
**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, 2020**
OR

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

For the transition period from _____ to _____

Commission file 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	Trading Symbol(s)	Name of Each Exchange on Which Registered
\$100,000,000 Zero Coupon Callable Accreting Notes due January 15, 2043	HBA/43	New York Stock Exchange
\$50,000,000 Zero Coupon Callable Accreting Notes due January 29, 2043	HBA/43A	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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

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 ☐

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

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 19, 2021, 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

<u>Part/Item No.</u>		<u>Page</u>
Part I		
Item 1.	Business:	
	Organization	4
	HSBC Group	4
	HSBC North America Operations	4
	HSBC USA Operations	5
	Funding	7
	Human Capital	7
	Regulation and Competition	10
	Corporate Governance and Controls	17
Item 1A.	Risk Factors	18
Item 1B.	Unresolved Staff Comments	33
Item 2.	Properties	33
Item 3.	Legal Proceedings	33
Item 4.	Mine Safety Disclosures	33
Part II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	33
Item 6.	Selected Financial Data	34
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations:	
	Forward-Looking Statements	36
	Executive Overview	38
	Basis of Reporting	44
	Critical Accounting Policies and Estimates	45
	Balance Sheet Review	50
	Results of Operations	55
	Segment Results - Group Reporting Basis	61
	Credit Quality	66
	Liquidity and Capital Resources	78
	Off-Balance Sheet Arrangements, Credit Derivatives and Other Contractual Obligations	82
	Fair Value	83
	Risk Management	85
	Glossary of Terms	104
	Consolidated Average Balances and Interest Rates	106
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk	107
Item 8.	Financial Statements and Supplementary Data	107
	Selected Quarterly Financial Data (Unaudited)	217
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	217
Item 9A.	Controls and Procedures	217
Item 9B.	Other Information	218

Part/Item No.

Part III

Page

Item 10.	Directors, Executive Officers and Corporate Governance	219
Item 11.	Executive Compensation	219
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters ..	219
Item 13.	Certain Relationships and Related Transactions, and Director Independence	219
Item 14.	Principal Accounting Fees and Services	219

Part IV

Item 15.	Exhibits and Financial Statement Schedules	220
Item 16.	Form 10-K Summary	221
	Signatures	222

PART I**Item 1. Business**

Organization

HSBC USA Inc. ("HSBC USA") is incorporated under the laws of the State of Maryland and is 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'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 Group

HSBC Group aims to be the leading international bank helping personal, wealth and corporate clients thrive through its deep heritage and is a leading provider of transactional banking products and services with a geographical network which provides clients and investors access to what it believes are the most attractive growth opportunities. HSBC Group seeks growth where the opportunities best align with its strengths, focused on enabling and supporting business and trade between the developed world and the faster growing, higher returning markets of the world, particularly in Asia and the Middle East. In 2020, HSBC Group announced that the more challenging economic environment requires strategic changes in order to increase returns and create capacity for future growth. These strategic changes include materially reshaping underperforming areas of HSBC Group, particularly in Global Banking and Markets, in Europe, and in the United States. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Overview - 2020 Events."

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, 2020 were HSBC USA, HSBC Markets (USA) Inc. ("HMUS"), a holding company for certain subsidiaries primarily associated with global banking and markets businesses, 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

In support of HSBC Group's strategy, our U.S. operations are focused on the core activities of our three global businesses and a Corporate Center, 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 trade corridor.

- Our Wealth and Personal Banking ("WPB") business, which was created in 2020 and is discussed further below, provides a range of banking and wealth products and services to individuals and certain small businesses, including high net worth and ultra-high net worth individuals and their families, 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 with strong international trade ties.
- Our Global Banking and Markets ("GBM") 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 Corporate Center ("CC") comprises certain centralized activities and functions 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. Through HSBC Bank USA, we offer our customers a full range of commercial and consumer banking products and related financial services. 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.

HSBC USA also owns 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, 2020, 2019 and 2018 was not material.

At December 31, 2020, we had approximately 1.66 million customers, some of which are customers of more than one of our businesses. Customers in the States of California and New York accounted for 38 percent and 29 percent, respectively, of our total outstanding commercial real estate loans and residential mortgage loans.

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"). 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"). 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 the Group Reporting Basis as they impact our results, see Note 24, "Business Segments," in the accompanying consolidated financial statements. For a discussion of our current strategy, see "Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Overview - 2020 Events."

