options and forward contracts. All derivatives are stated at fair value. Where we enter into enforceable master netting agreements with counterparties, the master netting agreements permit us to net those derivative asset and liability positions and to offset cash collateral held and posted with the same counterparty.

The following table presents the fair value of derivative contracts by major product type on a gross basis. Gross fair values exclude the effects of both counterparty netting as well as collateral, and therefore are not representative of our exposure. The table below presents the amounts of counterparty netting and cash collateral that have been offset in the consolidated balance sheet, as well as cash and securities collateral posted and received under enforceable master netting agreements that do not meet the criteria for netting. Derivative assets and liabilities which are not subject to an enforceable master netting agreement, or are subject to a netting agreement where an appropriate legal opinion to determine such agreements are enforceable has not been either sought or obtained, have not been netted in the table below. Where we have received or posted collateral under netting agreements where an appropriate legal opinion to determine such agreements are enforceable has not been either sought or obtained, the related collateral also has not been netted in the table below.

	December 31, 2017		December 31, 2016	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
	(in millions)			
Derivatives accounted for as fair value hedges⁽¹⁾				
OTC-cleared ⁽²⁾	\$ 84	\$ 390	\$ 142	\$ 341
Bilateral OTC ⁽²⁾	—	134	—	196
Interest rate contracts	84	524	142	537
Derivatives accounted for as cash flow hedges⁽¹⁾				
Foreign exchange contracts - bilateral OTC⁽²⁾	10	—	12	—
OTC-cleared ⁽²⁾	4	86	6	57
Bilateral OTC ⁽²⁾	—	22	—	94
Interest rate contracts	4	108	6	151
Total derivatives accounted for as hedges	98	632	160	688
Trading derivatives not accounted for as hedges⁽³⁾				
Exchange-traded ⁽²⁾	6	59	35	84
OTC-cleared ⁽²⁾	11,905	10,526	15,248	14,189
Bilateral OTC ⁽²⁾	11,549	12,997	16,045	17,480
Interest rate contracts	23,460	23,582	31,328	31,753
Exchange-traded ⁽²⁾	4	—	24	6
Bilateral OTC ⁽²⁾	15,746	14,666	24,020	22,645
Foreign exchange contracts	15,750	14,666	24,044	22,651
Equity contracts - bilateral OTC⁽²⁾	2,820	2,806	1,658	1,653
Exchange-traded ⁽²⁾	52	108	81	13
Bilateral OTC ⁽²⁾	502	613	1,038	867
Precious metals contracts	554	721	1,119	880
OTC-cleared ⁽²⁾	67	75	227	289
Bilateral OTC ⁽²⁾	589	485	1,291	1,076
Credit contracts	656	560	1,518	1,365
Other non-qualifying derivatives not accounted for as hedges⁽¹⁾				
OTC-cleared ⁽²⁾	519	60	287	41
Bilateral OTC ⁽²⁾	170	164	437	170
Interest rate contracts	689	224	724	211
Foreign exchange contracts - bilateral OTC⁽²⁾	—	—	—	31
Equity contracts - bilateral OTC⁽²⁾	1,264	145	672	222
Precious metals contracts - bilateral OTC⁽²⁾	—	1	—	—
Credit contracts - bilateral OTC⁽²⁾	—	24	32	4
Other contracts - bilateral OTC⁽²⁾⁽⁴⁾	6	52	5	14
Total derivatives	45,297	43,413	61,260	59,472
Less: Gross amounts of receivable / payable subject to enforceable master netting agreements⁽⁵⁾⁽⁷⁾	36,394	36,394	51,111	51,111
Less: Gross amounts of cash collateral received / posted subject to enforceable master netting agreements⁽⁶⁾⁽⁷⁾	4,480	3,823	5,145	3,826
Net amounts of derivative assets / liabilities presented in the balance sheet	4,423	3,196	5,004	4,535
Less: Gross amounts of financial instrument collateral received / posted subject to enforceable master netting agreements but not offset in the consolidated balance sheet	742	370	787	1,050
Net amounts of derivative assets / liabilities	\$ 3,681	\$ 2,826	\$ 4,217	\$ 3,485

⁽¹⁾ Derivative assets / liabilities related to cash flow hedges, fair value hedges and derivative instruments held for purposes other than for trading are recorded in other assets / interest, taxes and other liabilities on the consolidated balance sheet.

⁽²⁾ Over-the-counter (OTC) derivatives include derivatives executed and settled bilaterally with counterparties without the use of an organized exchange or central clearing house. The credit risk associated with bilateral OTC derivatives is managed through master netting agreements and obtaining collateral. OTC-cleared derivatives are executed bilaterally in the OTC market but then novated to a central clearing counterparty, whereby the central clearing counterparty becomes the counterparty to both of the original counterparties. Exchange traded derivatives are executed directly on an organized exchange that provides pre-trade price transparency. Credit risk is minimized for OTC-cleared derivatives and exchange traded derivatives through daily margining required by central clearing counterparties. During the first quarter of 2017, a central clearing counterparty amended its rules for OTC-cleared interest rate

derivatives to legally re-characterize daily variation margin payments to be settlement payments as opposed to cash collateral posted. The impact of reflecting the rule change for this central clearing counterparty as of December 31, 2016 would have been a reduction in gross derivative assets and liabilities of approximately \$5.2 billion and \$5.2 billion, respectively, with corresponding decreases in the related counterparty and cash collateral netting.

- (3) Trading related derivative assets / liabilities are recorded in trading assets / trading liabilities on the consolidated balance sheet.
- (4) Consists of swap agreements entered into in conjunction with the sales of certain Visa Inc. ("Visa") Class B common shares ("Class B Shares").
- (5) Represents the netting of derivative receivable and payable balances for the same counterparty under enforceable netting agreements.
- (6) Represents the netting of cash collateral posted and received by counterparty under enforceable netting agreements.
- (7) Netting is performed at a counterparty level in cases where enforceable master netting agreements are in place, regardless of the type of derivative instrument. Therefore, we have not attempted to allocate netting to the different types of derivative instruments shown in the table above.

See Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," for further information on offsetting related to resale and repurchase agreements and securities borrowing and lending arrangements.

Derivatives Held for Risk Management Purposes Our risk management policy requires us to identify, analyze and manage risks arising from the activities conducted during the normal course of business. We use derivative instruments as an asset and liability management tool to manage our exposures in interest rate, foreign currency and credit risks in existing assets and liabilities, commitments and forecasted transactions. The accounting for changes in fair value of a derivative instrument will depend on whether the derivative has been designated and qualifies for hedge accounting.

We designate derivative instruments to offset the fair value risk and cash flow risk arising from fixed-rate and floating-rate assets and liabilities as well as forecasted transactions. We assess the hedging relationships, both at the inception of the hedge and on an ongoing basis, using a regression approach to determine whether the designated hedging instrument is highly effective in offsetting changes in the fair value or the cash flows attributable to the hedged risk. Accounting principles for qualifying hedges require us to prepare detailed documentation describing the relationship between the hedging instrument and the hedged item, including, but not limited to, the risk management objective, the hedging strategy and the methods to assess and measure the ineffectiveness of the hedging relationship. We discontinue hedge accounting when we determine that the hedge is no longer highly effective, the hedging instrument is terminated, sold or expired, the designated forecasted transaction is not probable of occurring, or when the designation is removed by us.

Fair Value Hedges In the normal course of business, we hold fixed-rate loans and securities and issue fixed-rate senior and subordinated debt obligations. The fair value of fixed-rate (U.S. dollar and non-U.S. dollar denominated) assets and liabilities fluctuates in response to changes in interest rates or foreign currency exchange rates. We utilize interest rate swaps, forward and futures contracts and foreign currency swaps to minimize our exposure to changes in fair value caused by interest rate and foreign currency volatility. The changes in the fair value of the hedged item designated in a qualifying hedge are captured as an adjustment to the carrying amount of the hedged item (basis adjustment). If the hedging relationship is terminated and the hedged item continues to exist, the basis adjustment is amortized over the remaining life of the hedged item.

We recorded basis adjustments for active fair value hedges which decreased the carrying amount of our debt by \$132 million and \$104 million at December 31, 2017 and 2016, respectively. During 2017, 2016 and 2015, we amortized \$5 million, \$6 million and \$6 million, respectively, of basis adjustments related to terminated and/or re-designated fair value hedges of our debt. The total accumulated unamortized basis adjustments related to terminated and-or re-designated fair value hedges amounted to increases in the carrying amount of our debt of \$7 million and \$12 million at December 31, 2017 and 2016, respectively.

We recorded basis adjustments for active fair value hedges of AFS securities which increased the carrying amount of the securities by \$279 million and \$258 million at December 31, 2017 and 2016, respectively.

The following table presents information on gains and losses on derivative instruments designated and qualifying as hedging instruments in fair value hedges and the hedged items in fair value hedges and their locations on the consolidated statement of income (loss):

	Gain (Loss) on Derivative		Gain (Loss) on Hedged Items		Net Ineffective Gain (Loss) Recognized
	Interest Income (Expense)	Other Income (Loss)	Interest Income (Expense)	Other Income (Loss)	Other Income (Loss)
(in millions)					
Year Ended December 31, 2017					
Interest rate contracts/AFS Securities	\$ (121)	\$ 33	\$ 367	\$ (35)	\$ (2)
Interest rate contracts/long-term debt.....	12	(24)	(257)	29	5
Total.....	<u>\$ (109)</u>	<u>\$ 9</u>	<u>\$ 110</u>	<u>\$ (6)</u>	<u>\$ 3</u>
Year Ended December 31, 2016					
Interest rate contracts/AFS Securities	\$ (178)	\$ 59	\$ 374	\$ (74)	\$ (15)
Interest rate contracts/long-term debt.....	32	(82)	(155)	80	(2)
Total.....	<u>\$ (146)</u>	<u>\$ (23)</u>	<u>\$ 219</u>	<u>\$ 6</u>	<u>\$ (17)</u>
Year Ended December 31, 2015					
Interest rate contracts/AFS Securities	\$ (202)	\$ (82)	\$ 363	\$ 66	\$ (16)
Interest rate contracts/long-term debt.....	10	(18)	(83)	20	2
Total.....	<u>\$ (192)</u>	<u>\$ (100)</u>	<u>\$ 280</u>	<u>\$ 86</u>	<u>\$ (14)</u>

Cash Flow Hedges We own or issue floating rate financial instruments and enter into forecasted transactions that give rise to variability in future cash flows. As a part of our risk management strategy, we use interest rate swaps, currency swaps and futures contracts to mitigate risk associated with variability in the cash flows. Changes in fair value of a derivative instrument associated with the effective portion of a qualifying cash flow hedge are recognized initially in other comprehensive income (loss). When the cash flows being hedged materialize and are recorded in income or expense, the associated gain or loss from the hedging derivative previously recorded in accumulated other comprehensive loss ("AOCI") is reclassified into earnings in the same accounting period in which the designated forecasted transaction or hedged item affects earnings. If a cash flow hedge of a forecasted transaction is de-designated because it is no longer highly effective, or if the hedge relationship is terminated, the cumulative gain or loss on the hedging derivative to that date will continue to be reported in AOCI unless it is probable that the hedged forecasted transaction will not occur by the end of the originally specified time period as documented at the inception of the hedge, at which time the cumulative gain or loss is released into earnings.

At December 31, 2017 and 2016, active cash flow hedge relationships extend or mature through July 2036. During 2017, \$17 million of losses related to terminated and/or re-designated cash flow hedge relationships were amortized to earnings from AOCI compared with losses of \$17 million and \$11 million during 2016 and 2015, respectively. During the next twelve months, we expect to amortize \$19 million of remaining losses to earnings resulting from these terminated and/or re-designated cash flow hedges. The interest accrual related to the hedging instruments is recognized in interest income.

The following table presents information on gains and losses on derivative instruments designated and qualifying as hedging instruments in cash flow hedges (including amounts recognized in AOCI from all terminated cash flow hedges) and their locations on the consolidated statement of income (loss):

	Gain (Loss) Recognized in AOCI on Derivative (Effective Portion)			Location of Gain (Loss) Reclassified from AOCI into Income (Effective Portion)	Gain (Loss) Reclassified From AOCI into Income (Effective Portion)			Location of Gain (Loss) Recognized in Income on the Derivative (Ineffective Portion and Amount Excluded from Effectiveness Testing)	Gain (Loss) Recognized in Income on the Derivative (Ineffective Portion)		
	2017	2016	2015		2017	2016	2015		2017	2016	2015
(in millions)											
Year Ended December 31,											
Foreign exchange contracts	\$ 1	\$ (1)	\$ (2)	Interest income (expense)	\$ —	\$ —	\$ —	Other income (loss)	\$ —	\$ —	\$ —
Interest rate contracts	(30)	6	(21)	Interest income (expense)	(17)	(17)	(11)	Other income (loss)	1	—	—
Total	<u>\$ (29)</u>	<u>\$ 5</u>	<u>\$ (23)</u>		<u>\$ (17)</u>	<u>\$ (17)</u>	<u>\$ (11)</u>		<u>\$ 1</u>	<u>\$ —</u>	<u>\$ —</u>

Trading Derivatives and Non-Qualifying Hedging Activities In addition to risk management, we enter into derivative instruments, including buy- and sell-protection credit derivatives, for trading and market making purposes, to repackage risks and structure trades to facilitate clients' needs for various risk taking and risk modification purposes. We manage our risk exposure by entering into offsetting derivatives with other financial institutions to mitigate the market risks, in part or in full, arising from our trading activities with our clients. In addition, we also enter into buy-protection credit derivatives with other market participants to manage our counterparty credit risk exposure. Where we enter into derivatives for trading purposes, realized and unrealized gains and losses are recognized in trading revenue. Prior to the sale of our remaining MSRs portfolio during the fourth quarter of 2016, we used forward purchases or sales of to-be-announced ("TBA") securities to economically hedge our MSRs. Changes in the fair value of TBA positions, which were considered derivatives, were recorded in residential mortgage banking revenue (expense). Credit losses arising from counterparty risk on over-the-counter derivative instruments and offsetting buy protection credit derivative positions are recognized as an adjustment to the fair value of the derivatives and are recorded in trading revenue.

Our non-qualifying hedging and other activities include:

- Derivative contracts related to the fixed-rate long-term debt issuances and hybrid instruments, including all structured notes and deposits, for which we have elected fair value option accounting. These derivative contracts are non-qualifying hedges but are considered economic hedges.
- Credit default swaps which are designated as economic hedges against the credit risks within our loan portfolio. In the event of an impairment loss occurring in a loan that is economically hedged, the impairment loss is recognized as provision for credit losses while the gain on the credit default swap is recorded as other income (loss).
- Swap agreements entered into in conjunction with the sales of certain Visa Class B Shares to a third party to retain the litigation risk associated with the Class B Shares sold until the related litigation is settled and the Class B Shares can be converted into Class A common shares ("Class A Shares"). See Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," for additional information.

Derivative instruments designated as economic hedges that do not qualify for hedge accounting are recorded at fair value through profit and loss. Realized and unrealized gains and losses on economic hedges are recognized in gain (loss) on instruments designated at fair value and related derivatives, other income (loss) or residential mortgage banking revenue (expense) while the derivative asset or liability positions are reflected as other assets or other liabilities.

The following table presents information on gains and losses on derivative instruments held for trading purposes and their locations on the consolidated statement of income (loss):

Location of Gain (Loss) Recognized in Income on Derivatives		Amount of Gain (Loss) Recognized in Income on Derivatives		
		Year Ended December 31,		
		2017	2016	2015
		(in millions)		
Interest rate contracts	Trading revenue	\$ (209)	\$ (283)	\$ 899
Interest rate contracts	Residential mortgage banking revenue (expense)	—	36	26
Foreign exchange contracts	Trading revenue	192	386	(472)
Equity contracts	Trading revenue	2	6	4
Precious metals contracts	Trading revenue	220	(20)	52
Credit contracts	Trading revenue	(110)	(71)	(23)
Total		\$ 95	\$ 54	\$ 486

The following table presents information on gains and losses on derivative instruments held for non-qualifying hedging and other activities and their locations on the consolidated statement of income (loss):

Location of Gain (Loss) Recognized in Income on Derivatives		Amount of Gain (Loss) Recognized in Income on Derivatives		
		Year Ended December 31,		
		2017	2016	2015
		(in millions)		
Interest rate contracts	Gain (loss) on instruments designated at fair value and related derivatives	\$ 62	\$ (12)	\$ 89
Interest rate contracts	Residential mortgage banking revenue (expense)	—	—	1
Foreign exchange contracts	Gain (loss) on instruments designated at fair value and related derivatives	6	30	(10)
Equity contracts	Gain (loss) on instruments designated at fair value and related derivatives	1,121	466	(110)
Credit contracts	Gain (loss) on instruments designated at fair value and related derivatives	—	—	(3)
Credit contracts	Other income (loss)	(43)	(70)	42
Other contracts ⁽¹⁾	Other income (loss)	(10)	—	—
Total		\$ 1,136	\$ 414	\$ 9

⁽¹⁾ Consists of swap agreements entered into in conjunction with the sales of certain Visa Class B Shares.

Credit-Risk Related Contingent Features We enter into total return swap, interest rate swap, cross-currency swap and credit default swap contracts, amongst others, which contain provisions that require us to maintain a specific credit rating from each of the major credit rating agencies. Sometimes the derivative instrument transactions are a part of broader structured product transactions. If our credit ratings were to fall below the current ratings, the counterparties to our derivative instruments could demand us to post additional collateral. The amount of additional collateral required to be posted will depend on whether we are downgraded by one or more notches. The aggregate fair value of all derivative instruments with credit-risk related contingent features that were in a liability position at December 31, 2017 was \$1,063 million, for which we had posted collateral of \$758 million. The aggregate fair value of all derivative instruments with credit-risk-related contingent features that were in a liability position at December 31, 2016 was \$586 million, for which we had posted collateral of \$581 million. Substantially all of the collateral posted is in the form of cash or securities available-for-sale. See Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," for further details.

The following table presents the amount of additional collateral that we would be required to post (from the current collateral level) related to derivative instruments with credit-risk related contingent features if our long term ratings were downgraded by one or two notches. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another rating agency will generally not result in additional collateral.

	One-notch downgrade	Two-notch downgrade
	(in millions)	
Amount of additional collateral to be posted upon downgrade	\$ 30	\$ 31

Notional Value of Derivative Contracts The following table summarizes the notional values of derivative contracts:

At December 31,	2017	2016
	(in millions)	
Interest rate:		
Futures and forwards	\$ 735,757	\$ 501,635
Swaps	2,687,273	2,142,183
Options written	77,144	74,741
Options purchased	93,042	87,020
	<u>3,593,216</u>	<u>2,805,579</u>
Foreign exchange:		
Swaps, futures and forwards	924,163	965,301
Options written	25,911	52,845
Options purchased	26,617	53,260
Spot.....	19,401	34,565
	<u>996,092</u>	<u>1,105,971</u>
Commodities, equities and precious metals:		
Swaps, futures and forwards	38,709	49,555
Options written	31,631	19,495
Options purchased	43,202	30,632
	<u>113,542</u>	<u>99,682</u>
Credit derivatives	90,290	123,714
Other contracts ⁽¹⁾	644	184
Total.....	<u>\$ 4,793,784</u>	<u>\$ 4,135,130</u>

⁽¹⁾ Consists of swap agreements entered into in conjunction with the sales of certain Visa Class B Shares.

15. Fair Value Option

We report our results to HSBC in accordance with HSBC Group accounting and reporting policies ("Group Reporting Basis"), which apply International Financial Reporting Standards ("IFRSs") as issued by the International Accounting Standards Board ("IASB") and endorsed by the European Union ("EU"). We typically have elected to apply fair value option ("FVO") accounting to selected financial instruments to align the measurement attributes of those instruments under U.S. GAAP and the Group Reporting Basis and to simplify the accounting model applied to those financial instruments. We elected to apply FVO accounting to certain commercial loans held for sale, certain securities sold under repurchase agreements, certain fixed-rate long-term debt issuances and all of our hybrid instruments, including structured notes and deposits. Prior to January 1, 2017, changes in the fair value of these assets and liabilities, including changes in fair value related to interest rate, credit and other risks, as well as the mark-to-market adjustment on the related derivatives and the net realized gains or losses on these derivatives are reported in gain (loss) on instruments designated at fair value and related derivatives in the consolidated statement of income (loss). As discussed more fully in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," beginning January 1, 2017, the fair value movement on fair value option liabilities attributable to our own credit spread is recorded in other comprehensive income (loss).

Loans We elected to apply FVO accounting to certain commercial syndicated loans which are originated with the intent to sell and certain commercial loans that we purchased from the secondary market and hold as hedges against our exposure to certain total return swaps and include these loans as loans held for sale in the consolidated balance sheet. The election allows us to account for these loans at fair value which is consistent with the manner in which the instruments are managed. Where available, fair value is based on observable market consensus pricing obtained from independent sources, relevant broker quotes or observed market prices of instruments with similar characteristics. Where observable market parameters are not available, fair value is determined based on contractual cash flows adjusted for estimates of prepayment rates, expected default rates and loss severity discounted at management's estimate of the expected rate of return required by market participants. We also consider loan specific risk mitigating factors such as collateral arrangements in determining the fair value estimate. Interest from these loans is recorded as interest income in the consolidated statement of income (loss). Because a substantial majority of the loans elected for the fair value option are floating rate assets, changes in their fair value are primarily attributable to changes in loan-specific credit risk factors. The components of gain (loss) related to loans designated at fair value are summarized in the table below. At December 31, 2017 and 2016, no loans for which the fair value option has been elected were 90 days or more past due or in nonaccrual status.

Resale and Repurchase Agreements We elected to apply FVO accounting to certain securities purchased and sold under resale and repurchase agreements which are trading in nature. The election allows us to account for these resale and repurchase agreements at fair value which is consistent with the manner in which the instruments are managed. The fair value of the resale and repurchase agreements is determined using market rates currently offered on comparable transactions with similar underlying collateral and maturities. Interest on these resale and repurchase agreements is recorded as interest income or expense in the consolidated statement of income (loss). The components of gain (loss) related to these resale and repurchase agreements designated at fair value are summarized in the table below.

Long-Term Debt (Own Debt Issuances) We elected to apply FVO accounting for certain fixed-rate long-term debt for which we had applied or otherwise would elect to apply fair value hedge accounting. The election allows us to achieve a similar accounting effect without having to meet the hedge accounting requirements. The own debt issuances elected under FVO are traded in secondary markets and, as such, the fair value is determined based on observed prices for the specific instruments. The observed market price of these instruments reflects the effect of changes to our own credit spreads and interest rates. Interest on the fixed-rate debt accounted for under FVO is recorded as interest expense in the consolidated statement of income (loss). The components of gain (loss) in the consolidated statement of income (loss) related to long-term debt designated at fair value are summarized in the table below.

Hybrid Instruments We elected to apply FVO accounting to all of our hybrid instruments issued, including structured notes and deposits. The valuation of the hybrid instruments is predominantly driven by the derivative features embedded within the instruments and our own credit risk. Cash flows of the hybrid instruments in their entirety, including the embedded derivatives, are discounted at an appropriate rate for the applicable duration of the instrument adjusted for our own credit spreads. The credit spreads applied to structured notes are determined with reference to our own debt issuance rates observed in the primary and secondary markets, internal funding rates, and structured note rates in recent executions while the credit spreads applied to structured deposits are determined using market rates currently offered on comparable deposits with similar characteristics and maturities. Interest on this debt is recorded as interest expense in the consolidated statement of income (loss). The components of gain (loss) in the consolidated statement of income (loss) related to hybrid instruments designated at fair value are summarized in the table below.

The following table summarizes the fair value and unpaid principal balance for items we account for under FVO:

	Fair Value	Unpaid Principal Balance	Fair Value over (under) Unpaid Principal Balance
	(in millions)		
At December 31, 2017			
Commercial loans held for sale.....	\$ 471	\$ 483	\$ (12)
Securities purchased under resale agreements.....	80	80	—
Securities sold under repurchase agreements	2,032	2,031	1
Fixed rate long-term debt.....	2,230	1,750	480
Hybrid instruments:			
Structured deposits.....	7,693	7,685	8
Structured notes.....	10,656	9,530	1,126
At December 31, 2016			
Commercial loans held for sale.....	\$ 725	\$ 728	\$ (3)
Securities purchased under resale agreements.....	770	767	3
Securities sold under repurchase agreements	2,672	2,670	2
Fixed rate long-term debt.....	2,012	1,750	262
Hybrid instruments:			
Structured deposits.....	7,526	7,881	(355)
Structured notes.....	8,372	8,067	305

Components of Gain (loss) on Instruments at Fair Value and Related Derivatives The following table summarizes the components of gain (loss) on instruments designated at fair value and related derivatives reflected in the consolidated statement of income (loss) for the years ended December 31, 2017, 2016 and 2015:

	Loans	Securities Purchased Under Resale Agreements	Securities Sold Under Repurchase Agreements	Long-Term Debt	Hybrid Instruments	Total
(in millions)						
Year Ended December 31, 2017						
Interest rate and other components ⁽¹⁾	\$ —	\$ (1)	\$ 2	\$ 6	\$ (1,151)	\$ (1,144)
Credit risk component ⁽²⁾	(2)	—	—	—	—	(2)
Total mark-to-market on financial instruments designated at fair value.....	(2)	(1)	2	6	(1,151)	(1,144)
Mark-to-market on the related derivatives.....	—	—	—	(31)	1,163	1,132
Net realized gain on the related long-term debt derivatives	—	—	—	57	—	57
Gain (loss) on instruments designated at fair value and related derivatives	\$ (2)	\$ (1)	\$ 2	\$ 32	\$ 12	\$ 43
Year Ended December 31, 2016						
Interest rate and other components ⁽¹⁾	\$ —	\$ —	\$ 4	\$ (2)	\$ (543)	\$ (541)
Credit risk component ⁽²⁾	22	—	—	(3)	(33)	(14)
Total mark-to-market on financial instruments designated at fair value.....	22	—	4	(5)	(576)	(555)
Mark-to-market on the related derivatives.....	—	—	—	(31)	452	421
Net realized gain on the related long-term debt derivatives	—	—	—	63	—	63
Gain (loss) on instruments designated at fair value and related derivatives	\$ 22	\$ —	\$ 4	\$ 27	\$ (124)	\$ (71)
Year Ended December 31, 2015						
Interest rate and other components ⁽¹⁾	\$ —	\$ —	\$ (6)	\$ (23)	\$ 127	\$ 98
Credit risk component ⁽²⁾	(14)	—	—	194	20	200
Total mark-to-market on financial instruments designated at fair value.....	(14)	—	(6)	171	147	298
Mark-to-market on the related derivatives.....	—	—	—	7	(109)	(102)
Net realized gain on the related long-term debt derivatives	—	—	—	68	—	68
Gain (loss) on instruments designated at fair value and related derivatives	\$ (14)	\$ —	\$ (6)	\$ 246	\$ 38	\$ 264

⁽¹⁾ As it relates to hybrid instruments, interest rate and other components primarily includes interest rate, foreign exchange and equity contract risks.

⁽²⁾ As discussed more fully in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," beginning January 1, 2017, the fair value movement on fair value option liabilities attributable to our own credit spread is recorded in common equity as a component of other comprehensive income (loss).

16. Income Taxes

On December 22, 2017, Tax Legislation was signed into law which reduced the Federal corporate income tax rate from 35 percent to 21 percent effective January 1, 2018. During the fourth quarter of 2017, we increased our income tax provision by \$865 million as a result of the Federal corporate tax rate change, due to a lower carrying value of our net deferred tax asset.

Total income taxes was as follows:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Provision for income taxes	\$ 1,228	\$ 89	\$ 230
Income tax expense (benefit) included in common equity related to:			
Unrealized gains (losses) on investment securities	127	(135)	(242)
Unrealized gains (losses) on fair value option liabilities attributable to our own credit spread ⁽¹⁾	(115)	—	—
Unrealized gains (losses) on derivatives designated as cash flow hedges.....	(5)	9	2
Employer accounting for post-retirement plans	1	2	—
Total income taxes	\$ 1,236	\$ (35)	\$ (10)

⁽¹⁾ See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for information on the adoption of new accounting guidance on January 1, 2017 related to fair value option liabilities attributable to our own credit spread.

The components of the provision for income taxes were as follows:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Current:			
Federal	\$ 795	\$ 191	\$ 3
State and local.....	109	27	35
Foreign.....	21	11	2
Total current.....	925	229	40
Deferred.....	303	(140)	190
Provision for income taxes	\$ 1,228	\$ 89	\$ 230

The following table provides an analysis of the difference between effective rates based on the provision for income taxes attributable to pretax income and the statutory U.S. Federal income tax rate:

Year Ended December 31,	2017		2016		2015	
	(dollars are in millions)					
Tax expense at the U.S. Federal statutory income tax rate	\$ 367	35.0%	\$ 76	35.0%	\$ 196	35.0%
Increase (decrease) in rate resulting from:						
State and local taxes, net of Federal benefit.....	28	2.7	10	4.6	20	3.6
Adjustment of Federal tax rate used to value deferred taxes ⁽¹⁾ ..	865	82.4	—	—	—	—
Adjustment of State tax rate used to value deferred taxes ⁽²⁾	(15)	(1.4)	4	1.8	47	8.4
Other non-deductible / non-taxable items ⁽³⁾	1	.1	21	9.6	1	.2
Items affecting prior periods ⁽⁴⁾	6	.6	(2)	(.9)	(7)	(1.3)
Uncertain tax positions.....	—	—	(4)	(1.8)	4	.7
Low income housing and other tax credit investments.....	(17)	(1.6)	(17)	(7.8)	(26)	(4.6)
Change in valuation allowances reserves.....	—	—	—	—	(5)	(.9)
Stock based compensation ⁽⁵⁾	(8)	(.8)	—	—	—	—
Other.....	1	.1	1	.5	—	—
Provision for income taxes.....	\$1,228	117.1%	\$ 89	40.8%	\$ 230	41.1%

⁽¹⁾ For 2017, the amount relates to the effects of revaluing our net deferred tax asset for new Tax Legislation that was enacted on December 22, 2017.

⁽²⁾ For 2017, the amount includes an out of period adjustment to our deferred tax asset balance which decreased tax expense by \$9 million. For 2015, the amount mainly relates to the effects of revaluing our net deferred tax asset for New York City Tax Reform that was enacted on April 13, 2015.

⁽³⁾ For 2016, the amount mainly relates to the accrual of non-deductible penalties.

⁽⁴⁾ For 2017, the amount relates to the impact of adjustments associated with filing the 2016 State income tax returns and changes in tax credits as a result of filing the 2016 Federal income tax return.