Wealth and Personal Banking Segment We previously announced as part of our restructuring plan that we would combine our Retail Banking and Wealth Management ("RBWM") and Private Banking ("PB") businesses to create a single WPB business. During 2020, we implemented a change to our internal management reporting to report what was historically RBWM and PB together within a newly created WPB segment and, as a result, we have aligned our segment reporting to reflect this change for all periods presented.

Our WPB segment provides a range of banking and wealth products and services to individuals and certain small businesses through our branches, on-line channels as well as dedicated relationship managers and representative offices. Banking and certain exempt securities services are provided through HSBC Bank USA, brokerage and investment advisory services and annuities are provided through our affiliate HSI and additional insurance products are offered through the bank's subsidiary, HSBC Insurance Agency (USA) Inc. 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 investment advisory and securities brokerage; as well as the sale of certain third-party insurance solutions. WPB is focused on growing its wealth and banking business in key urban centers with strong international connectivity across the United States, including New York City, Los Angeles, San Francisco, Seattle, Miami and Washington DC. WPB also 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, with many clients sourced in collaboration with our other business lines. WPB works with these clients to provide tailored, coordinated and innovative ways

to manage and preserve wealth while optimizing returns by offering 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.

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. Supporting our three client groups is our International Subsidiary Banking team, which provides solutions to international subsidiaries operating in the United States. 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 ("GLCM"), Global Trade and Receivables Finance ("GTRF"), Lending and Transaction Management, GBM 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 Group to capture a larger percentage of a relationship.

Global Banking and Markets Segment Our GBM 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, which includes Canada and Latin America. GBM provides tailored financial solutions to major government, corporate and institutional clients as well as private investors worldwide. GBM 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, GBM aims to develop a comprehensive understanding of each client's financial requirements with a long-term relationship management approach. In addition to GBM clients, GBM also provides financial solutions to WPB and CMB clients where those clients have needs that require the product set that GBM has available.

Within client-focused business lines, GBM offers a full range of capabilities, including:

- Banking and financing advice and solutions for sovereign, corporate and institutional clients, including loans, working capital, GTRF product offerings, GLCM product and service offerings, 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.

Corporate Center Segment During 2020, we decided to implement a change to our internal management reporting to allocate Balance Sheet Management ("BSM"), which was historically reported within the CC segment, to the WPB, CMB and GBM businesses to better align the revenue and expense to the businesses generating or utilizing this activity. As a result, we have aligned our segment reporting to reflect this change for all periods presented.

CC includes our legacy structured credit products, certain corporate function costs, certain debt issued for which fair value option accounting was elected and related derivatives, certain affiliate transactions, tax credit investments and adjustments to the fair value of HSBC shares held for stock plans. Beginning in 2020, CC also includes certain costs to achieve representing costs incurred relating to the delivery of our restructuring plan primarily consisting of lease impairment and other related costs, as well as severance costs allocated to us from HTSU and other HSBC affiliates.

During the fourth quarter of 2020, our BSM function was renamed Markets Treasury, though the scope of the function remains the same. Markets Treasury is responsible for managing liquidity and funding under the supervision of our Asset and Liability Management Committee. Markets Treasury also manages our structural interest rate position within a limit structure. The majority of the liquidity is invested in interest bearing deposits with Federal Reserve banks and U.S. Government and other high quality securities. Markets Treasury is permitted to use derivatives as part of its mandate to manage interest rate risk. Derivative activity comprises predominantly the use of interest rate swaps which are part of cash flow hedging relationships. Credit risk in Markets Treasury 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 their liquidity portfolio. Markets Treasury manages interest rate risk and liquidity and funding risk. Markets Treasury income statement and balance sheet results are allocated to each of the global businesses based upon tangible equity levels and levels of any surplus liabilities.

Funding

We fund our operations using a diversified deposit base, supplemented by issuing short-term and long-term unsecured debt, secured financing repurchase agreements utilizing High Quality Liquid Assets ("HQLA"), accessing the Federal Home Loan Bank of New York, issuing preferred equity, and, as necessary, receiving capital contributions from our parent, HSBC North America. Emphasis is placed on maintaining stable deposit balances. In 2020, our primary source of funds continued to be deposits, augmented by issuances of commercial paper, securities sold under repurchase agreements and term debt.

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, and our management of the credit risks inherent in our business and customer base.

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").

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

Human Capital

At December 31, 2020, we had approximately 4,179 employees. We rely heavily on Human Resource ("HR") services provided by an affiliate, HTSU, which supports our HR related activities including HR Operations, Performance and Reward, Learning and Talent Development, Resourcing and Onboarding, and Employee Relations while working with our business segments and support functions to help achieve our business objectives.

By focusing on employee well-being, diversity, inclusion and engagement, as well as building our peoples' skills and capabilities for now and for the future, we aim to create an environment where our people can fulfill their potential. We use confidential surveys to assess progress and make changes. We want to have an open culture where our people feel connected, supported to speak up and where our leaders encourage feedback. Where we make organizational changes, we support our people throughout the change and in particular, where there are job losses.

How we listen to our employees We capture our employees' views and engage in dialogue with employees based on their feedback on a range of topics, such as our strategy, culture, behavior, well-being and working environment, through our employee survey, Snapshot. Results are presented to the US Executive Committee, as well as the Group Management Board and relevant executive committees.

We continue to closely monitor the outbreak of the coronavirus ("COVID-19") pandemic. The well-being of our customers and our employees is important to us, and we will continue to take efforts to ensure their safety and support them through this difficult time.

When things go wrong HSBC Confidential is a global whistleblowing platform that enables our people, past and present, to raise concerns in confidence. HSBC does not condone or tolerate any acts of retaliation against those who raise concerns.

Whistleblowing concerns are investigated thoroughly and independently. Remedial action, taken where appropriate, includes disciplinary action, dismissal, and adjustments to variable pay and performance ratings.

We rely on our employees to deliver fair outcomes for our customers and make sure we act with integrity in the financial markets. A high standard of personal conduct is critical to our ability to live up to this commitment and ensure a healthy working environment. We manage misconduct by taking action, as appropriate, up to and including dismissal. We report cases on a regular basis to management committees. Bullying and harassment of any type are not tolerated and we have strict processes to manage this behavior.

Remuneration Our pay and performance strategy aims to reward competitively the achievement of long-term sustainable performance in an effort to attract and motivate the very best people, regardless of gender, ethnicity, age, disability or any other factor unrelated to performance or experience with HUSI, while performing their role in the long-term interests of our stakeholders.

The quality and commitment of our employees is fundamental to our success and, accordingly, we aim to attract, retain and motivate them. As trust and relationships are vital in our business, our goal is to recruit those who are committed to a long-term career with us.

Certain employees participate in HSBC's Employee Stock Purchase Plan and Restricted Share Plan. See Note 20, "Share-Based Plans," in the accompanying consolidated financial statements for further detail.

Diversity and inclusion We are committed to a company-wide approach to diversity and inclusion. We want to embrace our employees' diverse ideas, styles and perspectives to reflect and understand our customers, communities, suppliers and investors.

HSBC's Global Principles outline that our employees must treat each other with dignity and respect, creating an inclusive culture to support equal opportunities. We do not tolerate discrimination, bullying, harassment or victimization. Our US People Committee, composed of the US Executive Committee members, governs our inclusion and culture agenda.

In 2020, we announced plans to improve diversity and inclusion. The leadership team agreed to a set of six pillars where we believe we can make meaningful progress toward advancing inclusion for all under-represented and diverse groups. These six pillars comprise the following objectives:

- Accountability – To build upon the foundation of our efforts in diversity and inclusion and to expand beyond that to reach our customers and communities that we serve.
- Recruiting and Retention – To increase the pipeline of diverse candidates, focusing on the ethnicities with the lowest representation.
- Representation – To improve representation across diversity groups, particularly at the more senior levels.
- Advancing the Conversation – To encourage and actively facilitate dialogue about inclusion and equality.
- Strategic Giving and Community Engagement – To target strategic giving to support equality-focused and diverse organizations and initiatives.
- Vendor Diversity – To accelerate our commitment to improving representation of minority-owned companies among our vendors.

A key component of this plan included the creation of the US Head of Inclusion and Culture, a new role which reports directly to the HSBC North America Chief Executive Officer ("CEO") and the Chief Human Resources Officer and is focused on expanding our diversity and inclusion efforts. This role will help us make quicker progress in advancing opportunities for our employees, expanding our customer demographic and investing in the communities that need our help the most.