⁽⁵⁾ As discussed more fully in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," beginning January 1, 2017, all excess tax benefits and tax deficiencies for share-based payment awards are recorded within income tax expense in the consolidated statement of income (loss).

The components of the net deferred tax asset are presented in the following table:

At December 31,	2017		2016	
	(in millions)			
Deferred tax assets:				
Allowance for credit losses.....	\$ 166		\$ 392	
Employee benefit accruals.....	75		108	
Accrued expenses	72		110	
Interests in real estate mortgage investment conduits ⁽¹⁾	175		548	
Unrealized losses on investment securities.....	96		275	
Partnerships.....	73		113	
Capitalized costs ⁽²⁾	724		—	
Fair value adjustments	26		—	
Other	165		360	
Total deferred tax assets.....	1,572		1,906	
Valuation allowance.....	(6)		(6)	
Total deferred tax assets, net of valuation allowance	1,566		1,900	
Deferred tax liabilities:				
Fair value adjustments	—		48	
Other	26		49	
Total deferred tax liabilities	26		97	
Net deferred tax asset.....	\$ 1,540		\$ 1,803	

- ⁽¹⁾ Real estate mortgage investment conduits ("REMICs") are investment vehicles that hold commercial and residential mortgages in trust and issue securities representing an undivided interest in these mortgages. HSBC Bank USA holds portfolios of noneconomic residual interests in a number of REMICs. This item represents tax basis in such interests which has accumulated as a result of tax rules requiring the recognition of income related to such noneconomic residuals. In 2017, a substantial portion of our noneconomic residual interests were sold.
- ⁽²⁾ Reflects our tax return election to capitalize certain service costs.

A reconciliation of the beginning and ending amount of unrecognized tax benefits related to uncertain tax positions is as follows:

	2017	2016	2015
	(in millions)		
Balance at January 1,.....	\$ 16	\$ 26	\$ 14
Additions based on tax positions related to the current year	2	2	4
Additions for tax positions of prior years	—	—	8
Reductions for tax positions of prior years	(1)	(8)	—
Reductions related to settlements with taxing authorities.....	—	(4)	—
Balance at December 31,.....	<u>\$ 17</u>	<u>\$ 16</u>	<u>\$ 26</u>

The total amount of unrecognized tax benefits that, if recognized, would affect the effective income tax rate was \$13 million, \$10 million and \$14 million at December 31, 2017, 2016 and 2015, respectively. Included in the unrecognized tax benefits are certain items the recognition of which would not affect the effective tax rate, such as the tax effect of temporary differences and the amount of State taxes that would be deductible for U.S. Federal tax purposes. It is reasonably possible that there could be a change in the amount of our unrecognized tax benefits within the next 12 months due to settlements or statutory expirations in various State and local tax jurisdictions.

It is our policy to recognize accrued interest related to uncertain tax positions in interest expense in the consolidated statement of income (loss) and to recognize penalties, if any, related to uncertain tax positions as a component of other expenses in the consolidated statement of income (loss). Accruals for the payment of interest associated with uncertain tax positions totaled \$4 million, \$3 million and \$4 million at December 31, 2017, 2016 and 2015, respectively. Our accrual for the payment of interest associated with uncertain tax positions increased by \$1 million during 2017 and decreased by \$1 million during 2016.

Deferred tax assets and liabilities are recognized for the future tax consequences related to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, for State net operating losses and for State tax credits. Our net deferred tax assets, including deferred tax liabilities, totaled \$1,540 million and \$1,803 million at December 31, 2017 and 2016, respectively.

See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for further discussion regarding our accounting policy relating to the evaluation, recognition and measurement of both the HNAH Group's and HSBC USA's deferred tax assets and liabilities. In evaluating the need for a valuation allowance at December 31, 2017, it has been determined that HNAH Group projections of future taxable income from U.S. operations based on management approved business plans provide sufficient and appropriate support for the recognition of our net deferred tax assets. At December 31, 2017, we have valuation allowances against certain State capital loss carryforwards for which the aforementioned projections of future taxable income do not provide the appropriate support.

The Internal Revenue Service concluded its examination of our 2012 and 2013 Federal income tax returns in the fourth quarter of 2016. Federal income tax returns for 2014 and forward remain open to examination.

We remain subject to State and local income tax examinations for years 2008 and forward. We are currently under audit by various State and local tax jurisdictions. Uncertain tax positions are reviewed on an ongoing basis and are adjusted in light of changing facts and circumstances, including progress of tax audits, developments in case law and the closing of statute of limitations. Such adjustments are reflected in the tax provision.

At December 31, 2017, for State tax purposes, we had apportioned and pre-tax effected net operating loss carryforwards of \$21 million which expire as follows: \$1 million in 2023 - 2027 and \$20 million in 2028 - 2032.

17. Preferred Stock

HSBC USA preferred stock outstanding was \$1,265 million at both December 31, 2017 and 2016 and included 1,265 shares of 6.0 percent Non-Cumulative Series I Preferred Stock that were issued to HSBC North America in 2016 in exchange for cash consideration of \$1,265 million. Dividends on the 6.0 percent Non-Cumulative Series I Preferred Stock are non-cumulative and will be payable when and if declared by our Board of Directors semi-annually on the first business day of June and December of each year at the stated rate of 6.0 percent. The Series I Preferred Stock may be redeemed at our option, in whole or in part, on or after May 31, 2021 or at any time after we receive notice from the Federal Reserve Board ("FRB") that the Series I Preferred Stock may no longer be included in the calculation of regulatory capital as a result of any subsequent changes in applicable laws, rules or regulations, at a redemption price equal to \$1,000,000 per share, plus an amount equal to any declared and unpaid dividends, but only after receipt of written approval from the FRB.

In 2016, HSBC USA redeemed all of its remaining externally issued preferred stock, including its Floating Rate Non-Cumulative Series F Preferred Stock, Floating Rate Non-Cumulative Series G Preferred Stock and 6.5 percent Non-Cumulative Series H Preferred Stock, at their stated values of \$25 per share, \$1,000 per share and \$1,000 per share, respectively, resulting in a total cash payment of \$1,265 million.

18. Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss includes certain items that are reported directly within a separate component of equity. The following table presents changes in accumulated other comprehensive loss balances:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Unrealized gains (losses) on investment securities:			
Balance at beginning of period	\$ (461)	\$ (234)	\$ 158
Other comprehensive income (loss) for period:			
Net unrealized gains (losses) arising during period, net of tax of \$136 million, \$(125) million and \$(239) million, respectively	227	(209)	(387)
Reclassification adjustment for gains realized in net income (loss), net of tax of \$(19) million, \$(26) million and \$(18) million, respectively ⁽¹⁾	(33)	(44)	(30)
Amortization of net unrealized losses on securities transferred from available-for-sale to held-to-maturity realized in net income (loss), net of tax of \$10 million, \$16 million and \$15 million, respectively ⁽²⁾	17	26	25
Total other comprehensive income (loss) for period	211	(227)	(392)
Balance at end of period	(250)	(461)	(234)
Unrealized gains (losses) on fair value option liabilities attributable to our own credit spread:			
Balance at beginning of period, as previously reported	—	—	—
Cumulative effect adjustment to initially apply new accounting guidance for financial liabilities measured under the fair value option, net of tax of \$103 million ⁽³⁾	174	—	—
Balance at beginning of period, adjusted	174	—	—
Other comprehensive income (loss) for period:			
Net unrealized losses arising during the period, net of tax of \$(115) million	(193)	—	—
Total other comprehensive loss for period	(193)	—	—
Balance at end of period	(19)	—	—
Unrealized gains (losses) on derivatives designated as cash flow hedges:			
Balance at beginning of period	(157)	(170)	(156)
Other comprehensive income (loss) for period:			
Net unrealized gains (losses) arising during period, net of tax of \$(11) million, \$3 million and \$(2) million, respectively	(18)	2	(21)
Reclassification adjustment for losses realized in net income (loss), net of tax of \$6 million, \$6 million and \$4 million, respectively ⁽⁴⁾	11	11	7
Total other comprehensive income (loss) for period	(7)	13	(14)
Balance at end of period	(164)	(157)	(170)
Pension and postretirement benefit liability:			
Balance at beginning of period	—	(3)	(3)
Other comprehensive income (loss) for period:			
Change in unfunded pension and postretirement liability, net of tax of less than \$1 million, \$2 million and \$0 million, respectively	2	3	—
Total other comprehensive income for period	2	3	—
Balance at end of period	2	—	(3)
Total accumulated other comprehensive loss at end of period	\$ (431)	\$ (618)	\$ (407)

⁽¹⁾ Amount reclassified to net income (loss) is included in other securities gains, net in our consolidated statement of income (loss).

⁽²⁾ Amount amortized to net income (loss) is included in interest income in our consolidated statement of income (loss). During 2014, we transferred securities from available-for-sale to held-to-maturity. At the date of transfer, AOCI included net pretax unrealized losses of \$234 million related to the transferred securities which will be amortized over the remaining contractual life of each security as an adjustment of yield in a manner consistent with the amortization of any premium or discount.

⁽³⁾ See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for additional discussion.

⁽⁴⁾ Amount reclassified to net income (loss) is included in interest income (expense) in our consolidated statement of income (loss).

19. Share-Based Plans

Employee Stock Purchase Plans The HSBC International Employee Share Purchase Plan (the "HSBC ShareMatch Plan") allowed eligible employees to purchase HSBC shares with a maximum monthly contribution of \$325 in 2017, \$325 in 2016 and \$400 in 2015. For every three shares purchased under the HSBC ShareMatch Plan (the "Investment Share") the employee is awarded an additional share at no charge (the "Matching Share"). The Investment Share is fully vested at the time of purchase while the Matching Share vests at the end of three years contingent upon continuing employment with the HSBC Group.

Compensation expense related to Employee Stock Purchase Plans was less than \$1 million in 2017, 2016 and 2015, respectively.

Restricted Share Plans Under the HSBC Group Share Plan, share-based awards have been granted to key employees typically in the form of restricted share units. These shares have been granted subject to either time-based vesting or performance based-vesting, typically over three to five years. Annual awards to employees are generally subject to three-year time-based graded vesting. We also issue a small number of off-cycle grants each year, primarily for reasons related to recruitment of new employees. Compensation expense for restricted share awards totaled \$31 million, \$38 million and \$42 million in 2017, 2016 and 2015, respectively. At December 31, 2017, future compensation cost related to grants which have not yet fully vested is approximately \$40 million. This amount is expected to be recognized over a weighted-average period of one year.

Prior to 2017, HSBC shares were also granted to certain key employees on a quarterly basis under a fixed pay allowance ("FPA") program which was discontinued in 2016. The FPA shares were not linked to the achievement of any performance conditions and they vested immediately. However, these shares are subject to various retention periods of up to five years based on the role of the employee. Compensation expense related to FPA shares totaled less than \$1 million and \$7 million in 2016 and 2015, respectively.

20. Pension and Other Postretirement Benefits

Defined Benefit Pension Plan Certain employees are eligible to participate in the HSBC North America qualified defined benefit pension plan (either the "HSBC North America Pension Plan" or the "Plan") which facilitates a unified employee benefit policy and unified employee benefit plan administration for HSBC companies operating in the United States. Future benefit accruals for legacy participants under the final average pay formula and future contributions under the cash balance formula were previously discontinued and, as a result, the Plan is frozen.

The components of pension expense for the defined benefit pension plan recorded in our consolidated statement of income (loss) and shown in the table below reflect the portion of pension expense of the combined HSBC North America Pension Plan which has been allocated to us. We have not been allocated any portion of the Plan's net pension liability.

Year Ended December 31,	2017	2016	2015
	(in millions)		
Interest cost on projected benefit obligation	\$ 71	\$ 70	\$ 70
Expected return on plan assets	(88)	(86)	(90)
Amortization of net actuarial loss	33	42	38
Administrative costs	4	4	5
Loss on partial settlement of Plan pension obligation	35	—	—
Pension expense	<u>\$ 55</u>	<u>\$ 30</u>	<u>\$ 23</u>

During the fourth quarter of 2017, HSBC North America completed a limited-time offer to former vested Plan employees who had not yet commenced receiving payment of their annuity benefit to elect a) an immediate lump sum payment; b) an immediate annuity (reduced for early payment under the terms of the Plan); or c) to retain their existing benefit in an annuity to be paid under the original terms of the Plan. Payments to former employees who elected to participate in an early distribution were made by HSBC North America in December. As a result, our allocated pension expense during the fourth quarter of 2017 included a settlement loss of approximately \$35 million due primarily to an acceleration of a portion of the Plan's actuarial losses which had been reflected in HSBC North America's AOCI.

During the years ended December 31, 2017 and 2016, pension expense was impacted by immaterial out of period adjustments which increased pension expense by \$4 million and \$6 million, respectively, in connection with pension valuation changes related to prior periods.

The assumptions used in determining pension expense of the HSBC North America Pension Plan are as follows:

	2017	2016	2015
Discount rate.....	3.60%	4.25%	3.95%
Expected long-term rate of return on Plan assets	5.50	5.50	6.00

Defined Contribution and Other Supplemental Retirement Plans We maintain a 401(k) plan covering substantially all employees. Employer contributions to the plan are based on employee contributions. Total expense recognized for this plan was approximately \$34 million, \$33 million and \$33 million in 2017, 2016 and 2015, respectively.

Certain employees are participants in various defined contribution and other non-qualified supplemental retirement plans all of which have been frozen. Total expense recognized for these plans was approximately \$2 million, \$3 million and \$3 million in 2017, 2016 and 2015, respectively.

Postretirement Plans Other Than Pensions Our employees also participate in plans which provide medical and life insurance benefits to retirees and eligible dependents. These plans cover substantially all employees who meet certain age and vested service requirements. We have instituted dollar limits on payments under the plans to control the cost of future medical benefits. The following table reflects the components of the net periodic postretirement benefit cost:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Interest cost on accumulated benefit obligation.....	\$ 2	\$ 2	2
Amortization of net actuarial gain.....	(1)	—	—
Net periodic postretirement benefit cost	<u>\$ 1</u>	<u>\$ 2</u>	<u>\$ 2</u>

The assumptions used in determining the net periodic postretirement benefit cost for our postretirement benefit plans are as follows:

	2017	2016	2015
Discount rate.....	3.95%	3.95%	3.60%
Salary increase assumption.....	3.00	3.00	3.00

A reconciliation of the beginning and ending balances of the accumulated postretirement benefit obligation is as follows:

	2017	2016
	(in millions)	
Accumulated benefit obligation at beginning of year	\$ 55	\$ 60
Interest cost	2	2
Actuarial losses (gains)	—	(3)
Benefits paid, net.....	(4)	(4)
Accumulated benefit obligation at end of year	<u>\$ 53</u>	<u>\$ 55</u>

Our postretirement benefit plans are funded on a pay-as-you-go basis. We currently estimate that we will pay benefits of approximately \$4 million relating to our postretirement benefit plans in 2018. The funded status of our postretirement benefit plans was a liability of \$53 million at December 31, 2017.

Estimated future benefit payments for our postretirement benefit plans are summarized in the following table:

	(in millions)
2018.....	\$ 4
2019.....	4
2020.....	4
2021.....	4
2022.....	4
2023-2027.....	18

The assumptions used in determining the benefit obligation of our postretirement benefit plans at December 31 are as follows:

	2017	2016	2015
Discount rate	3.45%	3.95%	3.95%
Salary increase assumption	3.00	3.00	3.00

For measurement purposes, 6.6 percent (pre-65) and, as it related to the postretirement benefit plans which were not amended, 8.1 percent (post-65) annual rates of increase in the per capita costs of covered health care benefits were assumed for 2017. These rates are assumed to decrease gradually reaching the ultimate rate of 4.5 percent in 2027, and remain at that level thereafter.

While assumed health care cost trend rates have an effect on the amounts reported for health care plans, a one-percentage point change in assumed health care cost trend rates would not have a material impact on service or interest costs or the postretirement benefit obligation.

21. Related Party Transactions

In the normal course of business, we conduct transactions with HSBC and its subsidiaries. HSBC policy requires that these transactions occur at prevailing market rates and terms and include funding arrangements, derivative transactions, servicing arrangements, information technology support, centralized support services, banking and other miscellaneous services and where applicable, these transactions are compliant with United States banking regulations. All extensions of credit by (and certain credit exposures of) HSBC Bank USA to other HSBC affiliates (other than FDIC insured banks) are legally required to be secured by eligible collateral. The following tables and discussions below present the more significant related party balances and the income (expense) generated by related party transactions:

At December 31,	2017	2016
	(in millions)	
Assets:		
Cash and due from banks	\$ 191	\$ 364
Interest bearing deposits with banks.....	473	980
Securities purchased under agreements to resell ⁽¹⁾	1,115	949
Trading assets	63	74
Loans	6,750	3,274
Other ⁽²⁾	134	291
Total assets	<u>\$ 8,726</u>	<u>\$ 5,932</u>
Liabilities:		
Deposits	\$ 10,521	\$ 23,999
Trading liabilities.....	737	510
Short-term borrowings.....	1,595	2,148
Long-term debt	4,841	4,834
Other ⁽²⁾	387	247
Total liabilities.....	<u>\$ 18,081</u>	<u>\$ 31,738</u>

⁽¹⁾ Reflects purchases of securities which other HSBC affiliates have agreed to repurchase.

⁽²⁾ Other assets and other liabilities primarily consist of derivative balances associated with hedging activities and other miscellaneous account receivables and payables.

Year Ended December 31,	2017	2016	2015
	(in millions)		
Income/(Expense):			
Interest income.....	\$ 65	\$ 122	\$ 117
Interest expense.....	(267)	(166)	(63)
Net interest income (expense).....	(202)	(44)	54
Trading revenue (expense).....	(615)	(1,297)	402
Servicing and other fees from HSBC affiliates:			
HSBC Bank plc.....	154	156	145
HSBC Finance Corporation.....	44	40	53
HSBC Markets (USA) Inc. ("HMUS").....	71	34	25
Other HSBC affiliates.....	79	59	53
Total servicing and other fees from HSBC affiliates.....	348	289	276
Gain (loss) on instruments designated at fair value and related derivatives.....	1,108	467	(116)
Support services from HSBC affiliates:			
HMUS.....	(121)	(214)	(283)
HSBC Technology & Services (USA) ("HTSU").....	(1,165)	(1,027)	(1,030)
Other HSBC affiliates.....	(263)	(254)	(243)
Total support services from HSBC affiliates.....	(1,549)	(1,495)	(1,556)
Occupancy expense, net.....	54	60	58
Stock based compensation expense ⁽¹⁾	(31)	(39)	(49)

⁽¹⁾ Employees may participate in one or more stock compensation plans sponsored by HSBC. These expenses are included in salaries and employee benefits in our consolidated statement of income (loss). Certain employees are also eligible to participate in a defined benefit pension plan and other postretirement plans sponsored by HSBC North America which are discussed in Note 20, "Pension and Other Postretirement Benefits."

In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income for consistency in presentation across similar transactions. Separately, we also concluded that rental revenue we receive from our affiliates for rent on certain office space would be better presented as a reduction to occupancy expense as opposed to a reduction to affiliates expense. As a result, we have reclassified prior year amounts in order to conform to the current year presentation. Reported net income for all periods was unaffected. The following table reflects the impact of this reclassification on our consolidated statement of income (loss) for the periods below:

	Year Ended December 31, 2016		Year Ended December 31, 2015	
	As Previously Reported	After Reclassification	As Previously Reported	After Reclassification
	(in millions)		(in millions)	
Income/(Expense):				
Servicing and other fees from HSBC affiliates:				
HSBC Bank plc	\$ 95	\$ 156	\$ 82	\$ 145
HSBC Finance Corporation.....	40	40	53	53
HMUS.....	23	34	25	25
Other HSBC affiliates.....	59	59	53	53
Total servicing and other fees from HSBC affiliates	217	289	213	276
Total other revenues.....	1,332	1,404	1,672	1,735
Support services from HSBC affiliates:				
HMUS.....	(176)	(214)	(256)	(283)
HTSU.....	(994)	(1,027)	(999)	(1,030)
Other HSBC affiliates.....	(193)	(254)	(180)	(243)
Total support services from HSBC affiliates	(1,363)	(1,495)	(1,435)	(1,556)
Occupancy expense, net.....	(231)	(171)	(230)	(172)
Total operating expenses.....	(3,226)	(3,298)	(3,221)	(3,284)

Funding Arrangements with HSBC Affiliates:

We use HSBC affiliates to fund a portion of our borrowing and liquidity needs. At both December 31, 2017 and 2016, long-term debt with affiliates reflected \$4.9 billion of floating rate borrowings from HSBC North America. The outstanding balances include \$2.0 billion of senior debt which matures in August 2021, \$0.9 billion of subordinated debt which matures in May 2025 and \$2.0 billion of senior debt which matures in August 2026.

We have a \$150 million uncommitted line of credit with HSBC North America although there was no outstanding balance under this credit facility at either December 31, 2017 or 2016.

We have also incurred short-term borrowings with certain affiliates, largely securities sold under repurchase agreements with HSBC Securities (USA) Inc. ("HSI"). In addition, certain affiliates have also placed deposits with us.

Lending and Derivative Related Arrangements Extended to HSBC Affiliates:

At December 31, 2017 and 2016, we have the following loan balances outstanding with HSBC affiliates:

At December 31,	2017	2016
	(in millions)	
HSBC Finance Corporation	\$ —	\$ 2,501
HMUS and subsidiaries.....	6,690	563
HSBC Mexico S.A.	—	195
Other short-term affiliate lending.....	60	15
Total loans	<u>\$ 6,750</u>	<u>\$ 3,274</u>

HSBC Finance Corporation We had extended a \$5.0 billion, 364-day uncommitted unsecured revolving credit agreement to HSBC Finance, which expired during the fourth quarter of 2017 and was not renewed. During the first quarter of 2017, HSBC Finance

prepaid the \$2.5 billion that was outstanding under this credit agreement, including loan prepayment fees of \$28 million, which are included in servicing and other fees from HSBC affiliates.

HMUS and subsidiaries We have extended loans and lines, some of them uncommitted, to HMUS and its subsidiaries in the amount of \$7.9 billion and \$5.9 billion at December 31, 2017 and 2016, respectively, of which \$6.7 billion and \$0.6 billion, respectively, was outstanding. Included in the outstanding borrowings at December 31, 2017 was a \$5.0 billion overnight loan to HSI that was repaid in early January 2018 as the wire process from HSI to settle daily activity failed. The maturities of the remaining outstanding balances range from overnight to three months. Each borrowing is re-evaluated prior to its maturity date and either extended or allowed to mature.

HSBC Mexico S.A. We have extended an uncommitted line of credit to HSBC Mexico S.A. in the amount of \$1.2 billion at both December 31, 2017 and 2016, of which \$195 million was outstanding at December 31, 2016. During the second quarter of 2017, this amount was repaid in full.

We have extended lines of credit to various other HSBC affiliates totaling \$1.9 billion which did not have any outstanding balances at either December 31, 2017 and 2016.

Other short-term affiliate lending In addition to loans and lines extended to affiliates discussed above, from time to time we may extend loans to affiliates which are generally short term in nature. At December 31, 2017 and 2016, there were \$60 million and \$15 million, respectively, of these loans outstanding.

As part of a global HSBC strategy to offset interest rate or other market risks associated with certain securities, debt issues and derivative contracts with unaffiliated third parties, we routinely enter into derivative transactions with HSBC Finance, HSBC Bank plc and other HSBC affiliates. The notional value of derivative contracts related to these transactions was approximately \$768.4 billion and \$878.5 billion at December 31, 2017 and 2016, respectively. The net credit exposure (defined as the net fair value of derivative assets and liabilities, including any collateral received) related to the contracts was approximately \$64 million and \$29 million at December 31, 2017 and 2016, respectively. Our Global Banking and Markets business accounts for these transactions on a mark to market basis, with the change in value of contracts with HSBC affiliates substantially offset by the change in value of related contracts entered into with unaffiliated third parties.

Services Provided Between HSBC Affiliates:

Under multiple service level agreements, we provide services to and receive services from various HSBC affiliates. The following summarizes these activities:

- Servicing activities for residential mortgage loans across North America were performed both by us and HSBC Finance. As a result, we received servicing fees from HSBC Finance for services performed on their behalf and paid servicing fees to HSBC Finance for services performed on our behalf. The fees we received from HSBC Finance are reported in servicing and other fees from HSBC affiliates. During 2017, HSBC Finance completed the execution of their receivable sales program and, as a result, we are no longer servicing residential mortgage loans for HSBC Finance. Fees we paid to HSBC Finance are reported in support services from HSBC affiliates. This included fees paid for the servicing of residential mortgage loans (which had a carrying amount of \$558 million at December 31, 2016) that we previously purchased from HSBC Finance. During 2017, we sold these residential mortgage loans to third parties. See Note 7, "Loans Held for Sale," for additional information.
- HSBC North America's technology and certain centralized support services including human resources, corporate affairs, risk management, legal, compliance, tax, finance and other shared services that are centralized within HTSU. HTSU also provides certain item processing and statement processing activities to us. The fees we pay HTSU for the centralized support services and processing activities are included in support services from HSBC affiliates. We also receive fees from HTSU for providing certain administrative services to them. The fees we receive from HTSU are included in servicing and other fees from HSBC affiliates. In certain cases, for facilities used by HTSU, we may guarantee their performance under the lease agreements.
- We use HSBC Global Services Limited, an HSBC affiliate located outside of the United States, to provide various support services to our operations including among other areas, customer service, systems, collection and accounting functions. The expenses related to these services are included in support services from HSBC affiliates.
- We utilize HSI, a subsidiary of HMUS, for broker dealer, debt underwriting, customer referrals, loan syndication and other treasury and traded markets related services, pursuant to service level agreements. Debt underwriting fees charged by HSI are deferred as a reduction of long-term debt and amortized to interest expense over the life of the related debt. Fees charged by HSI for the other services are included in support services from HSBC affiliates.
- We receive fees from other subsidiaries of HSBC, including HSBC Bank plc and HSI, for providing them with banking and other miscellaneous services as well as support for certain administrative and global business activities. These fees are reported in servicing and other fees from HSBC affiliates.

Other Transactions with HSBC Affiliates

We received revenue from our affiliates for rent on certain office space, which has been recorded as a component of occupancy expense, net. Rental revenue from our affiliates totaled \$54 million, \$60 million and \$58 million during the years ended December 31, 2017, 2016 and 2015, respectively.

At both December 31, 2017 and 2016, we had \$1,265 million of non-cumulative preferred stock issued and outstanding to HSBC North America. See Note 17, "Preferred Stock," for additional details.

22. Business Segments

We have five distinct business segments that we utilize for management reporting and analysis purposes, which are aligned with HSBC's global business strategy: Retail Banking and Wealth Management ("RBWM"), Commercial Banking ("CMB"), Global Banking and Markets ("GB&M") and Private Banking ("PB") and a Corporate Center ("CC") which was created in 2017 and is discussed further below.

We previously announced that we made the decision to implement changes to our internal management reporting for certain activities and functions and report them within a new CC segment beginning in January 2017. These activities and functions include Balance Sheet Management and our legacy structured credit products which historically were both reported in GB&M, as well as a portfolio of residential mortgage loans previously purchased from HSBC Finance, including certain loan servicing activities performed on behalf of HSBC Finance, which were historically reported in RBWM. In addition, we have reviewed central costs historically reported in the Other segment and have reallocated these costs to the global businesses where appropriate. Remaining residual costs are reported in the CC along with all other remaining items historically reported in the Other segment. As a result, beginning in the first quarter of 2017, we aligned our segment reporting with the changes made to our internal management reporting and are reporting these changes as part of the newly created CC segment for the periods presented.

The following table summarizes the impact on reported segment profit before tax, total assets and total deposits as of and for the years ended December 31, 2016 and 2015:

	2016	2015
	(in millions)	
Increase (decrease) in segment profit before tax during the year ended December 31:		
RBWM.....	\$ 7	\$ (4)
CMB.....	13	8
GB&M.....	(192)	(144)
PB.....	5	4
CC (as compared with previously reported Other).....	167	136
Increase (decrease) in segment total assets at December 31:		
RBWM.....	\$ (585)	\$ (696)
CMB.....	—	—
GB&M.....	(107,780)	(78,783)
PB.....	—	—
CC (as compared with previously reported Other).....	108,365	79,479
Increase (decrease) in segment total deposits at December 31:		
RBWM.....	\$ —	\$ —
CMB.....	—	—
GB&M.....	(6,989)	(5,011)
PB.....	—	—
CC (as compared with previously reported Other).....	6,989	5,011

During 2017, we adopted new accounting guidance under the Group Reporting Basis which, for financial liabilities measured under the fair value option, requires recognizing the change in fair value attributable to our own credit spread in other comprehensive income (loss) consistent with the new accounting guidance also adopted under U.S. GAAP. The adoption of this guidance did not require periods prior to 2017 to be restated. During 2016 and 2015, total other revenues under the Group Reporting Basis included

a loss of \$3 million and a gain of \$194 million, respectively, from the change in fair value of our own debt attributable to our own credit spread for which we have elected fair value option accounting.

There have been no additional changes in the basis of our segmentation or measurement of segment profit as compared with the presentation in our 2016 Form 10-K.

Net interest income of each segment represents the difference between actual interest earned on assets and interest incurred on liabilities of the segment, adjusted for a funding charge or credit. Segments are charged a cost to fund assets (e.g. customer loans) and receive a funding credit for funds provided (e.g. customer deposits) based on equivalent market rates. The objective of these charges/credits is to transfer interest rate risk from the segments to one centralized unit in Balance Sheet Management and more appropriately reflect the profitability of the segments.

Certain other revenue and operating expense amounts are also apportioned among the business segments based upon the benefits derived from this activity or the relationship of this activity to other segment activity. These inter-segment transactions are accounted for as if they were with third parties.

Our segment results are presented in accordance with HSBC Group accounting and reporting policies, which apply IFRSs as issued by the IASB and endorsed by the EU, and, as a result, our segment results are prepared and presented using financial information prepared on the Group Reporting Basis as operating results are monitored and reviewed, trends are evaluated and decisions about allocating resources, such as employees, are primarily made on this basis. We continue, however, to monitor capital adequacy and report to regulatory agencies on a U.S. GAAP basis.

A summary of differences between U.S. GAAP and the Group Reporting Basis as they impact our results is presented below, including a new difference related to structured notes and deposits:

Net Interest Income

Loan impairment - As discussed more fully below under "Loan Impairment Charges (Provision for Credit Losses)," the Group Reporting Basis requires a discounted cash flow methodology for estimating impairment on pools of homogeneous customer loans. The amount of impairment relating to the discounting of future cash flows unwinds with the passage of time and is recognized in interest income. Under U.S. GAAP, a discounted cash flow methodology on pools of homogeneous loans is applied only to the extent loans are considered TDR Loans.

Loan origination - Certain loan fees and incremental direct loan costs, which would not have been incurred but for the origination of the loans, are deferred and amortized to earnings over the life of the loan under the Group Reporting Basis. Certain loan fees and direct incremental loan origination costs, including internal costs directly attributable to the origination of loans in addition to direct salaries, are deferred and amortized to earnings over the life of the loan under U.S. GAAP. Loan origination cost deferrals are more stringent under the Group Reporting Basis and generally result in lower costs being deferred than permitted under U.S. GAAP. In addition, all deferred loan origination fees, costs and loan premiums must be recognized based on the expected life of the loan under the Group Reporting Basis as part of the effective interest calculation while under U.S. GAAP they may be recognized on either a contractual or expected life basis.

Other Operating Income (Total Other Revenues)

Loans held for sale - For loans transferred to held for sale subsequent to origination, the Group Reporting Basis requires these loans to be reported separately on the balance sheet when certain criteria are met which are generally more stringent than those under U.S. GAAP, but does not change the recognition and measurement criteria. Accordingly, for the Group Reporting Basis, such loans continue to be accounted for and impairment continues to be measured in accordance with IAS 39, "Financial Instruments: Recognition and Measurement" ("IAS 39"), with any gain or loss recorded at the time of sale. U.S. GAAP requires loans that meet the held for sale classification requirements be transferred to a held for sale category and subsequently be measured at the lower of amortized cost or fair value. Under U.S. GAAP, the component of the lower of amortized cost or fair value adjustment upon transfer to held for sale related to credit risk is recorded in the statement of income (loss) as provision for credit losses while the component related to interest rates and liquidity factors is reported in the statement of income (loss) in other revenues. Changes in the lower of amortized cost or fair value after the initial transfer to held for sale are reported in the statement of income (loss) in other revenues.

For loans originated with the intent to sell, the Group Reporting Basis requires these loans to be classified as trading assets and recorded at their fair value, with income recorded in trading revenue. Under U.S. GAAP, such loans are classified as loans held for sale and, with the exception of certain loans accounted for under FVO accounting, are recorded at the lower of amortized cost or fair value, with changes in the lower of amortized cost or fair value adjustment recorded in other revenues.

Structured notes and deposits - Structured notes and deposits are classified as trading liabilities under the Group Reporting Basis and are carried at fair value with changes in fair value recorded in earnings. We elected to apply fair value option accounting to these structured notes and deposits under U.S. GAAP. Beginning January 1, 2017, the adoption of new accounting guidance under

U.S. GAAP requires the fair value movement on fair value option liabilities, including structured notes and deposits, attributable to our own credit spread to be recorded in other comprehensive income (loss).

Low income housing tax credit investments - Under the Group Reporting Basis, given the inter-relationship between the tax benefits obtained from our investment in low income housing tax credit investments and the amortization of our investment balance, such amounts are presented net in other operating income. Under U.S. GAAP, such amounts are presented net in income tax expense.

Servicing assets - Under the Group Reporting Basis, servicing assets are initially recorded on the balance sheet at cost and amortized over the projected life of the assets. Servicing assets are periodically tested for impairment with impairment adjustments charged against current earnings. Under U.S. GAAP, servicing assets are initially recorded on the balance sheet at fair value. All subsequent adjustments to fair value are reflected in other revenues. During the fourth quarter of 2016, we sold our remaining MSRs portfolio.

Renewable energy tax credit investments - Renewable energy tax credit investments are reported as available-for-sale securities and measured at fair value under the Group Reporting Basis, with changes in fair value recognized in equity. Under U.S. GAAP, these investments are accounted for under the equity method, with the amortization of our investment balance presented in other revenues and the tax benefits obtained presented in income tax expense.

Reclassification of fair value measured financial assets during 2008 - Certain securities were reclassified from trading assets to loans and receivables under the Group Reporting Basis in 2008 pursuant to an amendment to IAS 39, and are no longer marked to market under the Group Reporting Basis. These securities continue to be classified as trading assets and are carried at fair value under U.S. GAAP.

Derivatives - Under the Group Reporting Basis, the up-front recognition of the difference between transaction price and fair value in the consolidated statement of income (loss) is permissible only if the inputs used in calculating fair value are based on observable inputs. If the inputs are not observable, profit and loss is deferred and is recognized (1) over the period of contract, (2) when the data becomes observable, or (3) when the contract is settled. There is no similar observability requirement under U.S. GAAP.

REO expense - Other revenues under the Group Reporting Basis include losses on sale and the lower of amortized cost or fair value of the collateral less cost to sell adjustments on REO properties which are classified as other expense under U.S. GAAP.

Loan Impairment Charges (Provision for Credit Losses)

Loan impairment - The Group Reporting Basis requires a discounted cash flow methodology for estimating impairment on pools of homogeneous customer loans which requires the discounting of cash flows including recovery estimates at the original effective interest rate of the pool of customer loans. The amount of impairment relating to the discounting of future cash flows unwinds with the passage of time and is recognized in interest income. Under U.S. GAAP, a discounted cash flow methodology on pools of homogeneous loans is applied only to the extent loans are considered TDR Loans. Also under the Group Reporting Basis, if the fair value on secured loans previously written down increases because collateral values have improved and the improvement can be related objectively to an event occurring after recognition of the write-down, such write-down is reversed, which is not permitted under U.S. GAAP. Additionally under the Group Reporting Basis, future recoveries on charged-off loans or loans written down to fair value less cost to obtain title and sell are accrued for on a discounted basis and a recovery asset is recorded. Subsequent recoveries are recorded to earnings under U.S. GAAP, but are adjusted against the recovery asset under the Group Reporting Basis. Under the Group Reporting Basis, interest on impaired loans is recorded at the effective interest rate on the customer loan balance net of impairment allowances.

For commercial loans collectively evaluated for impairment, we utilize different loss emergence periods for calculating the allowance for credit losses under U.S. GAAP and the Group Reporting Basis. On an annual basis, we conduct reviews of our loss emergence period estimate used for U.S. GAAP reporting purposes based upon regulatory guidance and bank industry practice in the United States and, separately, the loss emergence period estimate under the Group Reporting Basis. These reviews have resulted in a longer emergence period under U.S. GAAP than under the Group Reporting Basis and, therefore, the allowance for credit losses for commercial loans collectively evaluated for impairment is higher under U.S. GAAP than under the Group Reporting Basis. This difference in loss emergence period is primarily attributable to the different approaches used for U.S. GAAP and the Group Reporting Basis. We have determined that, based on the judgment involved and the practice which has evolved in different jurisdictions, both approaches for estimating loss emergence periods result in an appropriate allowance for credit losses under the reporting basis to which each is being applied.

Loans held for sale - As discussed more fully above under "Other Operating Income (Total Other Revenues)," under U.S. GAAP, the credit risk component of the lower of amortized cost of fair value adjustment related to the transfer of loans to held for sale is reported in the consolidated statement of income (loss) as provision for credit losses. There is no similar requirement under the Group Reporting Basis.

Operating Expenses

Property - The sale and leaseback of our 452 Fifth Avenue property, including the 1 W. 39th Street building, in 2010 resulted in the recognition of a gain under the Group Reporting Basis while under U.S. GAAP such gain is deferred and was being recognized

over the lease term (which was ten years) due to our continuing involvement. During 2017, we extended the lease for an additional five years as well as the amortization of the deferred gain to reflect the new lease term.

Pension and other postretirement benefit costs - Pension expense under U.S. GAAP is generally higher than under the Group Reporting Basis as a result of the amortization of the amount by which actuarial losses exceeds the higher of 10 percent of the projected benefit obligation or fair value of plan assets (the corridor). In addition, under the Group Reporting Basis, pension expense is determined using a finance cost component comprising the net interest on the net defined benefit liability which does not reflect the benefit from the expectation of higher returns on plan assets. In 2017, pension expense was higher under U.S. GAAP due primarily to the impact of HSBC North America completing a limited-time lump sum offer to former vested HSBC North America Pension Plan employees during the fourth quarter of 2017. Under the Group Reporting Basis, completion of the offer resulted in a benefit from reducing HSBC North America's net under-funded status while under U.S. GAAP this benefit was more than offset by expense from an acceleration of a portion of the Plan's actuarial losses which had been reflected in HSBC North America's accumulated other comprehensive income. Under the Group Reporting Basis, these actuarial losses are recorded directly to retained earnings.

Loan origination - As discussed more fully above under "Net interest income," loan origination cost deferrals are more stringent under the Group Reporting Basis and generally result in lower costs being deferred than permitted under U.S. GAAP.

Litigation expense - Under U.S. GAAP, litigation accruals are recorded when it is probable a liability has been incurred and the amount is reasonably estimable. Under the Group Reporting Basis, a present obligation and a probable outflow of economic benefits must exist for an accrual to be recorded. This creates differences in the timing of accrual recognition between the Group Reporting Basis and U.S. GAAP. Additionally, under the Group Reporting Basis, legal costs to defend litigation are accrued at the time that a liability is recorded for the related litigation while under U.S. GAAP these costs are recognized as services are performed.

Share-based payments - Under the Group Reporting Basis, the recognition of compensation expense related to share-based bonuses begins on January 1 of the current year for awards expected to be granted in the first quarter of the following year. Under U.S. GAAP, the recognition of compensation expense related to share-based bonuses does not begin until the date the awards are granted.

Assets

Derivatives - Under U.S. GAAP, derivative receivables and payables with the same counterparty may be reported on a net basis in the balance sheet when there is a legally enforceable netting agreement in place. In addition, under U.S. GAAP, fair value amounts recognized for the obligation to return cash collateral received or the right to reclaim cash collateral paid are offset against the fair value of derivative instruments. Under the Group Reporting Basis, these agreements do not necessarily meet the requirements for offset, and therefore such derivative receivables and payables are presented gross on the balance sheet.

Unquoted equity securities - Under the Group Reporting Basis, equity securities which are not quoted on a recognized exchange, but for which fair value can be reliably measured, are required to be measured at fair value. Securities measured at fair value under the Group Reporting Basis are classified as either available-for-sale securities, with changes in fair value recognized in equity, or as trading securities, with changes in fair value recognized in income. Under U.S. GAAP, equity securities that are not quoted on a recognized exchange are not considered to have a readily determinable fair value and are required to be measured at cost, less any provisions for known impairment, and classified in other assets.

Loans - As discussed more fully above under "Other Operating Income (Total Other Revenues)," on a Group Reporting Basis, loans designated as held for sale at the time of origination and accrued interest are classified as trading assets. However, the accounting requirements governing when loans previously held for investment are transferred to a held for sale category are more stringent under the Group Reporting Basis than under U.S. GAAP which results in loans generally being reported as held for sale later than under U.S. GAAP.

Precious metal loans - Under U.S. GAAP, precious metals leased or loaned to customers are reclassified from trading precious metals into loans and are carried at amortized cost, while under the Group Reporting Basis, precious metals leased or loaned to customers continue to be part of the precious metal inventory recorded in other assets and are carried at fair value.

Loan impairment - As discussed more fully above under "Loan Impairment Charges (Provision for Credit Losses)," for commercial loans collectively evaluated for impairment, we utilize different loss emergence periods for U.S. GAAP and the Group Reporting Basis which has resulted in a higher allowance for credit losses under U.S. GAAP than under the Group Reporting Basis.

Goodwill - The Group Reporting Basis and U.S. GAAP require goodwill to be tested for impairment at least annually, or more frequently if circumstances indicate that goodwill may be impaired. Under the Group Reporting Basis, goodwill was amortized until 2005, however goodwill was amortized under U.S. GAAP until 2002, which resulted in a lower carrying amount of goodwill under the Group Reporting Basis.

The following table summarizes the results for each segment on a Group Reporting Basis, as well as provides a reconciliation of total results under the Group Reporting Basis to U.S. GAAP consolidated totals:

	Group Reporting Basis Consolidated Amounts						Total	Group Reporting Basis Adjustments ⁽⁴⁾	Group Reporting Basis Reclassifications ⁽⁵⁾	U.S. GAAP Consolidated Totals
	RBWM	CMB	GB&M	PB	CC	Adjustments/Reconciling Items				
(in millions)										
Year Ended December 31, 2017										
Net interest income ⁽¹⁾	\$ 886	\$ 739	\$ 585	\$ 217	\$ (40)	\$ —	\$ 2,387	\$ (48)	\$ (66)	\$ 2,273
Other operating income ⁽²⁾	526	216	617	94	274	—	1,727	200	75	2,002
Total operating income.....	1,412	955	1,202	311	234	—	4,114	152	9	4,275
Loan impairment charges.....	25	(52)	(94)	2	—	—	(119)	(72)	26	(165)
	1,387	1,007	1,296	309	234	—	4,233	224	(17)	4,440
Operating expenses ⁽²⁾	1,185	558	881	244	465	—	3,333	75	(17)	3,391
Profit (loss) before income tax expense.....	\$ 202	\$ 449	\$ 415	\$ 65	\$ (231)	\$ —	\$ 900	\$ 149	\$ —	\$ 1,049
Balances at end of period:										
Total assets.....	\$ 18,707	\$ 23,644	\$ 72,734	\$ 8,190	\$ 97,038	\$ —	\$ 220,313	\$ (33,078)	\$ —	\$ 187,235
Total loans, net.....	16,685	22,444	19,125	6,405	3,556	—	68,215	(1,397)	5,064	71,882
Goodwill.....	581	358	—	321	—	—	1,260	347	—	1,607
Total deposits.....	34,186	24,239	25,476	8,470	4,923	—	97,294	(3,261)	24,669	118,702
Year Ended December 31, 2016										
Net interest income ⁽¹⁾	\$ 818	\$ 749	\$ 567	\$ 207	\$ 132	\$ (2)	\$ 2,471	\$ (76)	\$ 89	\$ 2,484
Other operating income ⁽²⁾	363	229	785	89	127	2	1,595	(104)	(87)	1,404
Total operating income.....	1,181	978	1,352	296	259	—	4,066	(180)	2	3,888
Loan impairment charges.....	70	50	383	—	(9)	—	494	(78)	(44)	372
	1,111	928	969	296	268	—	3,572	(102)	46	3,516
Operating expenses ⁽²⁾⁽³⁾	1,131	591	986	232	338	—	3,278	(26)	46	3,298
Profit (loss) before income tax expense.....	\$ (20)	\$ 337	\$ (17)	\$ 64	\$ (70)	\$ —	\$ 294	\$ (76)	\$ —	\$ 218
Balances at end of period:										
Total assets.....	\$ 19,618	\$ 25,082	\$ 85,215	\$ 7,714	\$ 108,877	\$ —	\$ 246,506	\$ (45,234)	\$ 29	\$ 201,301
Total loans, net.....	16,889	24,125	21,914	6,024	3,512	—	72,464	(405)	799	72,858
Goodwill.....	581	358	—	325	—	—	1,264	348	—	1,612
Total deposits.....	32,472	22,005	22,260	11,618	6,989	—	95,344	(4,379)	38,283	129,248
Year Ended December 31, 2015										
Net interest income ⁽¹⁾	\$ 787	\$ 747	\$ 409	\$ 205	\$ 181	\$ (12)	\$ 2,317	\$ (78)	\$ 231	\$ 2,470
Other operating income ⁽²⁾	308	243	1,047	99	301	12	2,010	(39)	(236)	1,735
Total operating income.....	1,095	990	1,456	304	482	—	4,327	(117)	(5)	4,205
Loan impairment charges.....	68	140	65	(5)	(4)	—	264	130	(33)	361
	1,027	850	1,391	309	486	—	4,063	(247)	28	3,844
Operating expenses ⁽²⁾⁽³⁾	1,152	609	1,017	245	285	—	3,308	(52)	28	3,284
Profit (loss) before income tax expense.....	\$ (125)	\$ 241	\$ 374	\$ 64	\$ 201	\$ —	\$ 755	\$ (195)	\$ —	\$ 560
Balances at end of period:										
Total assets.....	\$ 19,700	\$ 26,763	\$ 99,360	\$ 8,428	\$ 80,279	\$ —	\$ 234,530	\$ (46,569)	\$ 317	\$ 188,278
Total loans, net.....	16,696	23,538	29,589	6,715	1,676	—	78,214	317	3,474	82,005
Goodwill.....	581	358	—	325	—	—	1,264	348	—	1,612
Total deposits.....	31,814	20,599	22,910	13,811	5,011	—	94,145	(4,097)	28,531	118,579

⁽¹⁾ Net interest income of each segment represents the difference between actual interest earned on assets and interest paid on liabilities of the segment adjusted for a funding charge or credit. Segments are charged a cost to fund assets (e.g. customer loans) and receive a funding credit for funds provided (e.g. customer deposits) based on equivalent market rates. The objective of these charges/credits is to transfer interest rate risk from the segments to one centralized unit in Balance Sheet Management and more appropriately reflect the profitability of the segments.

- (2) Expenses for the segments include fully apportioned corporate overhead expenses.
- (3) In 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. As a result, we have reclassified prior year amounts in order to conform to the current year presentation, which increased both RBWM other operating income and RBWM operating expenses \$11 million during the year ended December 31, 2016 and also increased both GB&M other operating income and GB&M operating expenses \$61 million and \$63 million during the years ended December 31, 2016 and 2015, respectively. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information.
- (4) Represents adjustments associated with differences between U.S. GAAP and the Group Reporting Basis. These adjustments, which are more fully described above, consist of the following:

	Net Interest Income	Other Revenues	Provision for Credit Losses	Operating Expenses	Profit (Loss) before Income Tax Expense	Total Assets
(in millions)						
December 31, 2017						
Derivatives.....	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (32,900)
Goodwill.....	—	(1)	—	—	(1)	347
Litigation.....	—	—	—	8	(8)	—
Loan impairment.....	(43)	—	(72)	—	29	(332)
Loan origination.....	(19)	—	—	(14)	(5)	42
Loans held for sale.....	9	141	—	—	150	21
Low income housing tax credit investments.....	—	(7)	—	—	(7)	—
Pension and other postretirement benefit costs.....	—	—	—	94	(94)	(263)
Property.....	—	—	—	(11)	11	8
Structured notes and deposits.....	—	85	—	—	85	—
Other.....	5	(18)	—	(2)	(11)	(1)
Total adjustments.....	<u>\$ (48)</u>	<u>\$ 200</u>	<u>\$ (72)</u>	<u>\$ 75</u>	<u>\$ 149</u>	<u>\$ (33,078)</u>
December 31, 2016						
Derivatives.....	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (44,911)
Goodwill.....	—	—	—	—	—	348
Litigation.....	—	—	—	(8)	8	(3)
Loan impairment.....	(57)	7	(58)	1	7	(326)
Loan origination.....	(21)	—	—	(19)	(2)	35
Loans held for sale.....	—	(80)	(20)	—	(60)	(31)
Low income housing tax credit investments.....	—	(9)	—	—	(9)	—
Pension and other postretirement benefit costs.....	—	—	—	19	(19)	(191)
Property.....	—	—	—	(19)	19	16
Unquoted equity securities.....	—	—	—	—	—	(163)
Other.....	2	(22)	—	—	(20)	(8)
Total adjustments.....	<u>\$ (76)</u>	<u>\$ (104)</u>	<u>\$ (78)</u>	<u>\$ (26)</u>	<u>\$ (76)</u>	<u>\$ (45,234)</u>
December 31, 2015						
Derivatives.....	\$ —	\$ (3)	\$ —	\$ —	\$ (3)	\$ (46,245)
Goodwill.....	—	—	—	—	—	348
Litigation.....	—	—	—	(2)	2	—
Loan impairment.....	(61)	3	132	1	(191)	(329)
Loan origination.....	(22)	(3)	—	(47)	22	49
Loans held for sale.....	—	(16)	(2)	—	(14)	(4)
Low income housing tax credit investments.....	—	(12)	—	—	(12)	—
Pension and other postretirement benefit costs.....	—	—	—	15	(15)	(177)
Property.....	—	—	—	(19)	19	21
Unquoted equity securities.....	—	—	—	—	—	(228)
Other.....	5	(8)	—	—	(3)	(4)
Total adjustments.....	<u>\$ (78)</u>	<u>\$ (39)</u>	<u>\$ 130</u>	<u>\$ (52)</u>	<u>\$ (195)</u>	<u>\$ (46,569)</u>

- (5) Represents differences in financial statement presentation between U.S. GAAP and the Group Reporting Basis.

23. Retained Earnings and Regulatory Capital Requirements

Bank dividends are one of the sources of funds used for payment of shareholder dividends and other HSBC USA cash needs. Approval is required if the total of all dividends HSBC Bank USA declares in any year exceeds the cumulative net income for that year, combined with the net income for the two preceding years reduced by dividends attributable to those years, or if the dividend resulted in a reduction of permanent capital. Under a separate restriction, payment of dividends is prohibited in amounts greater than undivided profits then on hand, after deducting actual losses and bad debts. Bad debts are debts due and unpaid for a period of six months unless well secured, as defined, and in the process of collection.

HSBC Bank USA is also required to maintain reserve balances either in the form of vault cash or on deposit with the Federal Reserve Bank, based on a percentage of deposits. At December 31, 2017 and 2016, HSBC Bank USA was required to maintain \$2,929 million and \$3,139 million, respectively, of reserve balances with the Federal Reserve Bank.

The following table summarizes the capital amounts and ratios of HSBC USA and HSBC Bank USA, calculated in accordance with banking regulations in effect at December 31, 2017 and 2016:

	December 31, 2017			December 31, 2016		
	Capital Amount	Well-Capitalized Ratio ⁽¹⁾	Actual Ratio	Capital Amount	Well-Capitalized Ratio ⁽¹⁾	Actual Ratio
(dollars are in millions)						
Common equity Tier 1 ratio:						
HSBC USA.....	\$ 17,428	4.5% ⁽²⁾	14.2%	\$ 17,544	4.5% ⁽²⁾	13.7%
HSBC Bank USA.....	19,294	6.5	16.7	19,577	6.5	15.7
Tier 1 capital ratio:						
HSBC USA.....	18,696	6.0	15.3	18,640	6.0	14.5
HSBC Bank USA.....	21,786	8.0	18.8	21,971	8.0	17.6
Total capital ratio:						
HSBC USA.....	22,565	10.0	18.4	23,549	10.0	18.3
HSBC Bank USA.....	25,522	10.0	22.1	26,325	10.0	21.1
Tier 1 leverage ratio:						
HSBC USA.....	18,696	4.0 ⁽²⁾	9.9	18,640	4.0 ⁽²⁾	9.2
HSBC Bank USA.....	21,786	5.0	11.7	21,971	5.0	11.1
Risk-weighted assets:						
HSBC USA.....	122,584			128,482		
HSBC Bank USA.....	115,667			124,666		
Adjusted quarterly average assets: ⁽³⁾						
HSBC USA.....	188,774			203,000		
HSBC Bank USA.....	186,551			197,944		

⁽¹⁾ HSBC USA and HSBC Bank USA are categorized as "well-capitalized," as defined by their principal regulators. To be categorized as well-capitalized under regulatory guidelines, a banking institution must have the ratios reflected in the above table, and must not be subject to a directive, order, or written agreement to meet and maintain specific capital levels.

⁽²⁾ There are no common equity Tier 1 or Tier 1 leverage ratio components in the definition of a well-capitalized bank holding company. The ratios shown are the regulatory minimum ratios.

⁽³⁾ Represents the Tier 1 leverage ratio denominator which reflects quarterly average assets adjusted for amounts permitted to be deducted from Tier 1 capital for the three months ended December 31, 2017 and 2016, respectively.

In 2013, U.S. banking regulators issued a final rule implementing the Basel III capital framework in the U.S. ("the Basel III final rule") which, for banking organizations such as HSBC North America and HSBC Bank USA, became effective in 2014 with certain provisions being phased in over time through the beginning of 2019. As a result, the capital ratios in the table above are reported in accordance with the Basel III transition rules within the final rule. In addition, risk-weighted assets in the table above are calculated using the Basel III Standardized Approach.

During 2017 and 2016, HSBC USA did not receive any cash capital contributions from its parent, HSBC North America, and did not make any capital contributions to its subsidiary, HSBC Bank USA.

24. Variable Interest Entities

In the ordinary course of business, we have organized special purpose entities ("SPEs") primarily to structure financial products to meet our clients' investment needs, to facilitate clients to access and raise financing from capital markets and to securitize financial assets held to meet our own funding needs. For disclosure purposes, we aggregate SPEs based on the purpose, risk characteristics and business activities of the SPEs. An SPE is a VIE if it lacks sufficient equity investment at risk to finance its activities without additional subordinated financial support or, as a group, the holders of the equity investment at risk lack either a) the power through voting or similar rights to direct the activities of the entity that most significantly impacts the entity's economic performance; or b) the obligation to absorb the entity's expected losses, the right to receive the expected residual returns, or both.

Variable Interest Entities We consolidate VIEs in which we hold a controlling financial interest as evidenced by the power to direct the activities of a VIE that most significantly impact its economic performance and the obligation to absorb losses of, or the right to receive benefits from, the VIE that could potentially be significant to the VIE and therefore are deemed to be the primary beneficiary. We take into account our entire involvement in a VIE (explicit or implicit) in identifying variable interests that individually or in the aggregate could be significant enough to warrant our designation as the primary beneficiary and hence require us to consolidate the VIE or otherwise require us to make appropriate disclosures. We consider our involvement to be potentially significant where we, among other things, (i) enter into derivative contracts to absorb the risks and benefits from the VIE or from the assets held by the VIE; (ii) provide a financial guarantee that covers assets held or liabilities issued by a VIE; (iii) sponsor the VIE in that we design, organize and structure the transaction; and (iv) retain a financial or servicing interest in the VIE.

We are required to evaluate whether to consolidate a VIE when we first become involved and on an ongoing basis. In almost all cases, a qualitative analysis of our involvement in the entity provides sufficient evidence to determine whether we are the primary beneficiary. In rare cases, a more detailed analysis to quantify the extent of variability to be absorbed by each variable interest holder is required to determine the primary beneficiary.

Consolidated VIEs The following table summarizes assets and liabilities related to our consolidated VIEs at December 31, 2017 and 2016 which are consolidated on our balance sheet. Assets and liabilities exclude intercompany balances that eliminate in consolidation.

	December 31, 2017		December 31, 2016	
	Consolidated Assets	Consolidated Liabilities	Consolidated Assets	Consolidated Liabilities
	(in millions)			
Low income housing limited liability partnership:				
Other assets	\$ 154	\$ —	\$ 231	\$ —
Long-term debt.....	—	73	—	79
Interest, taxes and other liabilities.....	—	59	—	60
Total	<u>\$ 154</u>	<u>\$ 132</u>	<u>\$ 231</u>	<u>\$ 139</u>

Low income housing limited liability partnership In 2009, all low income housing investments held by us at the time were transferred to a Limited Liability Partnership ("LLP") in exchange for debt and equity while a third party invested cash for an equity interest that is mandatorily redeemable at a future date. The LLP was created in order to ensure the utilization of future tax benefits from these low income housing tax projects. The LLP was deemed to be a VIE as it does not have sufficient equity investment at risk to finance its activities. Upon entering into this transaction, we concluded that we are the primary beneficiary of the LLP due to the nature of our continuing involvement and, as a result, consolidate the LLP and report the equity interest issued to the third party investor in other liabilities and the assets of the LLP in other assets on our consolidated balance sheet. The investments held by the LLP represent equity investments in the underlying low income housing partnerships. The LLP does not consolidate the underlying partnerships because it does not have the power to direct the activities of the partnerships that most significantly impact the economic performance of the partnerships.

As a practical expedient, we amortize our low income housing investments in proportion to the allocated tax benefits under the proportional amortization method and present the associated tax benefits net of investment amortization in income tax expense.

Unconsolidated VIEs We also have variable interests in other VIEs that are not consolidated because we are not the primary beneficiary. The following table provides additional information on these unconsolidated VIEs, including the variable interests held by us and our maximum exposure to loss arising from our involvements in these VIEs, at December 31, 2017 and 2016:

	Total Assets Held by Unconsolidated VIEs	Carrying Value of Variable Interests Held Reported as		Maximum Exposure to Loss
		Assets	Liabilities	
(in millions)				
At December 31, 2017				
Structured note vehicles.....	\$ 3,019	\$ 1,803	\$ 6	\$ 3,013
Limited partnership investments.....	1,566	412	262	412
Refinancing SPE.....	412	116	—	116
Total.....	<u>\$ 4,997</u>	<u>\$ 2,331</u>	<u>\$ 268</u>	<u>\$ 3,541</u>
At December 31, 2016				
Structured note vehicles.....	\$ 5,908	\$ 2,888	\$ 7	\$ 5,896
Limited partnership investments.....	1,853	427	227	427
Refinancing SPE.....	659	353	—	353
Total.....	<u>\$ 8,420</u>	<u>\$ 3,668</u>	<u>\$ 234</u>	<u>\$ 6,676</u>

Information on the types of variable interest entities with which we are involved, the nature of our involvement and the variable interests held in those entities is presented below.

Structured note vehicles We provide derivatives, such as interest rate and currency swaps, to structured note vehicles and, in certain instances, invest in the vehicles' debt instruments. We hold variable interests in these structured note vehicles in the form of total return swaps under which we take on the risks and benefits of the structured notes they issue. The same risks and benefits are passed on to third party entities through back-end total return swaps. We earn a spread for facilitating the transaction. Since we do not have the power to direct the activities of the VIE and are not the primary beneficiary, we do not consolidate them. Our maximum exposure to loss is the notional amount of the derivatives wrapping the structured notes. The maximum exposure to loss of \$3,013 million at December 31, 2017 will occur in the unlikely scenario where the value of the structured notes is reduced to zero and, at the same time, the counterparty of the back-end swap defaults with zero recovery. In certain instances, we hold credit default swaps with the structured note vehicles under which we receive credit protection on specified reference assets in exchange for the payment of a premium. Through these derivatives, the vehicles assume the credit risk associated with the reference assets which are then passed on to the holders of the debt instruments they issue. Because they create rather than absorb variability, the credit default swaps we hold are not considered variable interests. We record all investments in, and derivative contracts with, unconsolidated structured note vehicles at fair value on our consolidated balance sheet.

During the second quarter of 2017, one of the structured note vehicles was unwound and our investment in the structured note vehicle along with the related derivatives were terminated. As a result, we recognized a gain of approximately \$11 million, largely reflecting a make-whole payment provided by a third party guarantor of the investment. At the time of unwind, our investment in the structured note vehicle had a total carrying value of \$1,081 million, which was recorded in trading assets on the consolidated balance sheet.