Our employees also participate in a number of Employee Resource Groups ("ERGs"). These ERGs are voluntary, company-endorsed employee groups dedicated to fostering a diverse and inclusive work environment within the context of our mission, values, goals, business parameters and objectives. Resource groups typically form around a specific dimension of diversity such as age, gender, ethnicity, disability, sexual orientation, etc. The purpose of an ERG is to foster the professional growth, development and education of its members and others and to support organizational diversity and inclusion efforts. Another invaluable role of ERGs in our organization is providing feedback from employees to decision-makers and serving as touch points for engaging all employees in diversity efforts.

Employment of people with a disability We believe in providing equal opportunities for all employees. The employment of people with a disability is included in this commitment. The recruitment, training, career development and promotion of people with a disability are based on the aptitudes and abilities of the individual. Should employees become disabled during their employment with us, efforts are made to continue their employment and, if necessary, appropriate training and reasonable equipment and facilities are provided.

Learning and skills development We understand that to have a skilled and capable workforce for today and the future, we must invest in our employees at all stages of their careers. We measure our success through our retention, engagement scores, internal mobility and from external awards.

We provide training through HSBC University, our online learning portal and global network of training centers, which we launched in 2017. HSBC University assists our employees in developing technical and role-based skills, as well as personal skills. We put a strong emphasis on leadership skills to foster a culture of curiosity, innovation, collaboration and performance. Our training has a strong foundation in good conduct, with topics including managing non-financial risk, data privacy, cybersecurity, anti-money laundering, sanctions, anti-bribery and corruption, insider risk, competition law, raising concerns, workplace harassment and well-being. We also introduced a range of self-directed resources and workshops to improve team cohesion and performance.

We target a 98 percent completion rate for mandatory training on our values, strategy and approach to risk management. This helps keep our people aware of the risks we face so they can make better decisions to grow our business in a safe way.

Building for the future Developing our future leaders is critical to our long-term success. The Executive Committee dedicates time to articulate the current and future capabilities required to deliver the business strategy, and identify successors for our most critical roles. Successors then undergo robust assessment and participate in our executive development programs, which

have been designed and delivered in collaboration with some of the world's best business schools. Potential successors for senior roles also benefit from coaching and mentoring, and are moved into roles that will build their skills and capabilities.

Developing core skills Our suite of manager training and skills development was redesigned to focus on the skills that we believe are most important in the current environment - leading and supporting teams through change. Our managers are the critical link to supporting individuals and teams.

Risk management remains central to development at HSBC and is part of our mandatory training for all colleagues. For colleagues in roles at higher risk of exposure to financial wrongdoing, we provide more in depth training on financial risks such as money laundering, sanctions, bribery and corruption. We also have programs and resources to address specific areas of risk, such as those relating to the management of third party suppliers.

Our cyber hub brings together training, insights, events and campaigns to provide a one-stop shop on how to combat cyber-crime. We are also supporting leaders and model developers with training that helps them understand and apply our principles on the ethical use of big data and artificial intelligence.

Embedding inclusion Our commitment to diversity and inclusion is reflected in our learning and talent programs. In 2020, we bolstered existing online learning to help leaders address any behavioral biases. We paid specific attention on how we select and promote candidates for roles and how colleagues can readily access opportunities.

Adapting through COVID-19 Restrictions imposed due to the COVID-19 pandemic resulted in a halt to classroom learning and rapid expansion of our virtual learning. We prioritized supporting the transition to remote working and helping colleagues manage their well-being.

We converted or re-built hundreds of our technical, professional and personal classroom programs to be delivered by instructors online. This included supporting new joiners to HSBC with an immersive virtual induction program and virtual internships.

Health and safety We are committed to providing a safe and healthy working environment for everyone. We strive to ensure best health and safety management practices are adopted across HUSI or standards that reflect HSBC core values.

Putting our commitment into practice, we delivered a range of programs in 2020 to help us understand and manage effectively the risks we face and improve the buildings in which we operate:

- COVID-19 safe workplaces were implemented based on expert medical advice and designed to protect our employees, contractors and customers from the risks of COVID-19. This included enhanced cleaning, training and awareness, signage, social distancing measures, public hygiene and track and trace measures.
- We enhanced our existing working from home policy with more awareness and best practices to be adopted during these unprecedented times.
- Our employees completed an improved health and safety training and awareness program ensuring roles and responsibilities were clear and understood.
- All of our buildings had an annual safety inspection (subject to local COVID-19 restrictions) to ensure we were meeting our standards, and continuously improving our safety performance.
- Our suite of management information dashboards were further enhanced, including a COVID-19 and a permit to work dashboard for high risk activities throughout the year.