Limited partnership investments We invest as a limited partner in partnerships that operate qualified affordable housing, renewable energy and community development projects. The returns of these investments are generated primarily from the tax benefits, including Federal tax credits and tax deductions from operating losses in the project companies. In addition, some of the investments also help us comply with the Community Reinvestment Act. Certain limited partnership structures are considered to be VIEs because either (a) they do not have sufficient equity investment at risk or (b) the limited partners with equity at risk do not have substantive kick-out rights through voting rights or substantive participating rights over the general partner. As a limited partner, we are not the primary beneficiary of the VIEs and do not consolidate them. Our investments in these partnerships are recorded in other assets on the consolidated balance sheet. The maximum exposure to loss shown in the table above represents our recorded investments.

Refinancing SPE We organized and provided loans to a SPE to purchase a senior secured financing facility from the originator designed to finance a third party borrower's acquisition of a portfolio of commercial real estate loans in Mexico. Interest and principal repayments of the prepayable financing facility are dependent on and are secured by the rental cash flows generated from the underlying commercial real estate properties. The financing facility contains additional credit enhancements, including a 15 percent equity subordination in the borrower's capital structure and a financial guarantee over 25 percent of the outstanding balance provided by the borrower's parent.

The SPE is a refinancing vehicle designed to secure term financing from external investors to repay our loans. The loans issued to the SPE are supported by the financing facility and the security interests in the commercial real estate loans and the credit enhancements. The refinancing vehicle is a VIE because it does not have sufficient equity investment at risk to permit the entity to finance the activities without additional subordination provided by any parties. We have a variable interest in the VIE through our ownership of the loans. In view of the purpose and design of the SPE, the overall funding structure, the additional credit enhancements and the risks inherent in the VIE, we concluded the investors absorb an insignificant amount of expected loss and/or benefit in the VIE. Rather, the borrower and its parent take on the risks and benefits in the VIE through the credit enhancements provided to the holder of the financing facility. In addition, the investors do not have the power to direct the activities that most significantly impact the economic performance of the VIE and, therefore, we are not the primary beneficiary of the VIE. The maximum exposure to loss shown in the table above represents our investment in the loans without consideration of any recovery benefits from the credit enhancements.

Third-party sponsored securitization entities We invest in asset-backed securities issued by third party sponsored securitization entities which may be considered VIEs. The investments are transacted at arm's-length and decisions to invest are based on a credit analysis of the underlying collateral assets or the issuer. We are a passive investor in these issuers and do not have the power to direct the activities of these issuers. As such, we do not consolidate these securitization entities. Additionally, we do not have other involvements in servicing or managing the collateral assets or provide financial or liquidity support to these issuers which potentially give rise to risk of loss exposure. These investments are an integral part of the disclosure in Note 3, "Trading Assets and Liabilities," Note 4, "Securities," and Note 26, "Fair Value Measurements," and, therefore, are not disclosed in this note to avoid redundancy.

25. Guarantee Arrangements, Pledged Assets and Repurchase Agreements

Guarantee Arrangements As part of our normal operations, we enter into credit derivatives and various off-balance sheet guarantee arrangements with affiliates and third parties. These arrangements arise principally in connection with our lending and client intermediation activities and include standby letters of credit and certain credit derivative transactions. The contractual amounts of these arrangements represent our maximum possible credit exposure in the event that we are required to fulfill the maximum obligation under the contractual terms of the guarantee.

The following table presents total carrying value and contractual amounts of our sell protection credit derivatives and major off-balance sheet guarantee arrangements at December 31, 2017 and 2016. Following the table is a description of the various arrangements.

	December 31, 2017		December 31, 2016	
	Carrying Value	Notional / Maximum Exposure to Loss	Carrying Value	Notional / Maximum Exposure to Loss
	(in millions)			
Credit derivatives ⁽¹⁾⁽⁴⁾	\$ 303	\$ 42,328	\$ (627)	\$ 58,329
Financial standby letters of credit, net of participations ⁽²⁾⁽³⁾	—	5,128	—	5,423
Performance standby letters of credit, net of participations ⁽²⁾⁽³⁾	—	3,580	—	2,969
Total	<u>\$ 303</u>	<u>\$ 51,036</u>	<u>\$ (627)</u>	<u>\$ 66,721</u>

⁽¹⁾ Includes \$25,639 million and \$29,999 million of notional issued for the benefit of HSBC affiliates at December 31, 2017 and 2016, respectively.

⁽²⁾ Includes \$1,264 million and \$1,315 million of both financial and performance standby letters of credit issued for the benefit of HSBC affiliates at December 31, 2017 and 2016, respectively.

⁽³⁾ For standby letters of credit, maximum loss represents losses to be recognized assuming the letters of credit have been fully drawn and the obligors have defaulted with zero recovery.

⁽⁴⁾ For credit derivatives, the maximum loss is represented by the notional amounts without consideration of mitigating effects from collateral or recourse arrangements.

Credit-Risk Related Guarantees

Credit derivatives Credit derivatives are financial instruments that transfer the credit risk of a reference obligation from the credit protection buyer to the credit protection seller who is exposed to the credit risk without buying the reference obligation. We sell credit protection on underlying reference obligations (such as loans or securities) by entering into credit derivatives, primarily in the form of credit default swaps, with various institutions. We account for all credit derivatives at fair value. Where we sell credit protection to a counterparty that holds the reference obligation, the arrangement is effectively a financial guarantee on the reference obligation. Under a credit derivative contract, the credit protection seller will reimburse the credit protection buyer upon occurrence

of a credit event (such as bankruptcy, insolvency, restructuring or failure to meet payment obligations when due) as defined in the derivative contract, in return for a periodic premium. Upon occurrence of a credit event, we will pay the counterparty the stated notional amount of the derivative contract and receive the underlying reference obligation. The recovery value of the reference obligation received could be significantly lower than its notional principal amount when a credit event occurs.

Certain derivative contracts are subject to master netting arrangements and related collateral agreements. A party to a derivative contract may demand that the counterparty post additional collateral in the event its net exposure exceeds certain predetermined limits and when the credit rating falls below a certain grade. We set the collateral requirements by counterparty such that the collateral covers various transactions and products, and is not allocated to specific individual contracts.

We manage our exposure to credit derivatives using a variety of risk mitigation strategies where we enter into offsetting hedge positions or transfer the economic risks, in part or in entirety, to investors through the issuance of structured credit products. We actively manage the credit and market risk exposure in the credit derivative portfolios on a net basis and, as such, retain no or a limited net sell protection position at any time. The following table summarizes our net credit derivative positions at December 31, 2017 and 2016:

	December 31, 2017		December 31, 2016	
	Carrying / Fair Value	Notional	Carrying / Fair Value	Notional
	(in millions)			
Sell-protection credit derivative positions	\$ 303	\$ 42,328	\$ (627)	\$ 58,329
Buy-protection credit derivative positions	(188)	47,962	845	65,385
Net position ⁽¹⁾	\$ 115	\$ 5,634	\$ 218	\$ 7,056

⁽¹⁾ Positions are presented net in the table above to provide a complete analysis of our risk exposure and depict the way we manage our credit derivative portfolio. The offset of the sell-protection credit derivatives against the buy-protection credit derivatives may not be legally binding in the absence of master netting agreements with the same counterparty. Furthermore, the credit loss triggering events for individual sell protection credit derivatives may not be the same or occur in the same period as those of the buy protection credit derivatives thereby not providing an exact offset.

Standby letters of credit A standby letter of credit is issued to a third party for the benefit of a client and is a guarantee that the client will perform or satisfy certain obligations under a contract. It irrevocably obligates us to pay a specified amount to the third party beneficiary if the client fails to perform the contractual obligation. We issue two types of standby letters of credit: performance and financial. A performance standby letter of credit is issued where the client is required to perform some non-financial contractual obligation, such as the performance of a specific act, whereas a financial standby letter of credit is issued where the client's contractual obligation is of a financial nature, such as the repayment of a loan or debt instrument. At December 31, 2017, the total amount of outstanding financial standby letters of credit (net of participations) and performance guarantees (net of participations) were \$5,128 million and \$3,580 million, respectively. At December 31, 2016, the total amount of outstanding financial standby letters of credit (net of participations) and performance guarantees (net of participations) were \$5,423 million and \$2,969 million, respectively.

The issuance of a standby letter of credit is subject to our credit approval process and collateral requirements. We charge fees for issuing letters of credit commensurate with the client's credit evaluation and the nature of any collateral. Included in other liabilities are deferred fees on standby letters of credit amounting to \$48 million and \$49 million at December 31, 2017 and 2016, respectively. Also included in other liabilities is an allowance for credit losses on unfunded standby letters of credit of \$26 million and \$39 million at December 31, 2017 and 2016, respectively.

The following table summarizes the credit ratings related to guarantees including the ratings of counterparties against which we sold credit protection and financial standby letters of credit at December 31, 2017 as an indicative proxy of payment risk:

Notional/Contractual Amounts	Average Life (in years)	Credit Ratings of the Obligators or the Transactions		
		Investment Grade	Non-Investment Grade	Total
(dollars are in millions)				
Sell-protection Credit Derivatives ⁽¹⁾				
Single name credit default swaps ("CDS").....	2.7	\$ 23,555	\$ 11,588	\$ 35,143
Structured CDS.....	0.5	24	—	24
Index credit derivatives	4.4	3,012	2,547	5,559
Total return swaps.....	2.6	1,306	296	1,602
Subtotal.....		27,897	14,431	42,328
Standby Letters of Credit ⁽²⁾	1.2	5,198	3,510	8,708
Total.....		\$ 33,095	\$ 17,941	\$ 51,036

⁽¹⁾ The credit ratings in the table represent external credit ratings for classification as investment grade and non-investment grade.

⁽²⁾ External ratings for most of the obligors are not available. Presented above are the internal credit ratings which are developed using similar methodologies and rating scale equivalent to external credit ratings for purposes of classification as investment grade and non-investment grade.

Our internal credit ratings are determined based on HSBC's risk rating systems and processes which assign a credit grade based on a scale which ranks the risk of default of a client. The credit grades are assigned and used for managing risk and determining level of credit exposure appetite based on the client's operating performance, liquidity, capital structure and debt service ability. In addition, we also incorporate subjective judgments into the risk rating process concerning such things as industry trends, comparison of performance to industry peers and perceived quality of management. We compare our internal risk ratings to outside external rating agency benchmarks, where possible, at the time of formal review and regularly monitor whether our risk ratings are comparable to the external ratings benchmark data.

A non-investment grade rating of a referenced obligor has a negative impact to the fair value of the credit derivative and increases the likelihood that we will be required to perform under the credit derivative contract. We employ market-based parameters and, where possible, use the observable credit spreads of the referenced obligors as measurement inputs in determining the fair value of the credit derivatives. We believe that such market parameters are more indicative of the current status of payment/performance risk than external ratings by the rating agencies which may not be forward-looking in nature and, as a result, lag behind those market-based indicators.

Non Credit-Risk Related Guarantees and Other Arrangements

Visa covered litigation In 2008, we received Class B Shares as part of Visa's initial public offering ("IPO"). Pursuant to the IPO, we, along with all the other Class B shareholders, agreed to indemnify Visa for the claims and obligations arising from certain specific covered litigation. The Class B Shares are not eligible to be converted into publicly traded Class A Shares until settlement of the covered litigation as described in Note 27, "Litigation and Regulatory Matters." Accordingly, the Class B Shares are considered restricted and are only transferable under limited circumstances, which include transfers to other Class B shareholders. As discussed further below, beginning in late 2016 and into 2017, we sold substantially all of our remaining Visa Class B Shares to a third party.

During 2017, we sold 2,391,936 Visa Class B Shares resulting in a net pre-tax gain of approximately \$312 million. During 2016, we sold 638,219 Visa Class B Shares resulting in a net pre-tax gain of approximately \$71 million. The net pre-tax gains associated with these sales were recorded as a component of other income (loss) in the consolidated statement of income (loss). Under the terms of the sale agreements, we entered into swap agreements with the purchaser to retain the litigation risk associated with the Class B Shares sold until the related litigation is settled and the Class B Shares can be converted into Class A Shares. These swaps had a carrying value of \$52 million (of which \$36 million related to the sales during 2017) and \$14 million at December 31, 2017 and 2016, respectively. The swap agreements we entered into with the purchaser requires us to (a) make periodic payments, calculated by reference to the market price of Class A Shares and (b) make or receive payments based on subsequent changes in the conversion rate of Class B Shares into Class A Shares. The payments under the derivative will continue until the Class B Shares are able to be converted into Class A Shares. The fair value of the swap agreements is estimated using a discounted cash flow methodology and is dependent upon the final resolution of the related litigation. Changes in fair value between periods are recognized in other income (loss). In the third quarter of 2017, we entered into a total return swap position to economically hedge the periodic payments made under these swap agreements. See Note 14, "Derivative Financial Instruments," for further information.

Clearing houses and exchanges We are a member of various exchanges and clearing houses that trade and clear securities and/or derivatives contracts. Under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, members of a clearing house may be required to contribute to a guaranty fund to backstop members' obligations to the clearing house. As a member, we may be required to pay a proportionate share of the financial obligations of another member who defaults on its obligations to the exchange or the clearing house. Our guarantee obligations would arise only if the exchange or clearing house had exhausted its resources. Any potential contingent liability under these membership agreements cannot be estimated.

Lease Obligations We are obligated under a number of noncancellable leases for premises and equipment. Certain leases contain renewal options and escalation clauses. Office space leases generally require us to pay certain operating expenses. Net rental expense under third-party operating leases was \$148 million, \$140 million and \$143 million in 2017, 2016, and 2015, respectively.

We have lease obligations on certain office space which has been subleased through the end of the lease period. Under these agreements, the sublessee has assumed future rental obligations on the lease.

Future net minimum lease commitments under noncancellable third-party operating lease arrangements were as follows:

Year Ending December 31,	Minimum Rental Payments	Minimum Sublease Income	Net
	(in millions)		
2018	\$ 129	\$ (1)	\$ 128
2019	117	(1)	116
2020	108	(1)	107
2021	99	(1)	98
2022	86	—	86
Thereafter	215	—	215
Net minimum lease commitments	<u>\$ 754</u>	<u>\$ (4)</u>	<u>\$ 750</u>

Not included in the above disclosures is revenue received from our affiliates for rent on certain office space. As lessee of the properties, we have entered into agreements with affiliates to charge them rent based on the office space utilized by their employees during the period. See Note 21, "Related Party Transactions," for further disclosure.

Mortgage Loan Repurchase Obligations We have provided various representations and warranties related to the origination and sale of mortgage loans including, among other things, the ownership of the loans, the validity of the liens, the loan selection and origination process, and the compliance to the origination criteria established by the government agencies. In the event of a breach of our representations and warranties, we may be obligated to repurchase the loans with identified defects or to indemnify the buyers. Our contractual obligation arises only when the breach of representations and warranties are discovered and repurchase is demanded. From 2013 to 2017, agency eligible mortgage loan originations were sold directly to PHH Mortgage and PHH Mortgage is responsible for origination representations and warranties for all loans purchased. With the insourcing of our mortgage fulfillment operations, effective with applications starting January 2, 2018, we are now responsible for origination representations and warranties for all new agency eligible mortgage loan originations sold to third parties.

In estimating our repurchase liability arising from breaches of representations and warranties, we consider historical losses on residual risks not covered by settlement agreements adjusted for any risk factors not captured in the historical losses as well as the level of outstanding repurchase demands received. Outstanding repurchase demands received totaled \$3 million, \$6 million and \$5 million at December 31, 2017, 2016 and 2015 respectively.

The following table summarizes the change in our estimated repurchase liability during 2017, 2016 and 2015 for obligations arising from the breach of representations and warranties associated with mortgage loans sold:

Year Ended December 31,	2017	2016	2015
	(in millions)		
Balance at beginning of period	\$ 12	\$ 17	\$ 27
Decrease in liability recorded through earnings	(1)	(3)	(9)
Realized losses	(1)	(2)	(1)
Balance at end of period	<u>\$ 10</u>	<u>\$ 12</u>	<u>\$ 17</u>

Our repurchase liability of \$10 million at December 31, 2017 represents our best estimate of the loss that has been incurred, including interest, arising from breaches of representations and warranties associated with mortgage loans sold. Because the level of mortgage loan repurchase losses is dependent upon economic factors, investor demand strategies and other external risk factors such as housing market trends that may change, the level of the liability for mortgage loan repurchase losses requires significant

judgment. We continue to evaluate our methods of determining the best estimate of loss based on recent trends. As these estimates are influenced by factors outside our control, there is uncertainty inherent in these estimates making it reasonably possible that they could change. The range of reasonably possible losses in excess of our recorded repurchase liability is between zero and \$25 million at December 31, 2017. This estimated range of reasonably possible losses was determined based upon modifying the assumptions utilized in our best estimate of probable losses to reflect what we believe to be reasonably possible adverse assumptions.

Securitization Activity In addition to the repurchase risk described above, we have also been involved as a sponsor/seller of loans used to facilitate whole loan securitizations underwritten by our affiliate, HSI. In this regard, we began acquiring residential mortgage loans in 2005 which were warehoused on our balance sheet with the intent of selling them to HSI to facilitate HSI's whole loan securitization program which was discontinued in 2007. During 2005-2007, we purchased and sold \$24 billion of such loans to HSI which were subsequently securitized and sold by HSI to third parties. See "Mortgage Securitization Matters" in Note 27, "Litigation and Regulatory Matters," for additional discussion of related exposure.

Pledged Assets

Pledged assets included in the consolidated balance sheet consisted of the following:

	December 31, 2017	December 31, 2016
	(in millions)	
Interest bearing deposits with banks	\$ 2,952	\$ 3,034
Trading assets ⁽¹⁾	3,185	2,772
Securities available-for-sale ⁽²⁾	7,210	7,503
Securities held-to-maturity ⁽²⁾	2,131	2,551
Loans ⁽³⁾	17,404	18,260
Other assets ⁽⁴⁾	2,253	1,958
Total	<u>\$ 35,135</u>	<u>\$ 36,078</u>

⁽¹⁾ Trading assets are primarily pledged against liabilities associated with repurchase agreements.

⁽²⁾ Securities are primarily pledged against derivatives, public fund deposits, trust deposits and various short-term and long term borrowings, as well as providing capacity for potential secured borrowings from the Federal Home Loan Bank of New York ("FHLB") and the Federal Reserve Bank of New York.

⁽³⁾ Loans are primarily residential mortgage loans pledged against current and potential borrowings from the FHLB and the Federal Reserve Bank of New York.

⁽⁴⁾ Other assets represent cash on deposit with non-banks related to derivative collateral support agreements.

Debt securities pledged as collateral that can be sold or repledged by the secured party continue to be reported on the consolidated balance sheet. The fair value of securities available-for-sale that could be sold or repledged was \$524 million and \$892 million at December 31, 2017 and 2016, respectively. The fair value of trading assets that could be sold or repledged was \$3,185 million and \$2,772 million at December 31, 2017 and 2016, respectively.

The fair value of collateral we accepted under security resale agreements but not reported on the consolidated balance sheet was \$34,759 million and \$30,784 million at December 31, 2017 and 2016, respectively, discussed further below. Of this collateral, \$32,459 million and \$29,835 million could be sold or repledged at December 31, 2017 and 2016, respectively, of which \$1,231 million and \$769 million, respectively, had been sold or repledged as collateral under repurchase agreements or to cover short sales.

Repurchase Agreements

We enter into purchases of securities under agreements to resell (resale agreements) and sales of securities under agreements to repurchase (repurchase agreements) identical or substantially the same securities. Resale and repurchase agreements are accounted for as secured lending and secured borrowing transactions, respectively.

Repurchase agreements may require us to deposit cash or other collateral with the lender. In connection with resale agreements, it is our policy to obtain possession of collateral, which may include the securities purchased, with market value in excess of the principal amount loaned. The market value of the collateral subject to the resale and repurchase agreements is regularly monitored, and additional collateral is obtained or provided when appropriate, to ensure appropriate collateral coverage of these secured financing transactions.

The following table provides information about resale and repurchase agreements that are subject to offset at December 31, 2017 and 2016:

	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet ⁽¹⁾	Net Amounts Presented in the Balance Sheet	Gross Amounts Not Offset in the Balance Sheet		Net Amount ⁽³⁾
				Financial Instruments ⁽²⁾	Cash Collateral Received / Pledged	
(in millions)						
At December 31, 2017						
Assets:						
Securities purchased under resale agreements	\$ 33,974	\$ 1,356	\$ 32,618	\$ 32,616	\$ —	\$ 2
Liabilities:						
Securities sold under repurchase agreements	\$ 4,721	\$ 1,356	\$ 3,365	\$ 3,364	\$ —	\$ 1
At December 31, 2016						
Assets:						
Securities purchased under resale agreements	\$ 30,784	\$ 761	\$ 30,023	\$ 29,945	\$ —	\$ 78
Liabilities:						
Securities sold under repurchase agreements	\$ 4,433	\$ 761	\$ 3,672	\$ 3,661	\$ —	\$ 11

⁽¹⁾ Represents recognized amount of resale and repurchase agreements with counterparties subject to legally enforceable netting agreements that meet the applicable netting criteria as permitted by generally accepted accounting principles.

⁽²⁾ Represents securities received or pledged to cover financing transaction exposures.

⁽³⁾ Represents the amount of our exposure that is not collateralized / covered by pledged collateral.

The following table provides the class of collateral pledged and remaining contractual maturity of repurchase agreements accounted for as secured borrowings at December 31, 2017 and 2016:

	Overnight and Continuous	Up to 30 Days	31 to 90 Days	91 Days to One Year	Greater Than One Year	Total
	(in millions)					
At December 31, 2017						
U.S. Treasury, U.S. Government agency and sponsored entity securities	\$ 1,166	\$ 838	\$ 888	\$ 284	\$ 1,464	\$ 4,640
Foreign debt securities	—	81	—	—	—	81
Total repurchase agreements accounted for as secured borrowings	\$ 1,166	\$ 919	\$ 888	\$ 284	\$ 1,464	\$ 4,721
At December 31, 2016						
U.S. Treasury, U.S. Government agency and sponsored entity securities	\$ 761	\$ —	\$ —	\$ 1,272	\$ 2,400	\$ 4,433
Foreign debt securities	—	—	—	—	—	—
Total repurchase agreements accounted for as secured borrowings	\$ 761	\$ —	\$ —	\$ 1,272	\$ 2,400	\$ 4,433

26. Fair Value Measurements

Accounting principles related to fair value measurements provide a framework for measuring fair value that focuses on the exit price that would be received to sell an asset or paid to transfer a liability in the principal market (or in the absence of the principal market, the most advantageous market) accessible in an orderly transaction between willing market participants (the "Fair Value Framework"). Where required by the applicable accounting standards, assets and liabilities are measured at fair value using the "highest and best use" valuation premise. Fair value measurement guidance clarifies that financial instruments do not have alternative use and, as such, the fair value of financial instruments should be determined using an "in-exchange" valuation premise. However, the fair value measurement literature provides a valuation exception and permits an entity to measure the fair value of a group of financial assets and financial liabilities with offsetting credit risks and/or market risks based on the exit price it would receive or pay to transfer the net risk exposure of a group of assets or liabilities if certain conditions are met. We elected to apply the measurement exception to a group of derivative instruments with offsetting credit risks and market risks, which primarily relate to interest rate, foreign currency, debt and equity price risk, and commodity price risk as of the reporting date.

Fair Value Adjustments The best evidence of fair value is quoted market price in an actively traded market, where available. In the event listed price or market quotes are not available, valuation techniques that incorporate relevant transaction data and market parameters reflecting the attributes of the asset or liability under consideration are applied. Where applicable, fair value adjustments are made to ensure the financial instruments are appropriately recorded at fair value. The fair value adjustments reflect the risks associated with the products, contractual terms of the transactions, and the liquidity of the markets in which the transactions occur. The fair value adjustments are broadly categorized by the following major types:

Credit risk adjustment - The credit risk adjustment is an adjustment to a group of financial assets and financial liabilities, predominantly derivative assets and derivative liabilities, to reflect the credit quality of the parties to the transaction in arriving at fair value. A credit valuation adjustment to a financial asset is required to reflect the default risk of the counterparty. A debit valuation adjustment to a financial liability is recorded to reflect the default risk of HUSI. See "Valuation Techniques - Derivatives" below for additional details.

Liquidity risk adjustment - The liquidity risk adjustment (primarily in the form of bid-offer adjustment) reflects the cost that would be incurred to close out the market risks by hedging, disposing or unwinding the position. Valuation models generally produce mid-market values. The bid-offer adjustment is made in such a way that results in a measure that reflects the exit price that most represents the fair value of the financial asset or financial liability under consideration or, where applicable, the fair value of the net market risk exposure of a group of financial assets or financial liabilities. These adjustments relate primarily to Level 2 assets.

Model valuation adjustment - Where fair value measurements are determined using an internal valuation model based on observable and unobservable inputs, certain valuation inputs may be less readily determinable. There may be a range of possible valuation inputs that market participants may assume in determining the fair value measurement. The resultant fair value measurement has inherent measurement risk if one or more parameters are unobservable and must be estimated. An input valuation adjustment is necessary to reflect the likelihood that market participants may use different input parameters, and to mitigate the possibility of measurement error. In addition, the values derived from valuation techniques are affected by the choice of valuation model and model limitation. When different valuation techniques are available, the choice of valuation model can be subjective. Furthermore, the valuation model applied may have measurement limitations. In those cases, an additional valuation adjustment is also applied to mitigate the measurement risk. Model valuation adjustments are not material and relate primarily to Level 2 instruments.

We apply stress scenarios in determining appropriate liquidity risk and model risk adjustments for Level 3 fair values by reviewing the historical data for unobservable inputs (e.g., correlation, volatility). Some stress scenarios involve at least a 95 percent confidence interval (i.e., two standard deviations). We also utilize unobservable parameter adjustments when instruments are valued using internally developed models which reflects the uncertainty in the value estimates provided by the model.

Funding Fair Value Adjustment ("FFVA") - The FFVA reflects the estimated present value of the future market funding cost or benefit associated with funding uncollateralized derivative exposure at rates other than the Overnight Indexed Swap ("OIS") rate. See "Valuation Techniques - Derivatives" below for additional details.

Fair Value Hierarchy The Fair Value Framework establishes a three-tiered fair value hierarchy as follows:

Level 1 *quoted market price* - Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 *valuation technique using observable inputs* - Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are inactive, and measurements determined using valuation models where all significant inputs are observable, such as interest rates and yield curves that are observable at commonly quoted intervals.

Level 3 *valuation technique with significant unobservable inputs* - Level 3 inputs are unobservable inputs for the asset or liability and include situations where fair values are measured using valuation techniques based on one or more significant unobservable inputs.

Classification within the fair value hierarchy is based on whether the lowest hierarchical level input that is significant to the fair value measurement is observable. As such, the classification within the fair value hierarchy is dynamic and can be transferred to other hierarchy levels in each reporting period. Transfers between leveling categories are assessed, determined and recognized at the end of each reporting period.

Valuation Control Framework We have established a control framework which is designed to ensure that fair values are either determined or validated by a function independent of the risk-taker. To that end, the ultimate responsibility for the determination of fair values rests with Finance. Finance has established an independent price validation process to ensure that the assets and liabilities measured at fair value are properly stated.

A valuation committee, chaired by the Head of Product Control, meets monthly to review, monitor and discuss significant valuation matters arising from credit and market risks. The committee is responsible for reviewing and approving valuation policies and procedures including any valuation adjustments pertaining to, among other things, independent price verification, market liquidity, unobservable inputs, model uncertainty and counterparty credit risk. All valuation models are reviewed by the valuation committee in terms of model development, enhancements and performance. All models are independently reviewed by the Markets Independent Model Review function and applicable valuation model recommendations are reported to and discussed with the valuation committee. Significant valuation risks identified in business activities are corroborated and addressed by the committee members and, where applicable, are escalated to the Chief Financial Officer of HUSI and the Audit Committee of the Board of Directors.

Where fair value measurements are determined based on information obtained from independent pricing services or brokers, Finance applies appropriate validation procedures to substantiate fair value. For price validation purposes, quotations from at least two independent pricing sources are obtained for each financial instrument, where possible.

The following factors are considered in determining fair values:

- similarities between the asset or the liability under consideration and the asset or liability for which quotation is received;
- collaboration of pricing by referencing to other independent market data such as market transactions and relevant benchmark indices;
- consistency among different pricing sources;
- the valuation approach and the methodologies used by the independent pricing sources in determining fair value;
- the elapsed time between the date to which the market data relates and the measurement date;
- the source of the fair value information; and
- whether the security is traded in an active or inactive market.

Greater weight is given to quotations of instruments with recent market transactions, pricing quotes from dealers who stand ready to transact, quotations provided by market-makers who structured such instrument and market consensus pricing based on inputs from a large number of survey participants. Any significant discrepancies among the external quotations are reviewed and adjustments to fair values are recorded where appropriate. Where the transaction volume of a specific instrument has been reduced and the fair value measurement becomes less transparent, Finance will apply more detailed procedures to understand and challenge the appropriateness of the unobservable inputs and the valuation techniques used by the independent pricing service. Where applicable, Finance will develop a fair value estimate using its own pricing model inputs to test reasonableness. Where fair value measurements are determined using internal valuation models, Finance will validate the fair value measurement by either developing unobservable inputs based on the industry consensus pricing surveys in which we participate or back testing by observing the actual settlements occurring soon after the measurement date. Any significant valuation adjustments are reported to and discussed with the valuation committee.

Fair Value of Financial Instruments The fair value estimates, methods and assumptions set forth below for our financial instruments, including those financial instruments carried at cost, are made solely to comply with disclosures required by generally accepted accounting principles in the United States and should be read in conjunction with the financial statements and notes included in this report.

The following table summarizes the carrying value and estimated fair value of our financial instruments at December 31, 2017 and 2016:

December 31, 2017	Carrying Value	Fair Value	Level 1	Level 2	Level 3
	(in millions)				
Financial assets:					
Short-term financial assets	\$ 12,304	\$ 12,304	\$ 1,115	\$ 11,157	\$ 32
Federal funds sold and securities purchased under agreements to resell	32,538	32,538	—	32,538	—
Federal funds sold and securities purchased under agreements to resell designated under fair value option	80	80	—	80	—
Non-derivative trading assets	12,425	12,425	7,558	2,935	1,932
Derivatives	4,423	4,423	6	4,388	29
Securities	44,677	44,602	19,906	24,585	111
Commercial loans, net of allowance for credit losses	52,427	54,210	—	—	54,210
Commercial loans designated under fair value option and held for sale	471	471	—	471	—
Commercial loans held for sale	177	177	—	177	—
Consumer loans, net of allowance for credit losses	19,455	18,598	—	—	18,598
Consumer loans held for sale:					
Residential mortgages	6	6	—	5	1
Other consumer	61	61	—	—	61
Financial liabilities:					
Short-term financial liabilities	\$ 2,650	\$ 2,667	\$ —	\$ 2,635	\$ 32
Deposits:					
Without fixed maturities	100,502	100,502	—	100,502	—
Fixed maturities	9,834	9,782	—	9,782	—
Deposits designated under fair value option	7,693	7,693	—	6,796	897
Deposits held for sale	673	673	—	673	—
Non-derivative trading liabilities	2,246	2,246	1,722	524	—
Derivatives	3,196	3,196	12	3,173	11
Short-term borrowings designated under fair value option	2,032	2,032	—	2,032	—
Long-term debt	22,080	22,717	—	22,717	—
Long-term debt designated under fair value option	12,886	12,886	—	12,245	641

December 31, 2016	Carrying Value	Fair Value	Level 1	Level 2	Level 3
	(in millions)				
Financial assets:					
Short-term financial assets	\$ 21,500	\$ 21,500	\$ 1,235	\$ 20,238	\$ 27
Federal funds sold and securities purchased under agreements to resell	29,253	29,253	—	29,253	—
Federal funds sold and securities purchased under agreements to resell designated under fair value option	770	770	—	770	—
Non-derivative trading assets	12,439	12,439	3,560	5,811	3,068
Derivatives	5,004	5,004	12	4,961	31
Securities	49,719	49,748	25,145	24,498	105
Commercial loans, net of allowance for credit losses	53,286	54,938	—	—	54,938
Commercial loans designated under fair value option and held for sale	725	725	—	725	—
Commercial loans held for sale	119	119	—	119	—
Consumer loans, net of allowance for credit losses	19,572	18,833	—	—	18,833
Consumer loans held for sale:					
Residential mortgages	894	912	—	9	903
Other consumer	71	71	—	—	71
Financial liabilities:					
Short-term financial liabilities	\$ 2,456	\$ 2,489	\$ —	\$ 2,462	\$ 27
Deposits:					
Without fixed maturities	112,009	112,009	—	112,009	—
Fixed maturities	9,713	9,749	—	9,749	—
Deposits designated under fair value option	7,526	7,526	—	6,119	1,407
Non-derivative trading liabilities	1,122	1,122	1,060	62	—
Derivatives	4,535	4,535	8	4,511	16
Short-term borrowings designated under fair value option	2,672	2,672	—	2,672	—
Long-term debt	27,355	28,093	—	28,093	—
Long-term debt designated under fair value option	10,384	10,384	—	9,885	499

Assets and Liabilities Recorded at Fair Value on a Recurring Basis The following table presents information about our assets and liabilities measured at fair value on a recurring basis at December 31, 2017 and 2016, and indicates the fair value hierarchy of the valuation techniques utilized to determine such fair value:

December 31, 2017	Fair Value Measurements on a Recurring Basis					
	Level 1	Level 2	Level 3	Gross Balance	Netting ⁽¹⁾	Net Balance
	(in millions)					
Assets:						
Securities purchased under agreements to resell ⁽²⁾	\$ —	\$ 80	\$ —	\$ 80	\$ —	\$ 80
Trading securities, excluding derivatives:						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	3,391	332	—	3,723	—	3,723
Collateralized debt obligations	—	—	129	129	—	129
Asset-backed securities:						
Residential mortgages	—	16	—	16	—	16
Student loans	—	91	—	91	—	91
Corporate and other domestic debt securities	—	—	1,803	1,803	—	1,803
Debt securities issued by foreign entities	4,167	210	—	4,377	—	4,377
Equity securities	—	12	—	12	—	12
Precious metals trading	—	2,274	—	2,274	—	2,274
Derivatives: ⁽³⁾						
Interest rate contracts	6	24,231	—	24,237	—	24,237
Foreign exchange contracts	4	15,754	2	15,760	—	15,760
Equity contracts	—	3,911	173	4,084	—	4,084
Precious metals contracts	52	502	—	554	—	554
Credit contracts	—	536	120	656	—	656
Other contracts ⁽⁴⁾	—	—	6	6	—	6
Derivatives netting	—	—	—	—	(40,874)	(40,874)
Total derivatives	62	44,934	301	45,297	(40,874)	4,423
Securities available-for-sale:						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	19,056	10,004	—	29,060	—	29,060
Asset-backed securities:						
Home equity	—	51	—	51	—	51
Other	—	399	111	510	—	510
Debt securities issued by foreign entities	850	52	—	902	—	902
Equity securities	—	177	—	177	—	177
Loans ⁽⁵⁾	—	471	—	471	—	471
Other assets ⁽⁶⁾	—	—	15	15	—	15
Total assets	\$ 27,526	\$ 59,103	\$ 2,359	\$ 88,988	\$ (40,874)	\$ 48,114
Liabilities:						
Domestic deposits ⁽²⁾	\$ —	\$ 6,796	\$ 897	\$ 7,693	\$ —	\$ 7,693
Trading liabilities, excluding derivatives	1,722	524	—	2,246	—	2,246
Derivatives: ⁽³⁾						
Interest rate contracts	59	24,379	—	24,438	—	24,438
Foreign exchange contracts	—	14,664	2	14,666	—	14,666
Equity contracts	—	2,859	92	2,951	—	2,951
Precious metals contracts	108	614	—	722	—	722
Credit contracts	—	578	6	584	—	584
Other contracts ⁽⁴⁾	—	—	52	52	—	52
Derivatives netting	—	—	—	—	(40,217)	(40,217)
Total derivatives	167	43,094	152	43,413	(40,217)	3,196
Short-term borrowings ⁽²⁾	—	2,032	—	2,032	—	2,032
Long-term debt ⁽²⁾	—	12,245	641	12,886	—	12,886
Total liabilities	\$ 1,889	\$ 64,691	\$ 1,690	\$ 68,270	\$ (40,217)	\$ 28,053

December 31, 2016	Fair Value Measurements on a Recurring Basis					
	Level 1	Level 2	Level 3	Gross Balance	Netting ⁽¹⁾	Net Balance
	(in millions)					
Assets:						
Securities purchased under agreements to resell ⁽²⁾	\$ —	\$ 770	\$ —	\$ 770	\$ —	\$ 770
Trading securities, excluding derivatives:						
U.S. Treasury, U.S. Government agencies and sponsored enterprises.....	3,560	246	—	3,806	—	3,806
Collateralized debt obligations.....	—	—	184	184	—	184
Asset-backed securities:						
Residential mortgages.....	—	96	—	96	—	96
Student loans.....	—	85	—	85	—	85
Corporate and other domestic debt securities.....	—	—	2,884	2,884	—	2,884
Debt securities issued by foreign entities.....	—	3,597	—	3,597	—	3,597
Equity securities.....	—	15	—	15	—	15
Precious metals trading.....	—	1,772	—	1,772	—	1,772
Derivatives: ⁽³⁾						
Interest rate contracts.....	36	32,163	1	32,200	—	32,200
Foreign exchange contracts.....	24	24,014	18	24,056	—	24,056
Equity contracts.....	—	2,171	159	2,330	—	2,330
Precious metals contracts.....	81	1,038	—	1,119	—	1,119
Credit contracts.....	—	1,342	208	1,550	—	1,550
Other contracts ⁽⁴⁾	—	—	5	5	—	5
Derivatives netting.....	—	—	—	—	(56,256)	(56,256)
Total derivatives.....	141	60,728	391	61,260	(56,256)	5,004
Securities available-for-sale:						
U.S. Treasury, U.S. Government agencies and sponsored enterprises.....	25,145	10,924	—	36,069	—	36,069
Asset-backed securities:						
Home equity.....	—	61	—	61	—	61
Other.....	—	—	105	105	—	105
Debt securities issued by foreign entities.....	—	521	—	521	—	521
Equity securities.....	—	154	—	154	—	154
Loans ⁽⁵⁾	—	725	—	725	—	725
Total assets.....	<u>\$ 28,846</u>	<u>\$ 79,694</u>	<u>\$ 3,564</u>	<u>\$ 112,104</u>	<u>\$ (56,256)</u>	<u>\$ 55,848</u>
Liabilities:						
Domestic deposits ⁽²⁾	\$ —	\$ 6,119	\$ 1,407	\$ 7,526	\$ —	\$ 7,526
Trading liabilities, excluding derivatives.....	1,060	62	—	1,122	—	1,122
Derivatives: ⁽³⁾						
Interest rate contracts.....	84	32,568	—	32,652	—	32,652
Foreign exchange contracts.....	6	22,658	18	22,682	—	22,682
Equity contracts.....	—	1,714	161	1,875	—	1,875
Precious metals contracts.....	13	867	—	880	—	880
Credit contracts.....	—	1,354	15	1,369	—	1,369
Other contracts ⁽⁴⁾	—	—	14	14	—	14
Derivatives netting.....	—	—	—	—	(54,937)	(54,937)
Total derivatives.....	103	59,161	208	59,472	(54,937)	4,535
Short-term borrowings ⁽²⁾	—	2,672	—	2,672	—	2,672
Long-term debt ⁽²⁾	—	9,885	499	10,384	—	10,384
Total liabilities.....	<u>\$ 1,163</u>	<u>\$ 77,899</u>	<u>\$ 2,114</u>	<u>\$ 81,176</u>	<u>\$ (54,937)</u>	<u>\$ 26,239</u>

⁽¹⁾ Represents counterparty and cash collateral netting which allow the offsetting of amounts relating to certain contracts if certain conditions are met.

⁽²⁾ See Note 15, "Fair Value Option," for additional information.

⁽³⁾ Includes trading derivative assets of \$3,725 million and \$4,411 million and trading derivative liabilities of \$2,633 million and \$3,786 million at December 31, 2017 and 2016, respectively, as well as derivatives held for hedging and commitments accounted for as derivatives.

⁽⁴⁾ Consists of swap agreements entered into in conjunction with the sales of certain Visa Class B Shares.

⁽⁵⁾ Includes certain commercial loans held for sale which we have elected to apply the fair value option. See Note 7, "Loans Held for Sale," for further information.

⁽⁶⁾ Represents contingent consideration receivable associated with the sale of a portion of our Private Banking business.

Transfers between levels of the fair value hierarchy are recognized at the end of each reporting period.

Transfers between Level 1 and Level 2 measurements There were no transfers between Levels 1 and 2 during 2017 and 2016.

Information on Level 3 assets and liabilities The following table summarizes additional information about changes in the fair value of Level 3 assets and liabilities during 2017 and 2016. As a risk management practice, we may risk manage the Level 3 assets and liabilities, in whole or in part, using securities and derivative positions that are classified as Level 1 or Level 2 measurements within the fair value hierarchy. Since those Level 1 and Level 2 risk management positions are not included in the table below, the information provided does not reflect the effect of such risk management activities related to the Level 3 assets and liabilities.

	Total Realized / Unrealized Gains (Losses) Included in										Current Period Unrealized Gains (Losses)
	Jan. 1, 2017	Earnings	Other Compre- hensive Income	Purch- ases	Issu- ances	Settle- ments	Transfers Into Level 3	Transfers Out of Level 3	Dec. 31, 2017		
	(in millions)										
Assets:											
Trading assets, excluding derivatives: ⁽¹⁾											
Collateralized debt obligations.....	\$ 184	\$ 28	\$ —	\$ —	\$ —	\$ (83)	\$ —	\$ —	\$ 129	\$ 13	
Corporate and other domestic debt securities...	2,884	—	—	—	—	(1,081)	—	—	1,803	—	
Derivatives, net: ⁽²⁾											
Interest rate contracts.....	1	(1)	—	—	—	—	—	—	—	(1)	
Foreign exchange contracts..	—	—	—	—	—	—	—	—	—	—	
Equity contracts.....	(2)	102	—	—	—	(24)	4	1	81	68	
Credit contracts.....	193	(7)	—	—	—	(72)	—	—	114	(16)	
Other contracts ⁽³⁾	(9)	(10)	—	—	(35)	8	—	—	(46)	—	
Other asset-backed securities available-for-sale ⁽⁴⁾	105	6	—	—	—	—	—	—	111	6	
Other assets ⁽⁵⁾	—	15	—	—	—	—	—	—	15	15	
Total assets.....	<u>\$ 3,356</u>	<u>\$ 133</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (35)</u>	<u>\$ (1,252)</u>	<u>\$ 4</u>	<u>\$ 1</u>	<u>\$ 2,207</u>	<u>\$ 85</u>	
Liabilities:											
Domestic deposits ⁽⁶⁾	\$ (1,407)	\$ (48)	\$ 7	\$ —	\$ (204)	\$ 526	\$ (31)	\$ 260	\$ (897)	\$ (28)	
Long-term debt ⁽⁶⁾	(499)	(85)	(7)	—	(295)	155	(12)	102	(641)	(71)	
Total liabilities.....	<u>\$ (1,906)</u>	<u>\$ (133)</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (499)</u>	<u>\$ 681</u>	<u>\$ (43)</u>	<u>\$ 362</u>	<u>\$ (1,538)</u>	<u>\$ (99)</u>	

	Total Realized / Unrealized Gains (Losses) Included in										Current Period Unrealized Gains (Losses)
	Jan. 1, 2016	Earnings	Other Compre- hensive Income	Purch- ases	Issu- ances	Settle- ments	Transfers Into Level 3	Transfers Out of Level 3	Dec. 31, 2016		
(in millions)											
Assets:											
Trading assets, excluding derivatives: ⁽¹⁾											
Collateralized debt obligations.....	\$ 221	\$ 13	\$ —	\$ —	\$ —	\$ (50)	\$ —	\$ —	\$ 184	\$ —	
Corporate and other domestic debt securities ...	2,870	—	—	14	—	—	—	—	2,884	—	
Derivatives, net: ⁽²⁾											
Interest rate contracts.....	1	—	—	—	—	—	—	—	1	—	
Foreign exchange contracts ..	—	—	—	—	—	—	—	—	—	—	
Equity contracts.....	(83)	63	—	—	—	13	1	4	(2)	37	
Credit contracts.....	179	16	—	—	—	(2)	—	—	193	4	
Other contracts ⁽³⁾	—	—	—	—	—	(9)	—	—	(9)	—	
Other asset-backed securities available-for-sale ⁽⁴⁾	—	—	—	—	—	—	105	—	105	—	
Mortgage servicing rights ⁽⁷⁾	140	(27)	—	—	—	(17)	—	(96)	—	—	
Total assets.....	\$ 3,328	\$ 65	\$ —	\$ 14	\$ —	\$ (65)	\$ 106	\$ (92)	\$ 3,356	\$ 41	
Liabilities:											
Domestic deposits ⁽⁶⁾	\$ (1,867)	\$ (82)	\$ —	\$ —	\$ (238)	\$ 623	\$ (55)	\$ 212	\$ (1,407)	\$ (44)	
Long-term debt ⁽⁶⁾	(746)	(34)	—	—	(263)	303	—	241	(499)	(29)	
Total liabilities.....	\$ (2,613)	\$ (116)	\$ —	\$ —	\$ (501)	\$ 926	\$ (55)	\$ 453	\$ (1,906)	\$ (73)	

⁽¹⁾ Gains (losses) on trading assets, excluding derivatives are included in trading revenue in the consolidated statement of income (loss).

⁽²⁾ Level 3 net derivatives included derivative assets of \$301 million and derivative liabilities of \$152 million at December 31, 2017 and derivative assets of \$391 million and derivative liabilities of \$208 million at December 31, 2016. Gains (losses) on derivatives, net are predominantly included in trading revenue in the consolidated statement of income (loss).

⁽³⁾ Consists of swap agreements entered into in conjunction with the sales of certain Visa Class B Shares.

⁽⁴⁾ Realized gains (losses) on securities available-for-sale are included in other securities gains, net in the consolidated statement income. Unrealized gains (losses) on securities available-for-sale are included in other comprehensive income (loss).

⁽⁵⁾ Represents contingent consideration receivable associated with the sale of a portion of our Private Banking business. Gains (losses) associated with this transaction are included in other income (loss) in the consolidated statement of income (loss).

⁽⁶⁾ See Note 15, "Fair Value Option," for additional information. Beginning January 1, 2017, unrealized gains (losses) on fair value option liabilities attributable to our own credit spread is recorded in other comprehensive income (loss).

⁽⁷⁾ During the fourth quarter of 2016, we sold our remaining residential mortgage servicing rights portfolio to a third party. Gains (losses) on residential mortgage servicing rights were included in residential mortgage banking revenue (expense) in the consolidated statement of income (loss).

The following table presents quantitative information about the unobservable inputs used to determine the recurring fair value measurement of assets and liabilities classified as Level 3 fair value measurements at December 31, 2017 and 2016:

December 31, 2017

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs
Collateralized debt obligations	\$ 129	Broker quotes or consensus pricing and, where applicable, discounted cash flows	Prepayment rates	0% - 6%
			Conditional default rates	4% - 6%
			Loss severity rates	55% - 60%
Corporate and other domestic debt securities	\$ 1,803	Discounted cash flows	Spread volatility on collateral assets	2% - 4%
			Correlation between insurance claim shortfall and collateral value	80%
Interest rate derivative contracts	\$ —	Market comparable adjusted for probability to fund	Probability to fund for rate lock commitments	41% - 100%
Foreign exchange derivative contracts ⁽¹⁾	\$ —	Option pricing model	Implied volatility of currency pairs	6% - 9%
Equity derivative contracts ⁽¹⁾	\$ 81	Option pricing model	Equity / Equity Index volatility	7% - 42%
			Equity / Equity and Equity / Index correlation	42% - 80%
			Equity dividend yields	0% - 8%
Credit derivative contracts	\$ 114	Option pricing model and, where applicable, discounted cash flows	Issuer by issuer correlation of defaults	82% - 83%
			Credit default swap spreads	154bps - 174bps
Other derivative contracts	\$ (46)	Discounted cash flows	Conversion rate	1.6 times
			Expected duration	2 - 4 years
Other asset-backed securities available-for-sale	\$ 111	Discounted cash flows	Market assumptions related to yields for comparable instruments	1% - 3%
Other assets	\$ 15	Discounted cash flows	Client transfer rates based on rating	50% - 95%
Domestic deposits (structured deposits) ⁽¹⁾⁽²⁾	\$ (897)	Option adjusted discounted cash flows	Implied volatility of currency pairs	6% - 9%
			Equity / Equity Index volatility	7% - 42%
			Equity / Equity and Equity / Index correlation	42% - 80%
Long-term debt (structured notes) ⁽¹⁾⁽²⁾	\$ (641)	Option adjusted discounted cash flows	Implied volatility of currency pairs	6% - 9%
			Equity / Equity Index volatility	7% - 42%
			Equity / Equity and Equity / Index correlation	42% - 80%

December 31, 2016

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs
Collateralized debt obligations	\$ 184	Broker quotes or consensus pricing and, where applicable, discounted cash flows	Prepayment rates	1% - 6%
			Conditional default rates	6% - 8%
			Loss severity rates	85%
Corporate and other domestic debt securities	\$ 2,884	Discounted cash flows	Spread volatility on collateral assets	3% - 4%
			Correlation between insurance claim shortfall and collateral value	80%
Interest rate derivative contracts	\$ 1	Market comparable adjusted for probability to fund	Probability to fund for rate lock commitments	38% - 100%
Foreign exchange derivative contracts ⁽¹⁾	\$ —	Option pricing model	Implied volatility of currency pairs	15% - 21%
Equity derivative contracts ⁽¹⁾	\$ (2)	Option pricing model	Equity / Equity Index volatility	11% - 49%
			Equity / Equity and Equity / Index correlation	45% - 57%
			Equity dividend yields	0% - 14%
Credit derivative contracts	\$ 193	Option pricing model and, where applicable, discounted cash flows	Issuer by issuer correlation of defaults	82% - 83%
			Credit default swap spreads	150bps - 173bps
Other derivative contracts	\$ (9)	Discounted cash flows	Conversion rate	1.6 times
			Expected duration	3 - 5 years
Other asset-backed securities available-for-sale	\$ 105	Discounted cash flows	Market assumptions related to yields for comparable instruments	1% - 4%
Domestic deposits (structured deposits) ⁽¹⁾⁽²⁾	\$ (1,407)	Option adjusted discounted cash flows	Implied volatility of currency pairs	15% - 21%
			Equity / Equity Index volatility	11% - 49%
			Equity / Equity and Equity / Index correlation	45% - 57%
Long-term debt (structured notes) ⁽¹⁾⁽²⁾	\$ (499)	Option adjusted discounted cash flows	Implied volatility of currency pairs	15% - 21%
			Equity / Equity Index volatility	11% - 49%
			Equity / Equity and Equity / Index correlation	45% - 57%

⁽¹⁾ We are the client-facing entity and we enter into identical but opposite derivatives to transfer the resultant risks to our affiliates. With the exception of counterparty credit risks, we are market neutral. The corresponding intra-group derivatives are presented as equity derivatives and foreign exchange derivatives in the table.

⁽²⁾ Structured deposits and structured notes contain embedded derivative features whose fair value measurements contain significant Level 3 inputs.

Significant Unobservable Inputs for Recurring Fair Value Measurements

Collateralized Debt Obligations ("CDOs")

- *Prepayment rate* - The rate at which borrowers pay off the mortgage loans early. The prepayment rate is affected by a number of factors including the location of the mortgage collateral, the interest rate type of the mortgage loans, borrowers' credit and sensitivity to interest rate movement. The prepayment rate of our CDOs portfolio is close to the mid-point of the range.
- *Default rate* - Annualized percentage of default rate over a group of collateral such as residential or commercial mortgage loans. The default rate and loss severity rate are positively correlated. The default rate of our portfolio is tilted towards the low end of the range.
- *Loss severity rate* - Included in our Level 3 CDOs portfolio are trust preferred securities. The loss severity rate of the trust preferred securities is tilted towards the low end of the range.

Derivatives

- *Implied volatility* - The implied volatility is a significant pricing input for freestanding or embedded options including equity, foreign currency and interest rate options. The level of volatility is a function of the nature of the underlying risk, the level of strike price and the years to maturity of the option. Depending on the underlying risk and tenure, we determine the implied volatility based on observable input where information is available. However, substantially all of the implied volatilities are derived based on historical information. The implied volatility for different foreign currency pairs is between 6 percent and 9 percent while the implied volatility for equity/equity or equity/equity index is between 7 percent and 42 percent, respectively,

at December 31, 2017. Although implied foreign currency volatility and equity volatility appear to be widely distributed at the portfolio level, the deviation of implied volatility on a trade-by-trade basis is narrower. The average deviation of implied volatility for the foreign currency pair and at-the-money equity option are 1 percent and 5 percent, respectively, at December 31, 2017.

- *Correlations of a group of foreign currency or equity* - Correlation measures the relative change in values among two or more variables (i.e., equity or foreign currency pair). Variables can be positively or negatively correlated. Correlation is a key input in determining the fair value of a derivative referenced to a basket of variables such as equities or foreign currencies. A majority of the correlations are not observable, but are derived based on historical data. The correlation between equity/equity and equity/equity index was between 42 percent and 80 percent at December 31, 2017.

Sensitivity of Level 3 Inputs to Fair Value Measurements

Collateralized debt obligations - Probability of default, prepayment speed and loss severity rate are significant unobservable inputs. Significant increase (decrease) in these inputs will result in a lower (higher) fair value measurement of a collateralized debt obligation. A change in assumption for default probability is often accompanied by a directionally similar change in loss severity, and a directionally opposite change in prepayment speed.

Corporate and domestic debt securities - The fair value measurement of certain corporate debt securities is affected by the fair value of the underlying portfolios of investments used as collateral and the make-whole guarantee provided by third party guarantors. The probability that the collateral fair value declines below the collateral call threshold concurrent with the guarantors' failure to perform its make whole obligation is unobservable. The increase (decrease) in the probability the collateral value falls below the collateral call threshold is often accompanied by a directionally similar change in default probability of the guarantor.

Credit derivatives - Correlation of default among a basket of reference credit names is a significant unobservable input if the credit attributes of the portfolio are not within the parameters of relevant standardized CDS indices. Significant increase (decrease) in the default correlation will result in a lower (higher) fair value measurement of the credit derivative. A change in assumption for default correlation is often accompanied by a directionally similar change in default probability and loss rates of other credit names in the basket. For certain credit derivatives, the credit spreads of credit default swap contracts insuring asset backed securities is a significant unobservable input. Significant increase (decrease) in the credit spreads will result in a lower (higher) fair value measurement of the credit derivative.

Equity and foreign exchange derivatives - The fair value measurement of a structured equity or foreign exchange derivative is primarily affected by the implied volatility of the underlying equity price or exchange rate of the paired foreign currencies. The implied volatility is not observable. Significant increase (decrease) in the implied volatility will result in a higher (lower) fair value of a long position in the derivative contract.

Other derivatives - The fair value of the swap agreements we entered into in conjunction with the sales of certain Visa Class B Shares is dependent upon the final resolution of the related litigation. Significant unobservable inputs used in the fair value measurement include estimated changes in the conversion rate of Visa Class B Shares into Visa Class A Shares and the expected timing of the final resolution. An increase (decrease) in the loss estimate or in the timing of the resolution of the related litigation would result in a higher (lower) fair value measurement of the derivative.

Other asset-backed securities available-for-sale - The fair value measurement of certain asset-backed securities is primarily affected by estimated yields which are determined based on current market yields of comparable instruments adjusted for market liquidity. An increase (decrease) in the yields would result in a decrease (increase) in the fair value measurement of the securities.

Other assets - The fair value of the contingent consideration receivable associated with the sale of a portion of our Private Banking business is dependent upon the clients' decisions to transfer their accounts to UBS, the timing and amounts of client assets transferred and the acceptance of the client assets by UBS which are significant unobservable inputs. An increase (decrease) in the client transfer rate would result in a higher (lower) fair value measurement of the receivable.

Significant Transfers Into and Out of Level 3 Measurements During 2017, we transferred \$260 million of domestic deposits and \$102 million of long-term debt, which we have elected to carry at fair value, from Level 3 to Level 2 as a result of the embedded derivative no longer being unobservable as the derivative option is closer to maturity and there is more observability in short term volatility. Additionally, during 2017, we transferred \$31 million of domestic deposits, which we have elected to carry at fair value, from Level 2 to Level 3 as a result of a change in the observability of underlying instruments that resulted in the embedded derivative being unobservable.

During 2016, we transferred \$212 million of domestic deposits and \$241 million of long-term debt, which we have elected to carry at fair value, from Level 3 to Level 2 as a result of the embedded derivative no longer being unobservable as the derivative option is closer in maturity and there is more observability in short term volatility. During 2016, we transferred \$96 million of mortgage servicing rights from Level 3 to Level 2 upon execution of the sale agreement with a third party. During 2016, we transferred \$55 million of domestic deposits, which we have elected to carry at fair value, from Level 2 to Level 3 as a result of a change in the observability of underlying instruments that resulted in the embedded derivative being unobservable. Additionally, during 2016,

we transferred \$105 million of asset-backed securities available-for-sale from Level 2 to Level 3 due to the lack of availability of inputs in the market including independent pricing service valuations.

Assets and Liabilities Recorded at Fair Value on a Non-recurring Basis Certain financial and non-financial assets are measured at fair value on a non-recurring basis and therefore, are not included in the tables above. These assets include (a) mortgage and commercial loans classified as held for sale reported at the lower of amortized cost or fair value and (b) impaired loans or assets that are written down to fair value based on the valuation of underlying collateral during the period. These instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustment in certain circumstances (e.g., impairment). The following table presents the fair value hierarchy level within which the fair value of the financial and non-financial assets has been recorded at December 31, 2017 and 2016. The gains (losses) during 2017 and 2016 are also included.

	Non-Recurring Fair Value Measurements at December 31, 2017				Total Gains (Losses) For the Year Ended December 31, 2017
	Level 1	Level 2	Level 3	Total	
	(in millions)				
Residential mortgage loans held for sale ⁽¹⁾	\$ —	\$ —	\$ 2	\$ 2	\$ 7
Consumer loans ⁽²⁾	—	21	—	21	(11)
Commercial loans held for sale ⁽³⁾	—	62	—	62	5
Impaired commercial loans ⁽⁴⁾	—	—	289	289	132
Real estate owned ⁽⁵⁾	—	6	—	6	7
Total assets at fair value on a non-recurring basis	<u>\$ —</u>	<u>\$ 89</u>	<u>\$ 291</u>	<u>\$ 380</u>	<u>\$ 140</u>

	Non-Recurring Fair Value Measurements at December 31, 2016				Total Gains (Losses) For the Year Ended December 31, 2016
	Level 1	Level 2	Level 3	Total	
	(in millions)				
Residential mortgage loans held for sale ⁽¹⁾	\$ —	\$ 6	\$ 769	\$ 775	\$ (68)
Consumer loans ⁽²⁾	—	46	—	46	(22)
Commercial loans held for sale ⁽³⁾	—	79	—	79	(35)
Impaired commercial loans ⁽⁴⁾	—	—	278	278	(314)
Real estate owned ⁽⁵⁾	—	17	—	17	6
Total assets at fair value on a non-recurring basis	<u>\$ —</u>	<u>\$ 148</u>	<u>\$ 1,047</u>	<u>\$ 1,195</u>	<u>\$ (433)</u>

⁽¹⁾ At December 31, 2017 and 2016, the fair value of the loans held for sale was below cost. Certain residential mortgage loans held for sale have been classified as Level 3 fair value measurements within the fair value hierarchy, including certain residential mortgage loans held for sale for which the underlying real estate properties used to determine fair value are illiquid assets as a result of market conditions and, at December 31, 2016, certain residential mortgage loans which were transferred to held for sale during 2016 and sold during 2017 for which significant inputs in estimating fair value were unobservable. Additionally, the fair value of these properties is affected by, among other things, the location, the payment history and the completeness of the loan documentation.

⁽²⁾ Represents residential mortgage loans held for investment whose carrying amount was reduced during the periods presented based on the fair value of the underlying collateral. Total gains (losses) for 2016 include amounts recorded on loans that were subsequently transferred to held for sale.

⁽³⁾ At December 31, 2017 and 2016, the fair value of the loans held for sale was below cost.

⁽⁴⁾ Certain commercial loans have undergone troubled debt restructurings and are considered impaired. As a matter of practical expedient, we measure the credit impairment of a collateral-dependent loan based on the fair value of the collateral asset. The collateral often involves real estate properties that are illiquid due to market conditions. As a result, these loans are classified as a Level 3 fair value measurement within the fair value hierarchy.

⁽⁵⁾ Real estate owned is required to be reported on the balance sheet net of transactions costs. The real estate owned amounts in the table above reflect the fair value unadjusted for transaction costs.