Supporting our employees through organizational change To ensure we have the right roles in the right locations, our businesses regularly re-evaluate their structures. We strive to support colleagues closely through all organizational change, which will include those who will be affected by our business update. Our focus is to prioritize retention of our permanent employees through mechanisms such as redeployment. Redundancies were necessary in 2020, and we sought to treat people fairly and responsibly. Where appropriate, we provided suitable notice periods. We use objective and appropriate selection criteria for redundancies. We prohibit selection on grounds linked to personal characteristics, for example gender, race, age or having raised past concerns. Additionally, we provided employees access to counselling via employee assistance programs and career transition.

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 ("BHC"), 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").

In addition, the FRB requires certain large non-U.S. banks with significant operations in the United States, such as HSBC, to establish a single intermediate holding company ("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).

Financial Holding Company Regulation HSBC USA and its parent BHC 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 BHCs. 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 (the "CRA"), as amended, the FRB must prohibit the financial holding company and its subsidiaries from engaging in any additional activities other than those permissible for BHCs that are not financial holding companies.

Under the FRB supervisory rating system, IHCs and large BHCs with \$100 billion or more in total consolidated assets, including HSBC North America and HSBC USA, receive separate ratings from the FRB for (i) capital planning and positions, (ii) liquidity risk management and positions, and (iii) governance and controls. A covered BHC that receives a deficient rating for any of the three components is not considered to be "well managed."

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, BHC 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 exemptions.

Consumer Regulation Our consumer businesses operate in a highly regulated environment. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act" or "Dodd-Frank") created the Consumer Financial Protection Bureau (the "CFPB"), which has a broad range of powers to administer and enforce a 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 acts or 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. Our consumer lending businesses are also subject to additional 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.

Supervision of Bank Subsidiaries Our subsidiary national banks, HSBC Bank USA and HTCD, are subject to regulation and examination primarily by the Office of the Comptroller of the Currency ("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. In March 2020, the FRB reduced reserve requirements to zero percent.

HSBC Bank USA is subject to the CRA, which imposes affirmative, ongoing obligations on depository institutions to meet the credit needs of their local communities, including low- and moderate-income neighborhoods, consistent with the safe and sound operation of the institution. In May 2020, the OCC finalized amendments to its CRA regulations which require assessment of a bank's record of meeting the credit needs of its entire community, including low- and moderate-income neighborhoods. The amendments significantly revise for national banks, like HSBC Bank USA, how the OCC defines what qualifies for CRA credit, where such activity must be conducted to receive credit, how CRA performance is measured, and how CRA performance is documented and reported. The amendments took effect October 1, 2020, with a compliance date of January 1, 2023, for HSBC Bank USA. The OCC has also indicated it will conduct a future rulemaking to set the quantitative levels of CRA activity that a national bank would have to achieve to receive a Satisfactory or Outstanding CRA rating, either within a particular assessment area or overall. We will continue to evaluate the impact of any changes to the regulations implementing the CRA.

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 appropriate amounts of capital against its assets as discussed further in this Annual Report on Form 10-K.

Federal banking laws and regulations apply a variety of requirements or restrictions on insured depository institutions with respect to brokered deposits. For instance, only a "well capitalized" insured depository institution may accept brokered deposits without prior regulatory approval. In December 2020, the FDIC issued a final rule to revise and update its brokered deposit regulations. The final rule has the potential to create additional uncertainty regarding the types of deposits that must be considered brokered. We are evaluating the final rule and its potential impact on our results and operations.

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.

Affiliate Transaction Restrictions 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. Dodd-Frank expanded these affiliate transaction restrictions to include as a covered transaction the credit exposure of a bank to an affiliate arising from a derivative, securities lending/borrowing or repurchase transaction with an affiliate. The FRB has yet to propose rules to implement these revisions. A bank's transactions with its non-bank affiliates are also generally 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 generally must be secured with U.S. government securities.

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.