The following tables present quantitative information about non-recurring fair value measurements of assets and liabilities classified with Level 3 of the fair value hierarchy at December 31, 2017 and 2016:

At December 31, 2017

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs
Residential mortgage loans held for sale.....	\$ 2	Third party appraisal valuation based on estimated loss severities, including collateral values	Loss severity rates	30% - 100%
Impaired commercial loans	289	Valuation of third party appraisal on underlying collateral	Loss severity rates	9% - 61%

At December 31, 2016

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs
Residential mortgage loans held for sale	\$ 769	Third party appraisal valuation based on estimated loss severities, including collateral values and market discount rate	Loss severity rates Market discount rate	0% - 100% 8% - 14%
Impaired commercial loans.....	278	Valuation of third party appraisal on underlying collateral	Loss severity rates	4% - 100%

Significant Unobservable Inputs for Non-Recurring Fair Value Measurements

Residential mortgage loans held for sale represent subprime residential mortgage loans which were previously acquired with the intent of securitizing or selling them to third parties and, at December 31, 2016, residential mortgage loans which were transferred to held for sale during 2016 and sold during 2017. The weighted average loss severity rate for residential mortgage loans held for sale was approximately 69 percent at December 31, 2017. These severity rates are primarily impacted by the value of the underlying collateral securing the loans.

Impaired loans represent commercial loans. The weighted average severity rate for these loans was approximately 29 percent at December 31, 2017. These severity rates are primarily impacted by the value of the underlying collateral securing the loans.

Valuation Techniques Following is a description of valuation methodologies used for assets and liabilities recorded at fair value and for estimating fair value for those financial instruments not recorded at fair value for which fair value disclosure is required.

Short-term financial assets and liabilities - The carrying amount of certain financial assets and liabilities recorded at cost is considered to approximate fair value because they are short-term in nature, bear interest rates that approximate market rates, and generally have negligible credit risk. These items include cash and due from banks, interest bearing deposits with banks, customer acceptance assets and liabilities, short-term borrowings and dividends payable.

Federal funds sold and purchased and securities purchased and sold under resale and repurchase agreements - We record certain securities purchased and sold under resale and repurchase agreements at fair value. The fair value of these resale and repurchase agreements is determined using market rates currently offered on comparable transactions with similar underlying collateral and maturities.

The remaining federal funds sold and purchased and securities purchased and sold under resale and repurchase agreements are recorded at cost. A majority of these transactions are short-term in nature and, as such, the recorded amounts approximate fair value. For transactions with long-dated maturities, fair value is based on dealer quotes for instruments with similar terms and collateral.

Loans - Except for certain commercial loans held for sale for which the fair value option has been elected, we do not record loans at fair value on a recurring basis. From time to time, we record impairments to loans. The write-downs can be based on observable market price of the loan, the underlying collateral value or a discounted cash flow analysis. In addition, fair value estimates are determined based on the product type, financial characteristics, pricing features and maturity.

- Consumer loans held for sale – Consumer loans held for sale are recorded at the lower of amortized cost or fair value. The fair value estimates of consumer loans held for sale are determined primarily using the discounted cash flow method using assumptions consistent with those which would be used by market participants in valuing such loans. Valuation inputs include estimates of prepayment rates, default rates, loss severities, collateral values and market rates of return. Where available, such inputs are derived from or corroborated by observable market data. We also may hold discussions on value directly with potential investors. Since some loan pools may have features which are unique, the fair value measurement processes use significant unobservable inputs which are specific to the performance characteristics of the various loan portfolios. Where

available, we measure residential mortgage whole loans held for sale based on transaction prices of loan portfolios of similar characteristics observed in the whole loan market. Adjustments are made to reflect differences in collateral location, loan-to-value ratio, FICO scores, vintage year, default rates, the completeness of the loan documentation and other risk characteristics.

- Commercial loans held for sale - Commercial loans held for sale (that are not designated under FVO as discussed below) are recorded at the lower of amortized cost or fair value. The fair value estimates of commercial loans held for sale are determined primarily using observable market consensus pricing obtained from independent sources, relevant broker quotes or observed market prices of instruments with similar characteristics. We also may hold discussions on value directly with potential investors.
- Commercial loans held for sale designated under FVO – We record certain commercial loans held for sale at fair value. Where available, fair value is based on observable market consensus pricing obtained from independent sources, relevant broker quotes or observed market prices of instruments with similar characteristics. Where observable market parameters are not available, fair value is determined based on contractual cash flows adjusted for estimates of prepayment rates, expected default rates and loss severity discounted at management's estimate of the expected rate of return required by market participants. We also consider loan specific risk mitigating factors such as collateral arrangements in determining the fair value estimate.
- Commercial loans – Commercial loans and commercial real estate loans are valued by discounting the contractual cash flows, adjusted for prepayments and the borrower's credit risk, using a discount rate that reflects the current rates offered to borrowers of similar credit standing for the remaining term to maturity and, when applicable, our own estimate of liquidity premium.
- Commercial impaired loans – Generally represents collateral dependent commercial loans with fair value determined based on pricing quotes obtained from an independent third party appraisal.
- Consumer loans – The estimated fair value of our consumer loans were determined by developing an approximate range of value from a mix of various sources as appropriate for the respective pool of assets. These sources included estimates from an HSBC affiliate which reflect over-the-counter trading activity, trading input from other market participants which includes observed primary and secondary trades, where appropriate, the impact of current estimated rating agency credit tranching levels with the associated benchmark credit spreads as well as general discussions held directly with potential investors. Since some loan pools may have features which are unique, the fair value measurement processes use significant unobservable inputs which are specific to the performance characteristics of the various loan portfolios. For revolving products, the estimated fair value excludes future draws on the available credit line as well as other items and, therefore, does not include the fair value of the entire relationship.

We perform analytical reviews of fair value changes on a quarterly basis and periodically validate our valuation methodologies and assumptions based on the results of actual sales of loans with similar characteristics. In addition, from time to time, we may engage a third party valuation specialist to measure the fair value of a pool of loans. Portfolio risk management personnel provide further validation through discussions with third party brokers and other market participants.

Lending-related commitments - The fair value of commitments to extend credit, standby letters of credit and financial guarantees are not included in the table. The majority of the lending related commitments are not carried at fair value on a recurring basis nor are they actively traded. These instruments generate fees, which approximate those currently charged to originate similar commitments, which are recognized over the term of the commitment period. Deferred fees on commitments and standby letters of credit totaled \$158 million and \$49 million at December 31, 2017 and 2016, respectively.

Precious metals trading - Precious metals trading primarily includes physical inventory which is valued using spot prices.

Securities - Where available, debt and equity securities are valued based on quoted market prices. If a quoted market price for the identical security is not available, the security is valued based on quotes from similar securities, where possible. For certain securities, internally developed valuation models are used to determine fair values or validate quotes obtained from pricing services. The following summarizes the valuation methodology used for our major security classes:

- U.S. Treasury, U.S. Government agency issued or guaranteed and obligations of U.S. state and political subdivisions – As these securities transact in an active market, fair value measurements are based on quoted prices for the identical security or quoted prices for similar securities with adjustments as necessary made using observable inputs which are market corroborated.
- U.S. Government sponsored enterprises – For government sponsored mortgage-backed securities which transact in an active market, fair value measurements are based on quoted prices for the identical security or quoted prices for similar securities with adjustments as necessary made using observable inputs which are market corroborated. For government sponsored mortgage-backed securities which do not transact in an active market, fair value is determined primarily based on pricing information obtained from pricing services and is verified by internal review processes.
- Asset-backed securities, including collateralized debt obligations – Fair value is primarily determined based on pricing information obtained from independent pricing services adjusted for the characteristics and the performance of the underlying collateral.
- Other domestic debt and foreign debt securities (corporate and government) - For non-callable corporate securities, a credit spread scale is created for each issuer. These spreads are then added to the equivalent maturity U.S. Treasury yield to determine

current pricing. Credit spreads are obtained from the new market, secondary trading levels and dealer quotes. For securities with early redemption features, an option adjusted spread model is incorporated to adjust the spreads determined above. Additionally, we survey the broker/dealer community to obtain relevant trade data including benchmark quotes and updated spreads.

- Equity securities – Fair value measurements are determined based on quoted prices for the identical security.

The following tables provide additional information relating to asset-backed securities as well as certain collateralized debt obligations held at December 31, 2017:

Trading asset-backed securities:

Rating of Securities: ⁽¹⁾	Collateral Type:	Level 2	Level 3	Total
(in millions)				
AAA - A	Student loans	\$ 91	\$ —	\$ 91
BBB - B	Collateralized debt obligations	—	129	129
CCC - Unrated	Residential mortgages - Subprime	16	—	16
		\$ 107	\$ 129	\$ 236

Available-for-sale securities backed by collateral:

Rating of Securities: ⁽¹⁾	Collateral Type:	Level 2	Level 3	Total
(in millions)				
AAA - A	Home equity - Alt A	\$ 51	\$ —	\$ 51
	Other	399	111	510
	Total AAA -A	\$ 450	\$ 111	\$ 561

⁽¹⁾ We utilize Standard and Poor's ("S&P") as the primary source of credit ratings in the tables above. If S&P ratings are not available, ratings by Moody's and Fitch are used in that order. Ratings for collateralized debt obligations represent the ratings associated with the underlying collateral.

Derivatives – Derivatives are recorded at fair value. Asset and liability positions in individual derivatives that are covered by legally enforceable master netting agreements, including receivables (payables) for cash collateral posted (received), are offset and presented net in accordance with accounting principles which allow the offsetting of amounts.

Derivatives traded on an exchange are valued using quoted prices. OTC derivatives, which comprise a majority of derivative contract positions, are valued using valuation techniques. The fair value for the majority of our derivative instruments are determined based on internally developed models that utilize independently corroborated market parameters, including interest rate yield curves, option volatilities, and currency rates. For complex or long-dated derivative products where market data is not available, fair value may be affected by the underlying assumptions about, among other things, the timing of cash flows, expected exposure, probability of default and recovery rates. The fair values of certain structured derivative products are sensitive to unobservable inputs such as default correlations of the referenced credit and volatilities of embedded options. These estimates are susceptible to significant change in future periods as market conditions change.

We use the OIS curves as the base discounting curve for measuring the fair value of all derivatives, both collateralized and uncollateralized, and apply a FFVA to reflect the estimated present value of the future market funding cost or benefit associated with funding uncollateralized derivative exposure at rates other than the OIS rate. The FFVA is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralized component of the OTC derivative portfolio. The expected future funding exposure is calculated by a simulation methodology, where available, and is adjusted for events that may terminate the exposure, such as the default of HUSI or the counterparty.

Significant inputs related to derivative classes are broken down as follows:

- Credit Derivatives – Use credit default curves and recovery rates which are generally provided by broker quotes and various pricing services. Certain credit derivatives may also use correlation inputs in their model valuation.
- Interest Rate Derivatives – Swaps use interest rate curves based on currency that are actively quoted by brokers and other pricing services. Options will also use volatility inputs which are also quoted in the broker market.
- Foreign Exchange ("FX") Derivatives – FX transactions, to the extent possible, use spot and forward FX rates which are quoted in the broker market. Where applicable, we also use implied volatility of currency pairs as inputs.
- Equity Derivatives – Use listed equity security pricing and implied volatilities from equity traded options position.
- Precious Metal Derivatives – Use spot and forward metal rates which are quoted in the broker market.

As discussed earlier, we make fair value adjustments to model valuations in order to ensure that those values represent appropriate estimates of fair value. These adjustments, which are applied consistently over time, are generally required to reflect factors such as bid-ask spreads and counterparty credit risk that can affect prices in arms-length transactions with unrelated third parties. Such adjustments are based on management judgment and may not be observable.

We estimate the counterparty credit risk for financial assets and our own credit standing for financial liabilities (the "credit risk adjustments") in determining the fair value measurement. For derivative instruments, we calculate the credit risk adjustment by applying the probability of default of the counterparty to the expected exposure, and multiplying the result by the expected loss given default. We also take into consideration the risk mitigating factors including collateral agreements and master netting agreements in determining credit risk adjustments. We estimate the implied probability of default based on the credit spread of the specific counterparty observed in the credit default swap market. Where credit default spread of the counterparty is not available, we use the credit default spread of a specific proxy (e.g. the credit default swap spread of the counterparty's parent) or a proxy based on credit default swaps referencing to credit names of similar credit standing.

Real estate owned - Fair value is determined based on third party appraisals obtained at the time we take title to the property and, if less than the carrying amount of the loan, the carrying amount of the loan is adjusted to the fair value. The carrying amount of the property is further reduced, if necessary, at least every 45 days to reflect observable local market data, including local area sales data.

Structured notes and deposits – Structured notes and deposits are hybrid instruments containing embedded derivatives and are elected to be measured at fair value in their entirety under fair value option accounting principles. The valuation of hybrid instruments is predominantly driven by the derivative features embedded within the instruments and our own credit risk. The valuation of embedded derivatives may include significant unobservable inputs such as correlation of the referenced credit names or volatility of the embedded option. Cash flows of the funded notes and deposits in their entirety, including the embedded derivatives, are discounted at the relevant interest rates for the duration of the instrument adjusted for our own credit spreads. The credit spreads so applied are determined with reference to our own debt issuance rates observed in primary and secondary markets, internal funding rates, and the structured note rates in recent executions.

Long-term debt – We elected to apply fair value option to certain own debt issuances for which fair value hedge accounting otherwise would have been applied. These own debt issuances elected under FVO are traded in secondary markets and, as such, the fair value is determined based on observed prices for the specific instrument. The observed market price of these instruments reflects the effect of our own credit spreads. The credit spreads applied to these instruments were derived from the spreads at the measurement date.

For long-term debt recorded at cost, fair value is determined based on quoted market prices where available. If quoted market prices are not available, fair value is based on dealer quotes, quoted prices of similar instruments, or internally developed valuation models adjusted for our own credit spreads.

Deposits – For fair value disclosure purposes, the carrying amount of deposits with no stated maturity (e.g., demand, savings, and certain money market deposits), which represents the amount payable upon demand, is considered to generally approximate fair value. For deposits with stated maturities, fair value is estimated by discounting cash flows using market interest rates currently offered on deposits with similar characteristics and maturities.

27. *Litigation and Regulatory Matters*

In addition to the matters described below, in the ordinary course of business, we are routinely named as defendants in, or as parties to, various legal actions and proceedings relating to activities of our current and/or former operations. These legal actions and proceedings may include claims for substantial or indeterminate compensatory or punitive damages, or for injunctive relief. In the ordinary course of business, we also are subject to governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal), certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief. In connection with formal and informal inquiries by these regulators, we receive numerous requests, subpoenas and orders seeking documents, testimony and other information in connection with various aspects of our regulated activities.

Due to the inherent unpredictability of legal matters, including litigation, governmental and regulatory matters, particularly where the damages sought are substantial or indeterminate or when the proceedings or investigations are in the early stages, we cannot determine with any degree of certainty the timing or ultimate resolution of such matters or the eventual loss, fines, penalties or business impact, if any, that may result. We establish reserves for litigation, governmental and regulatory matters when those matters present loss contingencies that are both probable and can be reasonably estimated. Once established, reserves are adjusted from time to time, as appropriate, in light of additional information. The actual costs of resolving litigation and regulatory matters, however, may be substantially higher than the amounts reserved for those matters.

For the legal matters disclosed below, including litigation and governmental and regulatory matters, as to which a loss in excess of accrued liability is reasonably possible in future periods and for which there is sufficient currently available information on the basis of which management believes it can make a reliable estimate, we believe a reasonable estimate could be as much as \$275 million for HUSI. The legal matters underlying this estimate of possible loss will change from time to time and actual results may differ significantly from this current estimate.

In addition, based on the facts currently known for each of the below investigations, it is not practicable at this time for us to determine the terms on which these ongoing investigations will be resolved or the timing of such resolution. As matters progress, it is possible that any fines and/or penalties could be significant.

Given the substantial or indeterminate amounts sought in certain of these matters, and the inherent unpredictability of such matters, an adverse outcome in certain of these matters could have a material adverse effect on our consolidated financial statements in any particular quarterly or annual period.

Credit Card Litigation Since 2005, HSBC Bank USA, HSBC Finance, HSBC North America and HSBC, as well as other banks and Visa Inc. ("Visa") and MasterCard Incorporated ("MasterCard"), had been named as defendants in a number of consolidated merchant class actions and individual merchant actions had been filed against Visa and MasterCard, alleging that the imposition of a no-surcharge rule by the associations and/or the establishment of the interchange fee charged for credit card transactions causes the merchant discount fee paid by retailers to be set at supracompetitive levels in violation of the federal antitrust laws. *In re Payment Card Interchange Fee and Merchant Discount Antitrust Litigation*, MDL 1720, E.D.N.Y. ("MDL 1720"). In 2011, MasterCard, Visa, the other defendants, including HSBC Bank USA, and certain affiliates of the defendants entered into settlement and judgment sharing agreements (the "Sharing Agreements") that provide for the apportionment of certain defined costs and liabilities that the defendants, including HSBC Bank USA and our affiliates, may incur, jointly and/or severally, in the event of an adverse judgment or global settlement of one or all of these actions. The district court granted final approval of the class settlement in 2013 and entered the Class Settlement Order and final judgment dismissing the class action shortly thereafter.

In June 2016, the U.S. Court of Appeals for the Second Circuit ("Second Circuit") issued a decision vacating class certification and approval of the class settlement in MDL 1720, concluding the class was inadequately represented by their counsel in violation of the Federal Rule of Civil Procedure governing class actions as well as the Due Process Clause of the U.S. Constitution. Specifically, the Second Circuit held that there was a conflict between two different but overlapping settlement classes: (1) an opt-out class, which permitted individual class members to forgo their share of the monetary relief and pursue individual claims; and (2) a non-opt-out class of merchants, including future merchants that do not currently exist, which provided injunctive relief mainly in the form of a rule change by Visa and MasterCard to allow merchants to surcharge card transactions until July 20, 2021. The U.S. Supreme Court denied the plaintiffs' petition for review of the decision in March 2017.

Numerous merchants objected and/or opted out of the settlement during the exclusion period. Various opt-out merchants have filed opt-out suits in either state or federal court, most of which have been transferred to the consolidated multidistrict litigation, MDL 1720. To date, certain groups of opt-out merchants have entered into settlement agreements with the defendants in those actions and certain HSBC entities that, pursuant to the MDL 1720 Sharing Agreements, are responsible for a *pro rata* portion of any judgment or settlement amount awarded in actions consolidated into MDL 1720.

DeKalb County, et al. v. HSBC North America Holdings Inc., et al. In 2012, three of the five counties constituting the metropolitan area of Atlanta, Georgia filed a lawsuit pursuant to the Fair Housing Act against HSBC North America and numerous subsidiaries,

including HSBC Finance and HSBC Bank USA, in connection with residential mortgage lending, servicing and financing activities. In the action, captioned *DeKalb County, Fulton County, and Cobb County, Georgia v. HSBC North America Holdings Inc., et al.* (N.D. Ga. No. 12-CV-03640), the plaintiff counties assert that the defendants' allegedly discriminatory lending and servicing practices led to increased loan delinquencies, foreclosures and vacancies, which in turn caused the plaintiff counties to incur damages in the form of lost property tax revenues and increased municipal services costs, among other damages. In March 2015, the court denied the HSBC defendants' motion for summary judgment. In November 2015, the HSBC defendants' motion for reconsideration of that decision was granted in part, and the court reversed certain aspects of its March 2015 decision.

This matter was stayed pending U.S. Supreme Court review of the U.S. Court of Appeals for the Eleventh Circuit ("Eleventh Circuit") decision reversing motions to dismiss two similar cases filed against other lenders in *City of Miami v Bank of America Corp. & Wells Fargo & Co.*

In May 2017, the U.S. Supreme Court issued its decision, affirming the Eleventh Circuit's finding that a municipal plaintiff can be within the zone of interest conceivably protected by the Fair Housing Act. The court did not determine whether the injuries alleged by the city met the proximate cause test, but provided guidance for the lower courts in employing that test in further proceedings. This matter remains stayed.

County of Cook v HSBC North America Holdings Inc., et al. (N.D. Ill. Case No. 1:14-cv-2031). In 2014, Cook County, Illinois (the county in which the city of Chicago is located) filed an action pursuant to the Fair Housing Act against HSBC North America and certain subsidiaries that is substantially similar to the lawsuit filed by the counties of DeKalb, Fulton and Cobb in Georgia. In this action, as in *DeKalb County, et al. v. HSBC North America Holdings Inc., et al.*, the plaintiff asserts that the defendants' allegedly discriminatory lending and servicing practices led to increased loan delinquencies, foreclosures and vacancies, which in turn caused the plaintiff to incur damages in the form of lost property tax revenues and increased municipal services costs, among other damages. An amended complaint was filed in 2014. In September 2015, the court denied the HSBC defendants' motion to dismiss the amended complaint.

This matter was stayed pending U.S. Supreme Court review of the Eleventh Circuit decision reversing motions to dismiss two similar cases filed against other lenders in *City of Miami v Bank of America Corp. & Wells Fargo & Co.*

In May 2017, the U.S. Supreme Court issued its decision, affirming the Eleventh Circuit's finding that a municipal plaintiff can be within the zone of interest conceivably protected by the Fair Housing Act. The court did not determine whether the injuries alleged by the city met the proximate cause test, but provided guidance for the lower courts in employing that test in further proceedings. Following the decision, the stay was lifted and an amended complaint was filed in July 2017.

Defendants filed a motion to dismiss the amended complaint in August 2017. The motion is fully briefed and the HSBC defendants await a decision.

Credit Default Swap Matters

In June 2017, an action was filed by TeraExchange, LLC ("Tera"), a swaps execution facility, as well as its affiliates, against more than two dozen financial institutions, including HSBC, HSBC Bank plc, HSBC Bank USA and HSI, alleging violations of federal and state antitrust laws, and breaches of common law, arising out of an alleged conspiracy among the defendants to boycott Tera from the credit default swap trading market. Defendants filed a motion to dismiss in September 2017.

Interest Rate Swaps Litigation HSBC Bank USA, HSI, and HSBC Bank plc have been named as defendants, among others, in a putative class action brought in the U.S. District Court for the Southern District of New York relating to interest rate swaps. The action alleges that the defendants conspired to restrain trade in violation of the federal anti-trust laws by, among other things, restricting access to interest rate swap pricing exchanges and blocking new entrants into the exchange market, with the purpose and effect of artificially inflating the bid/ask spread paid to buy and sell interest rate swaps in the United States.

In June 2016, the Judicial Panel on Multi-district Litigation ordered the cases be consolidated as *In re Interest Rate Swaps Antitrust Litigation* in the U.S. District Court for the Southern District of New York. In January 2017, the dealer defendants, including the HSBC defendants, moved to dismiss the complaint.

In June 2017, the court granted the HSBC defendants' separate motion to dismiss, as well as dismissed co-defendants Tradeweb and ICAP. The court denied the dealer defendants' joint motion to dismiss. The court has not permitted plaintiffs to amend their complaint, but set a deadline in February 2018 for the parties to amend their pleadings or join additional parties.

Foreign Exchange ("FX") Matters

U.S. Litigation Since 2013 HSBC, HSBC Bank plc, HSBC North America and HSBC Bank USA have been named as defendants, among others, in several putative class actions filed in the U.S. District Court for the Southern District of New York. In 2014, plaintiffs filed an amended consolidated complaint naming HSBC, HSBC Bank plc, HSBC North America and HSBC Bank USA, among others, as defendants. The amended consolidated complaint alleges, among other things, that defendants conspired to manipulate the WM/Reuters foreign currency rates by sharing customers' confidential order flow information, thereby injuring plaintiffs and others by forcing them to pay artificial and non-competitive prices for products based off these foreign currency

rates (the "Consolidated Action"). The HSBC defendants settled the Consolidated Action in September 2015 for a total payment of \$285 million. HSBC Bank USA's portion of the settlement is \$14.25 million and was settled within reserves. The court granted preliminary approval of the settlement in December 2015 and issued an order in December 2016 approving a class notice and distribution plan.

In June 2015, a putative class action was filed in the New York District Court making similar allegations on behalf of Employee Retirement Income Security Act of 1974 ("ERISA") plan participants. The court dismissed the claims in the ERISA action, and the plaintiffs have appealed to the U.S. Court of Appeals for the Second Circuit. In May 2015, another complaint was filed in the U.S. District Court for the Northern District of California making similar allegations on behalf of retail customers. The HSBC defendants filed a motion to transfer that action from California to New York, which was granted in November 2015. In March 2017, the New York District Court dismissed the retail customers' complaint in response to the defendants' joint motion to dismiss. In August 2017, the retail customer plaintiffs filed an amended complaint and the defendants moved to dismiss. The motion remains pending. In April and June 2017, putative class actions making similar allegations on behalf of purported 'indirect' purchasers of foreign exchange products were filed in New York. Those plaintiffs subsequently filed a consolidated amended complaint. HSBC defendants' motion to dismiss the consolidated amended complaint was filed in August 2017 and remains pending.

Canada Litigation In September 2015, two putative class action complaints were filed in the Superior Courts of Justice, provinces of Ontario and Quebec, Canada, against, among others, HSBC, HSBC Bank plc, HSBC North America, HSBC Bank USA and HSBC Bank Canada. The complaints allege, among other things, that defendants conspired to fix the supply and rates of currency in the foreign currency market by sharing confidential customer information and coordinating trading to control or manipulate key rates. The HSBC defendants resolved the Canada FX matters for a total of \$15.5 million Canadian dollars. The settlements have been approved by the presiding courts.

Investigations HSBC and certain of its affiliates, including HSBC Bank USA, along with a number of other firms, are being investigated by regulatory agencies in various countries in relation to trading on the foreign exchange market. We are cooperating with the investigations. In 2014, HSBC reached settlements with the U.K. Financial Conduct Authority ("FCA") and the U.S. Commodity Futures Trading Commission ("CFTC"). HSBC Bank USA was not a party to those settlements. The investigations involving HSBC Bank USA continue.

In January 2018, HSBC entered into a three-year deferred prosecution agreement with the Criminal Division of the DOJ (the "FX DPA") regarding fraudulent conduct in connection with two particular transactions in 2010 and 2011. This concluded the DOJ's investigation into HSBC's historical foreign exchange activities. Under the terms of the FX DPA, HSBC has a number of ongoing obligations, including continuing to cooperate with authorities and implementing enhancements to its internal controls and procedures in its Global Markets business, which will be the subject of annual reports to the DOJ. In addition, HSBC agreed to pay a financial penalty and restitution.

In September 2017, HSBC and HSBC North America consented to a civil money penalty with the FRB in connection with its investigation into HSBC Group's historical FX exchange activities. Under the terms of the order, HSBC and HSBC North America agreed to undertake certain remedial steps and HSBC paid a civil money penalty to the FRB.

In August 2016, the DOJ indicted two now-former HSBC employees and charged them with wire fraud and conspiracy relating to a 2011 foreign exchange transaction. In October 2017, one of the former employees was found guilty after trial.

In February 2017, the Competition Commission of South Africa referred a complaint for proceedings before the South African Competition Tribunal against 18 financial institutions, including HSBC Bank plc, for alleged misconduct related to the foreign exchange market in violation of South African antitrust laws. In April 2017, HSBC Bank plc filed an exception to the complaint, based on a lack of jurisdiction and statute of limitations. In January 2018, the South African Competition Tribunal approved the provisional referral of additional financial institutions, including HSBC Bank USA to the proceedings. These proceedings are at an early stage.

Precious Metals Fix Matters

In re Commodity Exchange Inc., Gold Futures and Options Trading Litigation (Gold Fix Litigation) Since 2014, numerous putative class actions have been filed in the U.S. District Court for the Southern District of New York and the Northern District of California naming as defendants HSBC USA, HSI, HSBC and HSBC Bank plc, in addition to other members of the London Gold Fix. The complaints allege that from January 2004 through June 2013, defendants conspired to manipulate the price of gold and gold derivatives during the afternoon London Gold Fix in order to reap profits on proprietary trades. The actions have been transferred to and centralized in the U.S. District Court for the Southern District of New York. Plaintiffs filed consolidated amended complaints in 2014 and early 2015.

Defendants filed a motion to dismiss the second amended consolidated complaint in April 2015, and the motion was granted in part and denied in part in October 2016. Plaintiffs were granted leave to file a third amended complaint in June 2017 that names a new defendant. The court has denied the pre-existing defendants' request to move to dismiss the third amended complaint. The HSBC defendants and the other pre-existing defendants have requested a stay of discovery.

In re London Silver Fixing, Ltd. Antitrust Litigation (Silver Fix Litigation) In 2014, putative class actions were filed in the U.S. District Court for the Southern and Eastern Districts of New York naming HSBC, HSBC Bank plc, HSBC Bank USA and the other members of The London Silver Market Fixing Ltd as defendants. The complaints allege that, from January 2007 through December 2013, defendants conspired to manipulate the price of physical silver and silver derivatives for their collective benefit in violation of the U.S. Commodity Exchange Act and U.S. antitrust laws. The actions have been transferred to and centralized in the U.S. District Court for the Southern District of New York. Plaintiffs filed consolidated and amended complaints in January and April 2015. Defendants filed a motion to dismiss the second amended consolidated complaint in May 2015, and the motion was granted in part and denied in part in October 2016.

In June 2017, the court granted plaintiffs' leave to file a third amended complaint. The third amended complaint names several new defendants. The court has denied the pre-existing defendants' request for leave to file a motion to dismiss. The HSBC defendants and the other pre-existing defendants have requested a stay of discovery.

Platinum and Palladium Fix Litigation Since 2014, several putative class actions have been filed in the U.S. District Court for the Southern District of New York naming as defendants members of The London Platinum and Palladium Fixing Company (the "Platinum Group Metals or PGM Fixing"), including HSBC Bank USA, BASF Metals Limited, Goldman Sachs International and Standard Bank, plc. The complaints allege that, from January 2008 through November 2014, defendants conspired to manipulate the benchmark prices for physical Platinum Group Metals ("PGM") and PGM-based financial products. Plaintiffs filed a second amended consolidated complaint in August 2015. Defendants' motion to dismiss the second amended consolidated complaint was granted in part and denied in part in March 2017.

Plaintiffs filed a third amended complaint and the defendants filed a joint motion to dismiss the third amended complaint and await a ruling.

Canada Litigation In December 2015 a putative class action, *DiFilippo and Caron v. The Bank of Nova Scotia, et al.*, was filed in the Superior Court of Justice, Ontario Province, Canada, against, among others, HSBC, HSBC Bank plc, HSBC USA, HSI, HSBC Bank Canada and HSBC Securities Canada. The claim alleges, among other things, that defendants conspired to manipulate the price of gold and gold derivatives during the London Gold Fix. Another gold fix proceeding entitled *Benoit v. Bank of Nova Scotia, et al.* was filed in May 2017 in the Court in the Quebec Province. In addition to the HSBC defendants named above, the action names HUSI as a defendant, among others. The parties are seeking to stay this action during the pendency of the Ontario gold fix proceedings.