Regulatory Capital and Liquidity Requirements As a financial services holding company, we are subject to regulatory capital rules issued by U.S. banking regulators including Basel III (the "Basel III rule"). A bank or BHC's failure to meet minimum capital requirements can result in certain mandatory actions and possibly additional discretionary actions by its regulators. Generally, BHC 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 in "Liquidity and Capital Resources" in our MD&A, as well as, together with HSBC Bank USA's, in Note 25, "Retained Earnings and Regulatory Capital Requirements," of the accompanying consolidated financial statements. Our ultimate parent, HSBC, is also subject to regulatory capital requirements under United Kingdom ("U.K.") law.

Basel III Overview The Basel III rule establishes minimum capital ratios and overall capital adequacy standards for banks and BHCs. To be categorized as "well capitalized" under the Basel III rule, a banking institution must maintain capital equal to or in excess of the ratios reflected in the table included in Note 25, "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 BHC when particular circumstances warrant. Under the Basel III rule, all banking organizations are subject to a minimum Tier 1 leverage ratio of 4 percent. Additionally, certain banking organizations, such as HSBC North America and HSBC Bank USA, are subject to a supplementary leverage ratio ("SLR") of 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).

Under the Basel III rule, there are two methods available to calculate risk-weighted assets, the generally-applicable Standardized Approach and the Advanced Approaches, which are required in addition to the Standardized Approach for large banking organizations that meet certain thresholds. The Standardized Approach relies primarily on supervisory risk weights based on exposure type, and the Advanced Approaches determine risk weights based on internal models. In 2019, the FRB and the other federal banking agencies jointly finalized rules to implement the Economic Growth, Regulatory Relief and Consumer Protection Act ("Relief Act") that tailor the application of the enhanced prudential standards for large BHCs and foreign banking organizations (the "Tailoring Rules"). The Tailoring Rules assign each BHC and IHC with \$50 billion or more in total U.S. assets into one of five classifications (Categories I through IV, and 'other firms') based on its size and four risk-based indicators. Under the Tailoring Rules, HSBC North America and HSBC Bank USA are subject to Category III standards and are no longer considered "Advanced Approaches banking organizations." However, HSBC North America and HSBC Bank USA remain subject to certain other capital requirements that were previously applicable only to Advanced Approaches banking organizations, including the SLR and the countercyclical capital buffer which is discussed further below. Prior to adoption of the Tailoring Rules, HSBC North America and HSBC Bank USA had requested and received regulatory approval to opt out of the Advanced Approaches and therefore have previously calculated and will continue to calculate their risk-based capital requirements for credit risk solely under the Standardized Approach. The Tailoring Rules also permit Category III firms and their depository institution subsidiaries to opt-out of the requirement to recognize most elements of accumulated other comprehensive income ("AOCI") in regulatory capital. As a result, HSBC North America and HSBC Bank USA, made a one-time election to opt-out of the requirement to include all components of AOCI (with the exception of accumulated net gains and losses on cash flow hedges related to items that are not carried at fair value on the consolidated balance sheet) in common equity Tier 1 capital.

Category III firms and their depository institution subsidiaries also benefit from (i) simpler capital requirements for mortgage servicing assets, certain deferred tax assets, and investments in the capital of unconsolidated financial institutions, and (ii) a simplified treatment for the amount of capital issued by consolidated subsidiaries to third parties (generally known as minority interests) which can be included in regulatory capital. These simplifying amendments were adopted in a separate rulemaking finalized by the federal banking agencies in 2019. HSBC North America and HSBC Bank USA implemented both the Tailoring Rules and the simplifying amendments beginning with March 31, 2020 reporting. In 2019, the federal banking agencies also jointly amended the Basel III rule to implement a provision of the Relief Act by reducing the risk weighting applicable to high-volatility commercial real estate exposures and also finalized a rule to include a revised standardized approach for measuring counterparty credit risk ("SA-CCR") to calculate total risk-weighted asset amounts for derivative transactions in addition to the existing current exposure method ("CEM"). These changes also became effective beginning April 1, 2020. The Tailoring Rules clarify that Category III firms and their depository institution subsidiaries are not required to use SA-CCR to measure their derivative exposure. Instead, they have the option to use either SA-CCR or CEM for their risk-based capital ratios and the SLR. As such, HSBC North America and HSBC Bank USA have elected not to use SA-CCR at this time, but will continue to evaluate the impact of adopting SA-CCR in the future.