In April 2016 two putative class actions were filed in the Superior Courts in the Provinces of Ontario and Quebec, Canada, against, among others, HSBC, HSBC Bank plc, HSBC USA, HSI, HSBC Bank Canada and HSBC Securities Canada. The claims allege, among other things, that defendants conspired to manipulate the price of silver and silver derivatives during the London Silver Fix. The Ontario action is at an early stage. The Quebec action has been temporarily stayed.

Investigations HSBC and certain of its affiliates, including HSBC Bank USA, along with a number of other banks, are being investigated by law enforcement and/or regulatory agencies in various countries in relation to precious metals operations and trading. In 2014, the Antitrust Division and Criminal Fraud Section of the DOJ issued a document request to HSBC, seeking the voluntary production of certain documents in connection with a criminal investigation that the DOJ is conducting of alleged anti-competitive and manipulative conduct in precious metals trading. In January 2016, the Antitrust Division of the DOJ informed HSBC Bank USA that it was closing its investigation. In January 2018, HSI reached an agreement with the CFTC to resolve its investigation of HSBC's precious metals activities. Under the terms of the agreement, HSI agreed to pay a financial penalty to the CFTC.

Madoff Litigation

In 2008, Bernard L. Madoff ("Madoff") was arrested and ultimately pleaded guilty to running a Ponzi scheme and a trustee was appointed for the liquidation of his firm, Bernard L. Madoff Investment Securities LLC ("Madoff Securities"), an SEC-registered broker-dealer and investment adviser. Various non-U.S. HSBC companies provided custodial, administration and similar services to a number of funds incorporated outside the United States whose assets were invested with Madoff Securities. Plaintiffs (including funds, funds investors and the Madoff Securities trustee ("Trustee"), as described below) have commenced Madoff-related proceedings against numerous defendants arising out of Madoff Securities' fraud.

In 2010, the Trustee commenced suits against various HSBC companies in the U.S. Bankruptcy Court and in the English High Court. The Trustee filed a suit in the U.S. captioned *Picard v. HSBC et al* (Bankr S.D.N.Y. No. 09-01364), which also names certain funds, investment managers, and other entities and individuals, against HSBC Bank USA and certain of our foreign affiliates. The Trustee's claims seek recovery of prepetition transfers pursuant to U.S. bankruptcy law. The amount of these claims has not been pleaded or determined as against the HSBC entities. In November 2016, the U.S. Bankruptcy Court granted the motion to dismiss with respect to certain of the Trustee's claims filed by numerous defendants, including a number of foreign affiliates of HSBC Bank USA. In September 2017, the Second Circuit granted the parties' request to review the U.S. Bankruptcy Court's decision.

The Trustee's English action, which names HSBC Bank USA and other HSBC entities as defendants, seeks recovery of unspecified transfers of money from Madoff Securities to or through the HSBC entities. The Trustee's deadline for serving the claims has been extended through September 2018 for the U.K.-based defendants and November 2018 for all other defendants.

SPV Optimal SUS Ltd. ("SPV Optimal"), the purported assignee of Madoff Securities-invested Optimal Strategic U.S. Equity Ltd. filed an action in 2014 in New York state court asserting common law claims for aiding and abetting breach of fiduciary duty, aiding and abetting conversion, aiding and abetting fraud and knowing participation in a breach of trust and seeks to recover damages lost to Madoff's fraud. (*SPV OSUS Ltd. v. HSBC Bank plc, et al.*, Case No. 162259/2014). The case effectively is stayed pending appeal in a related case, *Optimal Strategic U.S. Equity Limited v. SPV OSUS Limited*.

In May 2015, two investors in the Hermes International Fund Limited filed an action in U.S. District Court for the Southern District of New York against HSBC entities, including HSBC Bank USA. Plaintiffs assert claims against several HSBC entities for (i) breach of fiduciary duty; (ii) aiding and abetting breach of fiduciary duty; (iii) aiding and abetting embezzlement; (iv) aiding and abetting fraud; (v) negligent misrepresentations; and (vi) unjust enrichment and seek damages of not less than \$8 million. (*Hau Yin To v. HSBC Bank plc, et al.* (15-cv-3590)). In March 2017, the court granted the HSBC defendants' motion to dismiss. In November 2017, the Second Circuit affirmed, on personal jurisdiction and standing grounds, the district court's dismissal of plaintiffs' complaint.

Beginning in 2009, Fairfield Sentry Limited, Fairfield Sigma Limited and Fairfield Lambda Limited ("Fairfield"), funds whose assets were directly or indirectly invested with Madoff Securities, commenced multiple suits in the British Virgin Islands ("BVI") and the United States against numerous fund shareholders, including various HSBC companies that acted as nominees for clients of HSBC's private banking business and other clients who invested in the Fairfield funds, seeking restitution of payments made in connection with share redemptions. The Fairfield liquidators voluntarily discontinued their actions against the HSBC defendants in BVI. In October 2016, the Fairfield liquidators filed a motion seeking leave to amend their complaints in the U.S. Bankruptcy Court. In January 2017, defendants filed a consolidated motion to dismiss and oppose the Fairfield liquidators' motion. The motions remain pending.

There are many factors that may affect the range of possible outcomes, and the resulting financial impact, of the various Madoff-related proceedings including, but not limited to, the circumstances of the fraud, the multiple jurisdictions in which proceedings have been brought and the number of different plaintiffs and defendants in such proceedings. The timing and resolution of these matters remains uncertain. It is possible that any liabilities that may arise as a result could be significant. In any event, we consider that we have good defenses to these claims and will continue to defend them vigorously.

Supranational, Sovereign and Agency ("SSA") Bonds. In April 2017, HSBC, HSBC Bank plc, HSI and HSBC Bank USA, among others, were named as defendants in a putative class action complaint alleging a conspiracy to manipulate the market for U.S. dollar-denominated SSA bonds between 2005 to the present in violation of the federal antitrust laws. In November 2017, plaintiffs filed a consolidated and amended complaint that dropped HSBC and HSBC Bank USA as defendants. The only remaining HSBC defendants are HSBC Bank plc and HSI, so this matter will no longer be reported.

In November 2017, HSBC, HSBC Bank plc, HSBC Bank USA, HSBC Bank Canada, HSBC USA, HSBC North America and HSI, among others, were named as defendants in a "Notice of Action" filed in the Superior Court of Justice, Ontario Province, Canada. The Notice alleges that the defendants conspired to manipulate the market for SSA bonds between January 2005 and December 2015 in violation of Canadian civil anti-trust law. A formal Statement of Claim has not been filed.

Benchmark Rate Litigation

HSBC USA and/or HSBC Bank USA are among several defendants in lawsuits filed by the following plaintiffs seeking unspecified damages arising from the alleged artificial suppression of U.S. dollar LIBOR rates: (1) the Federal Home Loan Mortgage Corporation; (2) two mutual funds managed by Prudential Investment Portfolios; (3) the FDIC, in its role as receiver for several failed banks; and (4) the National Credit Union Administration Board, in its capacity as liquidator for several failed credit unions. The other defendants are members of the U.S. dollar LIBOR panel of banks and their affiliates. These actions are part of the U.S. dollar LIBOR Multi-District Litigation proceeding pending in the U.S. District Court for the Southern District of New York (*In re LIBOR-Based Financial Instruments Antitrust Litigation*). HSBC and HSBC Bank plc are defendants in that proceeding as well. The stay previously imposed by the court on the individual actions was lifted in 2014. Plaintiffs subsequently filed amended complaints. Defendants moved to dismiss the amended complaints in 2014, and a hearing on the motion was held in February 2015. In December 2016, the court issued a ruling in which it (i) dismissed all anti-trust claims against foreign defendant banks for lack of personal jurisdiction; (ii) dismissed the class action brought on behalf of purchasers of corporate bonds not issued by a defendant bank but which paid interest linked to LIBOR ("Bondholder claim") for lack of efficient enforcer status; and (iii) sustained portions of all remaining anti-trust claims. The decision also contemplates further additional motions to dismiss the individual actions, including the actions against HSBC USA and HSBC Bank USA.

In 2014, HSBC Bank plc and other panel banks were named as defendants in a number of putative class actions that were filed and consolidated in the New York District Court on behalf of persons who transacted in interest rate derivative transactions or purchased or sold financial instruments that were either tied to U.S. dollar International Swaps and Derivatives Association fix

("ISDAfix") rates or were executed shortly before, during, or after the time of the daily ISDAfix setting window. The complaint alleges, among other things, misconduct related to these activities in violation of federal antitrust laws, the Commodity Exchange Act and state law. In 2014 and early 2015, plaintiffs filed first and second consolidated amended complaints substituting HSBC Bank USA for HSBC Bank plc as the only named HSBC Group defendant. In March 2016, defendants' motion to dismiss the second consolidated complaint was denied. In June 2017, HSBC Bank USA settled the ISDAfix litigation for \$14 million. The court granted preliminary approval of the settlement and we await final court approval.

HSBC Bank USA, HSBC, HSBC USA, HSBC North America and the Hongkong and Shanghai Banking Corporation Limited have been named as defendants, among others, in a putative class action brought in the U.S. District Court for the Southern District of New York on behalf of persons who transacted in products tied to the Singapore Interbank Offering Rate ("SIBOR") or Singapore Swap Offer Rate ("SOR") between January 2007 and December 2011. The complaint, encaptioned *Frontpoint Asian Event Driven Fund, L.P., et al. v Citibank, N.A., et al.* (Case No. 15-cv-05263), alleges that the defendant banks colluded to rig SIBOR and SOR by collusively making false SIBOR submissions and entering into collusive transactions directly in the swaps market, thereby fixing the prices of SIBOR and SOR based derivatives for their collective financial benefits. The defendants are accused of illegal restraint of trade in violation of the Sherman Anti-trust Act, violation of the Racketeer Influenced and Corrupt Organizations Act ("RICO"), and unjust enrichment. In August 2017, the court granted defendants' joint motion to dismiss with leave to replead. Plaintiffs have filed a second amended complaint, which defendants have moved to dismiss.

Mortgage Securitization Matters

In addition to the repurchase risk described in Note 25, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," HSBC Bank USA has also been involved as a sponsor/seller of loans used to facilitate whole loan securitizations underwritten by HSI. During 2005-2007, HSBC Bank USA purchased and sold \$24 billion of whole loans to HSI which were subsequently securitized and sold by HSI to third parties. The outstanding principal balance on these loans was approximately \$4.1 billion and \$4.6 billion at December 31, 2017 and 2016, respectively.

Participants in the U.S. mortgage securitization market that purchased and repackaged whole loans have been the subject of lawsuits and governmental and regulatory investigations and inquiries, which have been directed at groups within the U.S. mortgage market, such as servicers, originators, underwriters, trustees or sponsors of securitizations, and at particular participants within these groups. We expect activity in this area to continue. As a result, we may be subject to additional claims, litigation and governmental and regulatory scrutiny related to our participation in the U.S. mortgage securitization market, either individually or as a member of a group. As the industry's residential mortgage foreclosure issues continue, HSBC Bank USA has taken title to a number of foreclosed homes as trustee on behalf of various securitization trusts. As nominal record owner of these properties, HSBC Bank USA has been sued by municipalities and tenants alleging various violations of law, including laws regarding property upkeep and tenants' rights. While we believe and continue to maintain that the obligations at issue and any related liability are properly those of the servicer of each trust, we continue to receive significant and adverse publicity in connection with these and similar matters, including foreclosures that are serviced by others in the name of "HSBC, as trustee."

HSBC Bank USA and certain of our affiliates have been named as defendants in a number of actions in connection with residential mortgage-backed securities ("RMBS") offerings, which generally allege that the offering documents for securities issued by securitization trusts contained material misstatements and omissions, including statements regarding the underwriting standards governing the underlying mortgage loans.

In 2013, Deutsche Bank National Trust Company ("DBNTC"), as trustee of HASCO 2007-NC1, served a complaint that followed a summons with notice previously filed in New York County Supreme Court, State of New York, naming HSBC Bank USA as the sole defendant. The complaint alleges that DBNTC brought the action at the direction of certificateholders of the trust, seeking specific performance and/or damages of at least \$508 million arising out of the alleged breach of various representations and warranties made by HSBC Bank USA in the applicable pooling and servicing agreement regarding certain characteristics of the mortgage loans contained in the trust. In 2014, the court granted HSBC Bank USA's motion to dismiss, without prejudice, and with leave to replead. Plaintiff filed an amended complaint which HSBC Bank USA moved to dismiss, and that motion was denied in November 2015. HSBC Bank USA appealed the decision. In December 2017, the appeals court issued a decision dismissing the complaint.

Since 2010, various HSBC entities have received subpoenas and requests for information from the DOJ and the Massachusetts State Attorney General seeking the production of documents and information regarding HSBC's involvement in certain RMBS transactions as an issuer, sponsor, underwriter, depositor, trustee, custodian or servicer. In 2014, HSBC North America, on behalf of itself and various subsidiaries including, but not limited to, HSBC Bank USA, HSI Asset Securitization Corp., HSI, HSBC Mortgage Corporation (USA), HSBC Finance and Decision One Mortgage Company LLC, received a subpoena from the U.S. Attorney's Office for the District of Colorado, pursuant to the Financial Industry Reform, Recovery and Enforcement Act ("FIRREA"), concerning the origination, financing, purchase, securitization and servicing of subprime and non-subprime residential mortgages. We continue to cooperate with these investigations, which are at or nearing completion.

In December 2016, we had an initial discussion with the DOJ, wherein the DOJ stated its preliminary view that we are subject to liability under FIRREA in connection with certain securitizations from 2005 to 2007 with respect to which HSBC Bank USA served as sponsor or seller of loans and HSI served as underwriter. In March 2017, we provided our response to the DOJ, which, amongst other things, outlined why we disagree with the DOJ's preliminary view. Since then, we have been in active discussions with the DOJ regarding a potential resolution; however, we have also indicated a willingness to defend ourselves in the event that formal legal proceedings are commenced. There can be no assurance as to how or when this matter will be resolved, or whether this matter will be resolved prior to the commencement of formal legal proceedings by the DOJ. Moreover, it is possible that any such resolution could result in significant penalties and other costs. To date, at least one bank has been sued by the DOJ and at least eight other banks have reported settlements of mortgage-backed securities-related matters pursuant to FIRREA. The prior DOJ settlements provide no clear guidance as to how those individual settlement amounts were calculated, and due to the high degree of uncertainty involved, it is not practicable to estimate any possible financial impact of this matter, which could be significant. However, we note that the scale of our mortgage securitization activities was more limited in relation to a number of other banks in the industry.

We expect the focus on mortgage securitizations to continue and may be subject to additional claims, litigation and governmental or regulatory scrutiny relating to its participation in the U.S. mortgage securitization market.

Residential Funding Litigation In 2013, Residential Funding Company, LLC ("RFC") filed an action against HSBC Mortgage in Minnesota state court relating to alleged losses RFC suffered as a result of its purchase of approximately 8,800 mortgage loans from HSBC Mortgage between 1986 and 2007. The action subsequently was removed and transferred to the U.S. District Court for the Southern District of New York and then referred to the Bankruptcy Court for the Southern District of New York for disposition in connection with RFC's pending bankruptcy action. *Residential Funding Co. v. HSBC Mortg. Corp. (USA)*, Adv. Proc. No. 14-01915(MG). An amended complaint was subsequently filed with Rescap Liquidating Trust, as successor to RFC f/k/a Residential Funding Corporation as the named plaintiff. RFC alleges claims for breach of contract for alleged breach of representations and warranties concerning the quality and characteristics of the mortgage loans and contractual indemnification for alleged losses incurred by RFC arising out of purported defects in loans that RFC purchased from HSBC Mortgage and subsequently sold to third parties. In February 2015, the court granted in part and denied in part HSBC Mortgage's motion to dismiss. The court dismissed breach of contract claims relating to loans purchased before May 14, 2006 on statute of limitations grounds but allowed other claims to proceed. Discovery is proceeding.

Mortgage Securitization Trust Litigation Since 2014, Plaintiff-Investors in 280 RMBS trusts (the "Trusts") have sued HSBC Bank USA, as mortgage securitization trustee, in a number of cases: BlackRock et al., Royal Park Investments SA/NV ("RPI"), Phoenix Light SF Limited ("Phoenix Light"), the National Credit Union Administration Board, as Liquidating Agent ("NCUA"), Commerzbank AG, and Triaxx, IKB Bank AG ("IKB"), RMBS Recovery Holdings I, LLC, et al. ("Fir Tree"), VRS Holdings 2 LLC ("VRS") and Reliance Standard Life Insurance Company ("Reliance"). All the cases, with the exception of the IKB, Fir Tree, VRS and Reliance cases, have been deemed related and are assigned to the same judge in the U.S. District Court for the Southern District of New York. The IKB, VRS and Reliance cases are pending in New York State court and the Fir Tree case is pending in Virginia State court. The lawsuits were brought derivatively on behalf of the Trusts, but some also seek class relief. The complaints allege generally that the Trusts have collectively sustained losses in collateral value of approximately \$38 billion and seek to recover unspecified damages as a result of alleged breach of contract; breach of the federal Trust Indenture Act and New York's Streit Act; tort claims such as negligence, negligent misrepresentation, conflict of interest and breach of fiduciary duty. Similar lawsuits were filed simultaneously against other non-HSBC financial institutions that similarly served as mortgage securitization trustees. HSBC Bank USA's motions to dismiss these cases have largely been denied. These matters are proceeding.

In October 2017, Royal Park Investments SA/NV filed a complaint against HSBC Bank USA, as trustee, in the U.S. District Court for the Southern District of New York alleging various common law claims arising out of HSBC Bank USA's use of trust funds to defend itself against several lawsuits brought against the trustee. This matter is at an early stage.

Foreclosure Practices

In 2011, HSBC Bank USA entered into a consent cease and desist order with the OCC (the "OCC Servicing Consent Order") and our affiliate, HSBC Finance, and our common indirect parent, HSBC North America, entered into a similar consent order with the FRB (together with the OCC Servicing Consent Order, the "Servicing Consent Orders") following completion of a broad horizontal review of industry foreclosure practices. The OCC Servicing Consent Order required HSBC Bank USA to take prescribed actions to address the foreclosure practice deficiencies noted in the joint examination and described in the consent order, including an independent review of foreclosures pending or completed between January 2009 and December 2010 ("Independent Foreclosure Review" or "IFR").

In 2013, HSBC Bank USA entered into an agreement with the OCC, and HSBC Finance and HSBC North America entered into an agreement with the FRB (together the "IFR Settlement Agreements") to amend the Servicing Consent Orders, pursuant to which the IFR ceased and was replaced by a broader framework under which we and twelve other participating servicers provided cash payments and other assistance to help eligible borrowers. For participating servicers, including HSBC Bank USA and HSBC

Finance, fulfillment of the terms of the IFR Settlement Agreements satisfied the Independent Foreclosure Review requirements of the Servicing Consent Orders.

In 2015, HSBC Bank USA consented to the OCC's issuance of an amended OCC Servicing Consent Order setting forth the OCC's conclusion that we were not yet in compliance with all requirements of the OCC Servicing Consent Order and imposing certain business restrictions, which did not materially impact our business operations.

In January 2017, the OCC terminated the OCC Servicing Consent Order after determining that HSBC Bank USA had satisfied the requirements thereunder. In January 2018, the FRB terminated the related consent order against HSBC Finance and HSBC North America.

The Servicing Consent Orders do not preclude additional enforcement actions against HSBC Bank USA or our affiliates by bank regulatory, governmental or law enforcement agencies, such as the DOJ or state Attorneys General, which could include the imposition of civil money penalties and other sanctions relating to the activities that are the subject of the Servicing Consent Orders. In addition, the IFR Settlement Agreements do not preclude future private litigation concerning these practices.

Separate from the Servicing Consent Orders and the IFR Settlement discussed above, in 2012, the DOJ, the U.S. Department of Housing and Urban Development and state Attorneys General of 49 states announced a national mortgage settlement with the five largest U.S. mortgage servicers with respect to foreclosure and other mortgage servicing practices. Following the 2012 settlement, these government agencies initiated discussions with other mortgage industry servicers including us. In February 2016, HSBC Bank USA, HSBC Finance, HSBC Mortgage Services Inc. and HSBC North America entered into an agreement with the DOJ, the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau, other federal agencies and the Attorneys General of 49 states and the District of Columbia to resolve civil claims related to past residential mortgage loan origination and servicing practices (the "National Mortgage Settlement" or "NMS").

In March 2017, the monitor of the NMS filed with the U.S. District Court for the District of Columbia his Final Consumer Relief Report validating that our and our affiliates' obligation under the settlement to provide \$370 million in consumer relief has been satisfied. In June 2017, the NMS monitor filed with the Court his final report validating that all of our and our affiliates' obligations under the National Mortgage Settlement were satisfied.

The NMS may not, however, completely preclude other enforcement actions by state or federal agencies, regulators or law enforcement agencies related to foreclosure and other mortgage servicing practices, including, but not limited to, matters relating to the securitization of mortgages for investors, including the imposition of civil money penalties, criminal fines or other sanctions. In addition, these practices have in the past resulted in private litigation and such a settlement would not preclude further private litigation concerning foreclosure and other mortgage servicing practices.

Anti-Money Laundering, Bank Secrecy Act and Office of Foreign Assets Control Matters

In 2010, HSBC Bank USA entered into a consent cease and desist order with the OCC, and our parent, HSBC North America, entered into a consent cease and desist order with the FRB. In 2012, HSBC Bank USA further entered into an enterprise-wide compliance consent order (each an "Order" and together, the "Orders"). These orders require improvements to establish an effective compliance risk management program across our U.S. businesses, including risk management related to Bank Secrecy Act ("BSA") and Anti-Money Laundering ("AML") compliance. While these Orders remain open, HSBC Bank USA and HSBC North America believe that they have taken appropriate steps to bring themselves into compliance with the requirements of the Orders.

In 2012, HSBC, HSBC North America and HSBC Bank USA entered into agreements with U.S. and United Kingdom ("U.K.") government agencies regarding past inadequate compliance with AML/BSA and sanctions laws. Among those agreements, HSBC and HSBC Bank USA entered into a five-year deferred prosecution agreement with the DOJ, the United States Attorney's Office for the Eastern District of New York, and the United States Attorney's Office for the Northern District of West Virginia (the "AML DPA"), and HSBC consented to a cease and desist order and HSBC and HSBC North America consented to a civil money penalty order with the FRB. HSBC also entered into an agreement with the Office of Foreign Assets Control ("OFAC") regarding historical transactions involving parties subject to OFAC sanctions, as well as an undertaking with the FCA Authority to comply with certain forward-looking AML and sanctions-related obligations. In addition, HSBC Bank USA entered into a civil money penalty order with the U.S. Department of Treasury's Financial Crimes Enforcement Network ("FinCEN") and a separate monetary penalty order with the OCC.

Under these agreements, HSBC and HSBC Bank USA made payments totaling \$1.921 billion to U.S. authorities, of which \$1.381 billion was attributed to and paid by HSBC Bank USA and undertook various further obligations, including among others, to retain an independent compliance monitor (the "Monitor"). In December 2017, the AML DPA expired and the charges deferred by the AML DPA were dismissed. The Monitor will continue working in his capacity as a skilled person and independent consultant for a period of time at the FCA's and FRB's discretion. Additionally, as discussed elsewhere in this Note 27, we are the subject of other ongoing investigations and reviews by the DOJ.

In February 2018, the Monitor delivered his fourth annual follow-up review report. Through his country-level reviews, the Monitor identified potential AML and sanctions compliance issues that HSBC Group is reviewing further with the DOJ, FRB and/or FCA.

In particular, the DOJ is reviewing HSBC Group's handling of a corporate customer's accounts. In addition, FinCEN, as well as the Civil Division of the U.S. Attorney's Office for the Southern District of New York are investigating the collection and transmittal of third-party originator information in certain payments instructed over HSBC Group's proprietary payment systems. HSBC Group is cooperating with these investigations.

Concurrent with entry into the AML DPA, HSBC Bank USA also entered into two consent orders with the OCC. The first, discussed above, required HSBC Bank USA to adopt an enterprise-wide compliance program. The second required HSBC Bank USA to correct the circumstances noted in the OCC's report and imposed restrictions on HSBC Bank USA acquiring control of, or holding an interest in, any new financial subsidiary, or commencing a new activity in its existing financial subsidiary, without the OCC's prior approval.

The settlements with the U.S. and U.K. government agencies have led to private litigation and do not preclude further private litigation relating to HSBC Group's compliance with applicable AML/BSA and sanctions laws or other regulatory or law enforcement action for AML/BSA or sanctions or other matters not covered by the various agreements.

Shareholder Derivative Action In 2014, a shareholder of HSBC (who is not a shareholder of HSBC Bank USA, HSBC North America or HSBC USA) filed a shareholder derivative action, captioned *Michael Mason-Mahon v. Douglas J. Flint, et al.* (New York State Supreme Court, Nassau County, Index No. 602052/2014), purportedly on behalf of HSBC, HSBC Bank USA, HSBC North America and HSBC USA in New York State Supreme Court against the directors, certain officers and certain former directors of those HSBC companies alleging that those directors and officers breached their fiduciary duties to the companies and caused a waste of corporate assets by allegedly permitting and/or causing the conduct underlying the AML DPA. In 2014, the nominal corporate defendants moved to dismiss the action. Individual defendants who have been served also responded to the complaint. Plaintiffs filed an amended complaint in February 2015. Defendants filed a motion to dismiss the amended complaint in March 2015. The individual defendants who had been served also responded. In November 2015, the court granted the nominal corporate defendants' motion to dismiss. Plaintiffs have appealed this decision.

Charlotte Freeman, et al. v. HSBC Holdings plc, et al. In 2014, a complaint was filed in the U.S. District Court for the Eastern District of New York on behalf of representatives of U.S. persons killed and/or injured in Iraq between April 2004 and November 2011. The complaint was filed against HSBC, HSBC Bank USA, HSBC Bank plc and HSBC Bank Middle East Limited, as well as other non-HSBC banks, and alleges that the defendants conspired to violate the federal Anti-Terrorism Act., (18 U.S.C. §2331 et seq.) ("ATA"), by altering or falsifying payment messages involving Iran, Iranian parties and Iranian banks for transactions processed through the U.S. Defendants filed a motion to dismiss in March 2015. Plaintiffs filed amended complaints thereafter, which defendants moved to dismiss in September 2016. A decision on the motion remains pending.

Jeffrey Siegel, et al. v. HSBC Holdings plc, et al. In November 2015, an action was filed against HSBC, HSBC North America, HSBC Bank USA and HSBC Bank Middle East Limited (among other HSBC entities that subsequently were dismissed from the action), as well as unaffiliated Al Rajhi Bank, in the U.S. District Court for the Northern District of Illinois. Plaintiffs, four U.S. nationals injured or killed in a 2005 terrorist attack on a hotel in Amman, Jordan and their families and heirs, allege violations of the ATA. The complaint includes one count against the HSBC defendants for violation of the ATA's civil provision, alleging a failure to enforce due diligence methods to prevent its financial services from being used to support the terrorist attack. In August 2017, the court granted HSBC's and HSBC Bank Middle East Limited's motion to dismiss for lack of personal jurisdiction and transferred the action as to HSBC Bank USA and HSBC North America to the U.S. District Court for the Southern District of New York. In January 2018, the court denied plaintiffs' motion to amend the complaint to add allegations against HSBC.

Ramiro Giron, et al. v. Hong Kong and Shanghai Bank Company, Ltd., et al. In November 2015, a putative class action was filed in the U.S. District Court for the Central District of California against Hong Kong and Shanghai Bank Company, Ltd. and HSBC Bank USA by investors in a Ponzi scheme allegedly orchestrated by Phil Ming Xu and companies he controlled, including World Capital Markets and WCM777 entities. Plaintiffs allege violations of RICO, 18 U.S.C. §1961, et seq., common claims of aiding and abetting fraud and breach of fiduciary duty and California state statutory claims based on Hong Kong and Shanghai Banking Company's claimed acceptance of U.S. wire transfers to WCM777 from investors after U.S. federal and state authorities had shut down WCM777 in the U.S. in 2014. HSBC Bank USA is alleged to have acted as Hong Kong and Shanghai Banking Company's correspondent bank for certain wire transfers. Transfers to Hong Kong and Shanghai Banking Company are alleged to have totaled at least \$37 million. Plaintiffs also seek a trebling of damages under RICO and punitive damages under California law.

In June 2016, the court granted in part and denied in part HSBC Bank USA's motion to dismiss, and in October 2016, granted the Hong Kong and Shanghai Banking Company's motion to dismiss. In November 2017, the court granted HSBC Bank USA's motion for summary judgment and dismissed plaintiffs' fourth amended complaint and denied plaintiffs' motion for class certification. Plaintiffs filed a notice of appeal in December 2017.

Mary Zapata, et al. v. HSBC Holdings plc, et al. In February 2016, a group of plaintiffs claiming to be survivors and heirs of American nationals alleged to have been killed or injured in Mexico by Mexican drug cartels, filed a complaint in the U.S. District Court for the Southern District of Texas, Brownsville Division naming HSBC, HSBC Bank USA, HSBC México S.A., Institución de Banca Múltiple, Grupo Financiero HSBC and Grupo Financiero HSBC, S.A. de C.V. as defendants. Plaintiffs allege that the

HSBC defendants violated the ATA by providing financial services to individuals and entities associated with the drug cartels. Plaintiffs seek unspecified, treble damages.

In September 2017, the court dismissed claims against HSBC for lack of personal jurisdiction. In October 2017, the court likewise dismissed claims against HSBC Mexico S.A., Institucion de Banca Multiple, Grupo Financiero HSBC and Grupo Financiero HSBC, S.A. de C.V. for lack of personal jurisdiction while denying HSBC Bank USA's motion to transfer the case to the U.S. District Court for the Southern District of New York. Plaintiffs thereafter voluntarily dismissed the Texas action.

In November 2017, the Zapata plaintiffs filed an action in the U.S. District Court for the Eastern District of New York naming HSBC, HSBC Bank USA, HSBC México S.A., Institución de Banca Múltiple, Grupo Financiero HSBC and Grupo Financiero HSBC, S.A. de C.V. as defendants. The complaint is substantially similar to the prior pending action alleging on behalf of a group of survivors and heirs of American nationals alleged to have been killed or injured in Mexico by Mexican drug cartels that the HSBC defendants violated the ATA by providing financial services to individuals and entities associated with the drug cartels. Defendants moved to dismiss the action in February 2018.

Saul Martinez, et al. v. Deutsche Bank AG, et al. In November 2016, a complaint was filed in the U.S. District Court for the Southern District of Illinois on behalf of representatives of U.S. persons killed and/or injured in Iraq between 2004 and 2011. The complaint was filed against HSBC, HSBC Bank USA, HSBC Bank plc and HSBC Bank Middle East Limited, as well as other non-HSBC defendants, and alleges that the defendants conspired to violate the federal ATA by altering or falsifying payment messages involving Iran, Iranian parties and Iranian banks for transactions processed through the U.S. Plaintiffs filed an amended complaint in January 2017. In April 2017, the court granted defendants' motion to transfer the action to the U.S. District Court for the Eastern District of New York. Plaintiffs voluntarily dismissed the case in October 2017.

Timothy O'Sullivan, et al. v. Deutsche Bank AG, et al. In November 2017, a complaint was filed in the U.S. District Court for the Southern District of New York on behalf of representatives of U.S. persons killed and/or injured in Iraq between 2003 and 2011. The complaint was filed against HSBC, HSBC Bank plc, HSBC Bank USA, HSBC North America and HSBC Bank Middle East Limited, as well as other non-HSBC defendants, and alleges that the defendants conspired to violate the ATA by altering or falsifying payment messages involving Iran, Iranian parties and Iranian banks for transactions processed through the U.S. This action is at an early stage.

Telephone Consumer Protection Act ("TCPA") Litigation

In March 2017, plaintiff filed a consolidated and amended putative class action in the U.S. District Court for the Central District of California. *Ahmed and Monteleone v. HSBC Bank USA, National Association* (Case 5:16-cv-02057). The consolidated action alleges that the defendants contacted plaintiffs, or the members of the class that they seek to represent, on their cellular telephones using an automatic telephone dialing system or an artificial or prerecorded voice, without prior express consent or despite revocation of prior consent, in violation of the Telephone Consumer Protection Act, 47 U.S.C. §227 et seq. Plaintiffs seek statutory damages of up to \$1,500 for each violation. HSBC Mortgage Corporation responded to the complaint, and discovery is underway.

Other Regulatory and Law Enforcement Investigations

We continue to cooperate in ongoing investigations by the DOJ and the Internal Revenue Service regarding whether certain HSBC Group companies and employees acted appropriately in relation to certain customers who had U.S. tax reporting requirements.

In 2014, the Argentine tax authority filed a complaint against several individuals, including some current and former HSBC employees, alleging tax evasion and an unlawful tax association between HSBC Private Bank Suisse SA, HSBC Bank Argentina and HSBC Bank USA and certain HSBC officers, which allegedly enabled HSBC customers to evade Argentine tax obligations. Pending with the court are decisions whether to indict and proceed with charges against HSBC customers and employees.

We and certain other HSBC entities have received requests for information from various regulatory or law enforcement authorities around the world concerning persons and entities believed to be linked to Mossack Fonseca & Co, a service provider of personal investment companies. HSBC is cooperating with the relevant authorities.

Based on the facts currently known, in respect of each of the above investigations, it is not practicable at this time for us to determine the terms on which these ongoing investigations will be resolved or the timing of such resolution or for us to estimate reliably the amounts, or range of possible amounts, of any fines and/or penalties. As matters progress, it is possible that any fines and/or penalties could be significant.

28. Financial Statements of HSBC USA Inc. (Parent)

Condensed parent company financial statements follow:

Balance Sheet At December 31,	2017	2016
	(in millions)	
Assets:		
Interest bearing deposits with banks	\$ 1	\$ —
Securities held-to-maturity (fair value of \$3 million at both December 31, 2017 and 2016).....	2	3
Receivables and balances due from subsidiaries	14,536	17,356
Receivables from other HSBC affiliates	6,722	3,863
Investment in subsidiaries:		
Banking	23,316	23,626
Other	1	3
Other assets	148	267
Total assets	\$ 44,726	\$ 45,118
Liabilities:		
Interest, taxes and other liabilities	\$ 137	\$ 106
Payables due to subsidiaries	3	1
Payables due to other HSBC affiliates	22	27
Short-term borrowings	1,154	1,251
Long-term debt ⁽¹⁾	22,474	22,542
Long-term debt due to other HSBC affiliates ⁽¹⁾	842	836
Total liabilities	24,632	24,763
Total equity	20,094	20,355
Total liabilities and equity	\$ 44,726	\$ 45,118

⁽¹⁾ Contractual scheduled maturities for the debt over the next five years are as follows: 2018 –\$7.1 billion; 2019 – \$4.0 billion; 2020 – \$5.8 billion; 2021 – \$1.6 billion; 2022 – \$1.7 billion; and thereafter – \$3.1 billion.

Statement of Income (Loss) Year Ended December 31,	2017	2016	2015
	(in millions)		
Income:			
Dividends from banking subsidiaries	\$ 136	\$ 136	\$ 104
Dividends from other subsidiaries	—	17	1
Interest from subsidiaries	309	268	97
Interest from other HSBC affiliates	37	115	121
Other interest income	5	2	14
Other securities gains, net	—	7	1
Other income (loss) from subsidiaries	(1)	1	(2)
Other income (loss) from other HSBC Affiliates	1,093	418	(79)
Other income (loss)	(772)	(321)	121
Total income	<u>807</u>	<u>643</u>	<u>378</u>
Expenses:			
Interest to subsidiaries	—	—	23
Interest to other HSBC Affiliates	40	43	28
Other interest expense	541	475	375
Other expenses with subsidiaries	15	27	—
Other expenses	3	3	6
Total expenses	<u>599</u>	<u>548</u>	<u>432</u>
Income (loss) before taxes and equity in undistributed income (loss) of subsidiaries	<u>208</u>	<u>95</u>	<u>(54)</u>
Income tax expense (benefit)	18	(27)	(76)
Income (loss) before equity in undistributed income (loss) of subsidiaries	<u>190</u>	<u>122</u>	<u>22</u>
Equity in undistributed income (loss) of subsidiaries	(369)	7	308
Net income (loss)	<u>\$ (179)</u>	<u>\$ 129</u>	<u>\$ 330</u>

Statement of Comprehensive Loss Year Ended December 31,	2017	2016	2015
	(in millions)		
Net income (loss)	\$ (179)	\$ 129	\$ 330
Net change in unrealized gains (losses), net of tax:			
Investment securities	211	(227)	(392)
Fair value option liabilities attributable to our own credit spread	(193)	—	—
Derivatives designated as cash flow hedges	(7)	13	(14)
Pension and post-retirement benefit plans	2	3	—
Total other comprehensive income (loss)	13	(211)	(406)
Comprehensive loss	\$ (166)	\$ (82)	\$ (76)

Statement of Cash Flows Year Ended December 31,	2017	2016	2015
	(in millions)		
<i>Cash flows from operating activities:</i>			
Net income (loss).....	\$ (179)	\$ 129	\$ 330
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization.....	12	14	25
Net change in other assets and liabilities.....	485	274	517
Undistributed (income) loss of subsidiaries	369	(7)	(308)
Other, net	5	(4)	(31)
Cash provided by operating activities	<u>692</u>	<u>406</u>	<u>533</u>
<i>Cash flows from investing activities:</i>			
Purchases of securities.....	—	—	(56)
Sales and maturities of securities.....	1	254	298
Net change in investments in and receivables due from subsidiaries.....	2,843	(496)	(4,489)
Net change in receivables from other HSBC affiliates.....	(2,882)	887	835
Other, net	403	(27)	(38)
Cash provided by (used in) investing activities.....	<u>365</u>	<u>618</u>	<u>(3,450)</u>
<i>Cash flows from financing activities:</i>			
Net change in payables to other HSBC affiliates	(2)	19	—
Net change in short-term borrowings	(97)	(727)	(2,794)
Issuance of long-term debt.....	4,826	3,587	11,946
Repayment of long-term debt	(5,689)	(3,815)	(9,870)
Preferred stock issuance	—	1,265	—
Preferred stock redemption.....	—	(1,265)	(300)
Capital contribution from parent	—	—	4,000
Other increases (decreases) in capital surplus	(18)	(21)	(1)
Dividends paid.....	(77)	(67)	(65)
Cash provided by (used in) financing activities	<u>(1,057)</u>	<u>(1,024)</u>	<u>2,916</u>
Net change in cash and due from banks	—	—	(1)
Cash and due from banks at beginning of year	—	—	1
<i>Cash and due from banks at end of year</i>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Cash paid for:			
Interest	<u>\$ 579</u>	<u>\$ 517</u>	<u>\$ 406</u>

HSBC Bank USA is subject to legal restrictions on certain transactions with its non-bank affiliates in addition to the restrictions on the payment of dividends to us. See Note 23, "Retained Earnings and Regulatory Capital Requirements," for further discussion.

SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

The following table presents a quarterly summary of selected financial information for HUSI:

	2017				2016			
	Fourth	Third	Second	First	Fourth	Third	Second	First
	(in millions)							
Net interest income.....	\$ 534	\$ 560	\$ 582	\$ 597	\$ 588	\$ 604	\$ 638	\$ 654
Provision for credit losses	(45)	(22)	(21)	(77)	19	62	134	157
Net interest income after provision for credit losses.....	579	582	603	674	569	542	504	497
Other revenues ⁽¹⁾	458	393	558	593	282	338	307	477
Operating expenses ⁽¹⁾	903	820	849	819	899	821	837	741
Income (loss) before income tax	134	155	312	448	(48)	59	(26)	233
Income tax expense (benefit).....	907	61	108	152	(11)	26	(5)	79
Net income (loss).....	<u>\$ (773)</u>	<u>\$ 94</u>	<u>\$ 204</u>	<u>\$ 296</u>	<u>\$ (37)</u>	<u>\$ 33</u>	<u>\$ (21)</u>	<u>\$ 154</u>

⁽¹⁾ During the fourth quarter of 2017, we changed our presentation for certain cost reimbursements that were previously netted as an offset to affiliate expense. We now present these reimbursements gross in affiliate income. As a result, we have reclassified prior year amounts in order to conform to the current year presentation. See Note 21, "Related Party Transactions," in the accompanying consolidated financial statements for additional information. The following table reflects the impact of this reclassification for the periods below:

	2017			2016			
	Third	Second	First	Fourth	Third	Second	First
	(in millions)						
Increase in other revenues.....	25	29	32	25	18	14	15
Increase in operating expenses.....	25	29	32	25	18	14	15

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

During the years ended December 31, 2017, 2016 and 2015, there were no disagreements on accounting and financial disclosure matters between us and PricewaterhouseCoopers LLP ("PwC") on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which, if not resolved to the satisfaction of PwC, would have caused PwC to make reference to the matter in its reports on our financial statements.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures We maintain a system of internal and disclosure controls and procedures designed to ensure that information required to be disclosed by HSBC USA in the reports we file or submit under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is recorded, processed, summarized and reported on a timely basis. Our Board of Directors, operating through its Audit Committee, which is composed entirely of independent non-executive directors, provides oversight to our financial reporting process.

We conducted an evaluation, with the participation of the Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report so as to alert them in a timely fashion to material information required to be disclosed in reports we file under the Exchange Act.

Changes in Internal Control over Financial Reporting There has been no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Assessment of Internal Control over Financial Reporting Management is responsible for establishing and maintaining an adequate internal control structure and procedures over financial reporting as defined in Rule 13a-15(f) of the Exchange Act, and has completed an assessment of the effectiveness of HSBC USA's internal control over financial reporting as of December 31, 2017. In making this assessment, management used the criteria related to internal control over financial reporting established by the Committee of Sponsoring Organizations of the Treadway Commission in "Internal Control-Integrated Framework (2013)."

Based on the assessment performed, management concluded that as of December 31, 2017, HSBC USA's internal control over financial reporting was effective.

Item 9B. Other Information

Disclosures pursuant to Section 13(r) of the Securities Exchange Act Section 13(r) of the Securities Exchange Act requires each issuer registered with the SEC to disclose in its annual or quarterly reports whether it or any of its affiliates have knowingly engaged in specified activities or transactions with persons or entities targeted by U.S. sanctions programs relating to Iran, terrorism, or the proliferation of weapons of mass destruction, even if those activities are not prohibited by U.S. law and are conducted outside the U.S. by non-U.S. affiliates in compliance with local laws and regulations.

To comply with this requirement, HSBC has requested relevant information from its affiliates globally. During the period covered by this Form 10-K, HUSI did not engage in activities or transactions requiring disclosure pursuant to Section 13(r) other than those activities related to frozen accounts and transactions permitted under relevant U.S. sanction programs described under "Frozen Accounts and Transactions" below. The following activities conducted by our affiliates are disclosed in response to Section 13(r):

Loans in repayment Between 2001 and 2005, the Project and Export Finance division of the HSBC Group arranged or participated in a portfolio of loans to Iranian energy companies and banks. All of these loans were guaranteed by European and Asian export credit agencies and have varied maturity dates with final maturity in 2018. For those loans that remain outstanding, the HSBC Group continues to seek repayment in accordance with its obligations to the supporting export credit agencies. Details of these loans follow.

At December 31, 2017, the HSBC Group had five loans outstanding to an Iranian petrochemical company. These loans are supported by the official export credit agencies of the following countries: the United Kingdom, South Korea and Japan. The HSBC Group continues to seek repayments from the Iranian company under the outstanding loans in accordance with their original maturity profiles. Two repayments have been made under each of the five loans in 2017.

The HSBC Group also acted as a sub-participant in a Spanish Export Credit Agency supported loan provided by another international bank to Bank Mellat. This loan matured in 2013 with claims for non-payment being settled by the agency. A small balance which had remained unpaid by Bank Mellat in relation to this legacy asset was recovered in the first quarter of 2017.

Estimated gross revenue and net profit generated by these loans in repayment for 2017, which includes interest and fees, was approximately \$107,000. While the HSBC Group intends to continue to seek repayment under the existing loans, all of which were entered into before the petrochemical sector of Iran became a target of U.S. sanctions, it does not currently intend to extend any new loans.

Legacy contractual obligations related to guarantees Between 1996 and 2007, the HSBC Group provided guarantees to a number of its non-Iranian customers in Europe and the Middle East for various business activities in Iran. In a number of cases, the HSBC Group issued counter indemnities in support of guarantees issued by Iranian banks as the Iranian beneficiaries of the guarantees required that they be backed directly by Iranian banks. The Iranian banks to which the HSBC Group provided counter indemnities included Bank Tejarat, Bank Melli, and the Bank of Industry and Mine.

There was no measurable gross revenue in 2017 under those guarantees and counter indemnities. The HSBC Group does not allocate direct costs to fees and commissions and, therefore, has not disclosed a separate net profit measure. The HSBC Group is seeking to cancel all relevant guarantees and counter indemnities and does not currently intend to provide any new guarantees or counter indemnities involving Iran. None were cancelled in 2017 and approximately 19 remain outstanding.

Other relationships with Iranian banks Activity related to U.S.-sanctioned Iranian banks not covered elsewhere in this disclosure includes the following:

- The HSBC Group maintains several accounts in the United Kingdom for an Iranian-owned, U.K.-regulated financial institution. These accounts are generally no longer restricted under U.K. law, though HSBC maintains restrictions on the accounts as a matter of policy. The HSBC Group is seeking to exit these accounts and has begun transferring the funds to the client's accounts at other financial institutions. Estimated gross revenue in 2017 on these accounts, which includes fees and/or commissions, was approximately \$109,090.
- The HSBC Group acts as the trustee and administrator for a pension scheme involving eight employees of a U.S.-sanctioned Iranian bank in Hong Kong, six of whom joined the scheme during 2017. Under the rules of this scheme, the HSBC Group accepts contributions from the Iranian bank each month and allocates the funds into the pension accounts of the Iranian bank's employees. The HSBC Group runs and operates this pension scheme in accordance with Hong Kong laws and regulations. Estimated gross revenue, which includes fees and/or commissions, generated by this pension scheme during 2017 was approximately \$2,910.

For the Iranian bank related-activity discussed above, the HSBC Group does not allocate direct costs to fees and commissions and, therefore, has not disclosed a separate net profit measure.

The HSBC Group has been holding a safe custody box for the Central Bank of Iran. For a number of years, the box has not been accessed by the Central Bank of Iran and no fees have been charged to the Central Bank of Iran.

The HSBC Group currently intends to continue to wind down the activity discussed in this section, to the extent legally permissible, and not enter into any new such activity.

Activity related to U.S Executive Order 13382 The HSBC Group maintains an account for a corporate customer whose owner was designated under Executive Order 13382 during the first quarter of 2017. The customer made a payment of \$370,000 shortly after the owner's designation, which was cleared locally. The account was subsequently frozen. There was no measurable gross revenue or net profit generated from this transaction in 2017.

Other Activity The HSBC Group has an insurance company customer in the United Arab Emirates that during 2017 made six payments and processed five checks for the reimbursement of medical treatment to a hospital located in the United Arab Emirates and owned by the Government of Iran. HSBC processed all 11 transactions to the hospital made by its customer.

The HSBC Group has a travel agent customer in Europe that made 12 payments to an airline owned by the Government of Iran for the purchase of airline tickets on behalf of a customer.

The HSBC Group maintains an account for an individual customer that made a payment to the Embassy of Iran in Malaysia through a depository account during the first quarter of 2017, which pertained to charges for sending a document to his father in Iran.

The HSBC Group maintains an account for a corporate customer that received a payment from an Iranian-owned financial institution during the first quarter of 2017.

The HSBC Group maintains an account for an individual customer that received a check payment from an Iranian-owned entity during the first quarter of 2017.

The HSBC Group maintains an account for a corporate customer that received a check payment issued by an Iranian-owned financial institution during the first quarter of 2017.

The HSBC Group maintains accounts for certain individual and corporate customers that have used HSBC credit cards to make payments to Iranian-owned entities (such as Iranian embassies located in different countries for consular services), during 2017.

For the activity in this section, there was no measurable gross revenue or net profit to the HSBC Group in 2017.

Frozen accounts and transactions The HSBC Group and HSBC Bank USA (a subsidiary of HUSI) maintain several accounts that are frozen as a result of relevant sanctions programs, and safekeeping boxes and other similar custodial relationships, for which no activity, except as licensed or otherwise authorized, took place during 2017. There was no measurable gross revenue or net profit to the HSBC Group and HSBC Bank USA during 2017 relating to these frozen accounts.

PART III**Item 10. Directors, Executive Officers and Corporate Governance**

Omitted.

Item 11. Executive Compensation

Omitted.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Omitted.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Omitted.

Item 14. Principal Accounting Fees and Services

Audit Fees The aggregate amount billed by our principal accountant, PricewaterhouseCoopers LLP ("PwC"), for audit services performed during the fiscal years ended December 31, 2017 and 2016 was \$5,973,138 and \$4,200,343, respectively. Audit services include the auditing of financial statements, quarterly reviews, statutory audits, and the preparation of comfort letters, consents and review of registration statements.

Audit Related Fees The aggregate amount billed by PwC in connection with audit related services performed during the fiscal years ended December 31, 2017 and 2016 was \$2,543,000 and \$2,504,463, respectively. Audit related services include employee benefit plan audits, and audit or attestation services not required by statute or regulation.

Tax Fees The aggregate amount billed by PwC for tax related services performed during the fiscal years ended December 31, 2017 and 2016 was \$14,000 and \$63,000, respectively. These services include tax related research, general tax services in connection with transactions and legislation and tax services for review of Federal tax accounts in relation to the computation of associated interest.

All Other Fees The aggregate amount billed by PwC for other services performed during the fiscal years ended December 31, 2017 and 2016 was nil and nil, respectively.

All of the fees described above were approved by HSBC USA's Audit Committee.

The Audit Committee has a written policy that requires pre-approval of all services to be provided by PwC, including audit, audit-related, tax and all other services. Pursuant to the policy, the Audit Committee annually pre-approves the audit fee and terms of the audit services engagement. The Audit Committee also approves a specified list of audit, audit-related, tax and permissible non-audit services deemed to be routine and recurring services. Any service not included on this list must be submitted to the Audit Committee for pre-approval. On an interim basis, any proposed engagement that does not fit within the definition of a pre-approved service may be presented to the Chair of the Audit Committee for approval and to the full Audit Committee at its next regular meeting.

PART VI**Item 15. Exhibits and Financial Statement Schedules**

(a)(1) Financial Statements

The consolidated financial statements listed below, together with an opinion of PWC dated February 20, 2018 with respect thereto, are included in this Form 10-K pursuant to Item 8. Financial Statements and Supplementary Data of this Form 10-K.

HSBC USA Inc. and Subsidiaries:

Report of Independent Registered Public Accounting Firm

Consolidated Statement of Income (Loss)

Consolidated Statement of Comprehensive Loss

Consolidated Balance Sheet

Consolidated Statement of Changes in Equity

Consolidated Statement of Cash Flows

Notes to Financial Statements

Selected Quarterly Financial Data (Unaudited)

(a)(2) Not applicable.

(a)(3) Exhibits

- 3(i) Articles of Incorporation and amendments and supplements thereto (incorporated by reference to Exhibit 3(a) to HSBC USA Inc.'s Annual Report on Form 10-K for the year ended December 31, 1999, Exhibit 3 to HSBC USA Inc.'s Quarterly Report on Form 10-Q for the quarter ended September 30, 2000, Exhibit 3.2 to HSBC USA Inc.'s Current Report on Form 8-K filed April 4, 2005, Exhibit 3.3 to HSBC USA Inc.'s Current Report on Form 8-K filed April 4, 2005, Exhibit 3.2 to HSBC USA Inc.'s Current Report on Form 8-K filed October 14, 2005, Exhibit 3.2 to HSBC USA Inc.'s Current Report on Form 8-K filed May 22, 2006 and Exhibit 3.2 to HSBC USA Inc.'s Current Report on Form 8-K filed on May 31, 2016).
- 3(ii) Bylaws of HSBC USA Inc., as Amended and Restated effective April 20, 2017 (incorporated by reference to Exhibit 3.2 to HSBC USA Inc.'s Current Report on Form 8-K filed April 24, 2017).
- 4.1 Senior Indenture, dated as of March 31, 2009, by and between HSBC USA Inc. and Wells Fargo Bank, National Association, as trustee, as amended and supplemented (incorporated by reference to Exhibit 4.1 to HSBC USA Inc.'s Registration Statement on Form S-3, Registration No. 333-158358, Exhibit 4.2 to HSBC USA Inc.'s Registration Statement on Form S-3, Registration No. 333-180289 and Exhibit 4.3 to HSBC USA Inc.'s Registration Statement on Form S-3, Registration No. 333-202524).
- 4.2 Subordinated Indenture, dated as of October 24, 1996, by and between HSBC USA Inc. and Deutsche Bank Trust Companies Americas (as successor in interest to Bankers Trust Company), as trustee, as amended and supplemented (incorporated by reference to Exhibits 4.3, 4.4, 4.5 and 4.6 to Post-Effective Amendment No. 1 to HSBC USA Inc.'s Registration Statement on Form S-3, Registration No. 333-42421, and Exhibit 4.1 to HSBC USA Inc.'s Current Report on Form 8-K filed September 27, 2010).
- 4.3 Warrant Indenture, dated as of May 16, 2016, by and between HSBC USA Inc. and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.31 to Post-Effective Amendment No. 1 to HSBC USA Inc.'s Registration Statement on Form S-3, Registration No. 333-202524).
- 4.4 Other instruments defining the rights of holders of long-term debt of HSBC USA Inc. and its consolidated subsidiaries are not being filed herewith since the total amount of securities authorized under each such instrument does not exceed 10 percent of the total assets of HSBC USA Inc. and its subsidiaries on a consolidated basis. HSBC USA Inc. agrees that it will furnish a copy of any such instrument to the Securities and Exchange Commission upon request.
- 12 Computation of Ratio of Earnings to Fixed Charges.
- 23 Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.
- 24 Power of Attorney (included on the signature page of this Form 10-K).
- 31 Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32 Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101.INS XBRL Instance Document⁽¹⁾
101.SCH XBRL Taxonomy Extension Schema Document⁽¹⁾
101.CAL XBRL Taxonomy Extension Calculation Linkbase Document⁽¹⁾
101.DEF XBRL Taxonomy Extension Definition Linkbase Document⁽¹⁾
101.LAB XBRL Taxonomy Extension Label Linkbase Document⁽¹⁾
101.PRE XBRL Taxonomy Extension Presentation Linkbase Document⁽¹⁾

⁽¹⁾ Pursuant to Rule 405 of Regulation S-T, includes the following financial information included in our Annual Report on Form 10-K for the year ended December 31, 2017, formatted in eXtensible Business Reporting Language ("XBRL") interactive data files: (i) the Consolidated Statement of Income (Loss) for the years ended December 31, 2017, 2016 and 2015, (ii) the Consolidated Statement of Comprehensive Loss for the years ended December 31, 2017, 2016 and 2015, (iii) the Consolidated Balance Sheet at December 31, 2017 and 2016, (iv) the Consolidated Statement of Changes in Equity for the years ended December 31, 2017, 2016 and 2015, (v) the Consolidated Statement of Cash Flows for the years ended December 31, 2017, 2016 and 2015, and (vi) the Notes to Consolidated Financial Statements.

Item 16. Form 10-K Summary

Omitted.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, HSBC USA Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this the 20th day of February 2018.

HSBC USA INC.

By: /s/ PATRICK J. BURKE

Patrick J. Burke

President and Chief Executive Officer

Each person whose signature appears below constitutes and appoints K. P. Pisarczyk as his/her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him/her in his/her name, place and stead, in any and all capacities, to sign and file, with the Securities and Exchange Commission, this Form 10-K and any and all amendments and exhibits thereto, and all documents in connection therewith, granting unto each such attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he/she might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents or their substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of HSBC USA Inc. and in the capacities indicated on this the 20th day of February 2018.

Signature	Title
<u>/s/ P. J. BURKE</u> (P. J. Burke)	President, Chief Executive Officer, Chairman and Director (as Principal Executive Officer)
<u>/s/ P. D. AMEEN</u> (P. D. Ameen)	Director
<u>/s/ K. M. BLAKELY</u> (K. M. Blakely)	Director
<u>/s/ R. H. COX</u> (R. H. Cox)	Executive Director
<u>/s/ B. F. KROEGER</u> (B. F. Kroeger)	Director
<u>/s/ N. G. MISTRETTA</u> (N. G. Mistretta)	Director
<u>/s/ J. C. SHERBURNE</u> (J. C. Sherburne)	Director
<u>/s/ T. K. WHITFORD</u> (T. K. Whitford)	Director
<u>/s/ M. A. ZAESKE</u> (M. A. Zaeske)	Senior Executive Vice President and Chief Financial Officer (as Principal Financial Officer)
<u>/s/ W. TABAKA</u> (W. Tabaka)	Executive Vice President and Chief Accounting Officer (as Principal Accounting Officer)

HSBC USA INC.
COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(dollars are in millions)				
Ratios excluding interest on deposits:					
Net income (loss)	\$ (179)	\$ 129	\$ 330	\$ 354	\$ (338)
Income tax expense (benefit)	1,228	89	230	(56)	156
Fixed charges:					
Interest on:					
Short-term borrowings	124	79	46	36	27
Long-term debt	998	864	709	650	661
Others ⁽¹⁾	25	15	16	(88)	66
One third of rents, net of income from subleases	31	27	28	31	33
Total fixed charges, excluding interest on deposits	<u>1,178</u>	<u>985</u>	<u>799</u>	<u>629</u>	<u>787</u>
Earnings before taxes and fixed charges, excluding interest on deposits	<u>\$ 2,227</u>	<u>\$ 1,203</u>	<u>\$ 1,359</u>	<u>\$ 927</u>	<u>\$ 605</u>
Ratio of earnings to fixed charges, excluding interest on deposits ..	<u>1.89</u>	<u>1.22</u>	<u>1.70</u>	<u>1.47</u>	<u>.77</u>
Ratios including interest on deposits:					
Total fixed charges, excluding interest on deposits	\$ 1,178	\$ 985	\$ 799	\$ 629	\$ 787
Add: Interest on deposits	703	468	260	145	184
Total fixed charges, including interest on deposits	<u>1,881</u>	<u>1,453</u>	<u>1,059</u>	<u>774</u>	<u>971</u>
Earnings before taxes and fixed charges, excluding interest on deposits	2,227	1,203	1,359	927	605
Add: Interest on deposits	703	468	260	145	184
Earnings before taxes and fixed charges, including interest on deposits	<u>\$ 2,930</u>	<u>\$ 1,671</u>	<u>\$ 1,619</u>	<u>\$ 1,072</u>	<u>\$ 789</u>
Ratio of earnings to fixed charges, including interest on deposits ..	<u>1.56</u>	<u>1.15</u>	<u>1.53</u>	<u>1.39</u>	<u>.81</u>

⁽¹⁾ During 2014, we concluded certain state and local tax audits resulting in the settlement of significant uncertain tax positions covering a number of years. As a result, we released tax reserves previously maintained in relation to the periods and issues under review. In addition, we released our accrued interest associated with the tax reserves released which resulted in a \$120 million benefit to interest expense in 2014.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 ASR (No. 333-202524) of HSBC USA Inc. of our report dated February 20, 2018 relating to the consolidated financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 20, 2018

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

Certification of Chief Executive Officer

I, Patrick J. Burke, certify that:

1. I have reviewed this report on Form 10-K of HSBC USA Inc.;
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: February 20, 2018

/s/ PATRICK J. BURKE

Patrick J. Burke

Chairman of the Board, President
and Chief Executive Officer

Certification of Chief Financial Officer

I, Mark A. Zaeske, certify that:

1. I have reviewed this report on Form 10-K of HSBC USA Inc.;
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: February 20, 2018

/s/ MARK A. ZAESKE

Mark A. Zaeske

Senior Executive Vice President and
Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

**Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

The certification set forth below is being submitted in connection with the HSBC USA Inc. (the “Company”) Annual Report on Form 10-K for the period ending December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the “Report”) for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the “Exchange Act”) and Section 1350 of Chapter 63 of Title 18 of the United States Code.

I, Patrick J. Burke, certify that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of HSBC USA Inc.

Date: February 20, 2018

/s/ PATRICK J. BURKE

Patrick J. Burke

Chairman of the Board, President
and Chief Executive Officer

This certification accompanies each Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by HSBC USA Inc. for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

The signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to HSBC USA Inc. and will be retained by HSBC USA Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

**Certification pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

The certification set forth below is being submitted in connection with the HSBC USA Inc. (the "Company") Annual Report on Form 10-K for the period ending December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

I, Mark A. Zaeske, certify that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of HSBC USA Inc.

Date: February 20, 2018

/s/ MARK A. ZAESKE

Mark A. Zaeske

Senior Executive Vice President and
Chief Financial Officer

This certification accompanies each Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by HSBC USA Inc. for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

The signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to HSBC USA Inc. and will be retained by HSBC USA Inc. and furnished to the Securities and Exchange Commission or its staff upon request.