In response to the COVID-19 pandemic, the federal banking agencies issued a final rule that provides the option to transition in the regulatory capital impacts of the new current expected credit loss accounting standard over a five-year period. HSBC North America and HSBC Bank USA have elected the five-year transition option and, as a result, beginning in 2020, our capital ratios

are reported in accordance with the transition rules in the final rule. Accordingly, during 2020 and 2021, we will exclude from regulatory capital the change in retained earnings resulting from adoption of the new accounting standard on January 1, 2020 as well as 25 percent of the change in the allowance for credit losses recognized between January 1, 2020 and December 31, 2021. Beginning January 1, 2022, the excluded impacts will be phased in to regulatory capital over a three-year transition period and will be fully reflected at January 1, 2025.

Also in response to the COVID-19 pandemic, the FRB issued a final rule adopting a temporary change to the calculation of the SLR that permits IHCs, such as HSBC North America, to exclude U.S. Treasury securities and deposits at Federal Reserve Banks from the denominator of their SLR. This change, which took effect April 1, 2020, will remain in place until at least March 31, 2021 and is designed to allow banking institutions to expand their balance sheets to accommodate increased customer deposits while continuing to provide credit to companies and households. The federal banking agencies have also issued a final rule that permits depository institutions such as HSBC Bank USA to exclude temporarily U.S. Treasury securities and deposits at Federal Reserve Banks from the denominator of their SLR. This change took effect June 1, 2020 and will remain in place until March 31, 2021 although it may be extended if the adverse economic impacts of the COVID-19 pandemic persist.

We continue to review the composition of our capital structure and capital buffers in light of these developments.

HSBC USA and HSBC Bank USA are required to maintain minimum capital ratios as follows:

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

HSBC Bank USA is also subject to the 3 percent SLR and the countercyclical buffer (when in effect) in addition to the capital conservation buffer. Currently, HSBC USA and HSBC Bank USA hold capital in excess of these regulatory minimums plus a fixed 2.5 percent capital conservation buffer. If our risk-based capital ratios were to fall to levels within the capital conservation buffer, we would become subject to increasing restrictions on our capital distributions and discretionary bonus payments.

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, which could be more pronounced under the new guidance on expected credit losses from the Financial Accounting Standards Board ("FASB"). The FRB, in consultation with the OCC and FDIC, has affirmed the current countercyclical capital buffer level of zero percent and noted that any future modifications to the buffer would generally be subject to a 12-month phase-in period.

Capital Planning and Stress Testing The FRB requires certain U.S. top-tier BHCs and IHCs, including HSBC North America, 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 annual company-run stress tests as required under the Dodd-Frank Act (collectively, "DFAST"). Disclosure of the company-run stress tests is required only every other year. The company-run stress tests are forward looking exercises to assess the impact of hypothetical macroeconomic baseline and severely adverse scenarios provided by the FRB (and internally developed scenarios for the company-run exercises) on the financial condition and capital adequacy of a CCAR firm over a nine quarter planning horizon. HSBC Bank USA is not subject to the OCC's DFAST requirements, which require national banks with \$250 billion or more in total assets to conduct company-run stress tests.

As part of the CCAR process, the FRB undertakes a supervisory assessment of the capital adequacy of CCAR firms, including HSBC North America, based on a review of a comprehensive capital plan submitted by each participating BHC 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 baseline scenario and severely adverse scenarios provided by the FRB.

In March 2020, the FRB issued a final rule that eliminated the quantitative and qualitative "pass/fail" assessments from CCAR and modified the static capital conservation buffer to incorporate an institution-specific stress capital buffer ("SCB"), which is floored at 2.5 percent. The stress capital buffer equals (i) a CCAR firm's projected decline in common equity tier 1 under the annual CCAR supervisory severely adverse stress testing scenario plus (ii) one year of planned common stock dividends. The SCB is reset each year.

In August 2020, the FRB announced an SCB for each CCAR firm based on 2020 supervisory stress testing results conducted as part of CCAR. The first SCB became effective October 1, 2020 and would generally remain in effect until September 30, 2021, at which point the size of the SCB for each bank will be recalibrated based on the results of the 2021 stress tests. HSBC North

America already utilizes an internal capital assessment approach that is analogous to the SCB and continues to review the composition of its capital structures and capital buffers in light of the final rule. The SCB applies only to HSBC North America; HSBC USA and HSBC Bank USA remain subject to a static 2.5 percent capital conservation buffer.

HSBC North America submitted its 2020 CCAR capital plan and its 2020 annual company-run DFAST results in April 2020. In July 2020, HSBC North America publicly disclosed its 2020 annual DFAST results.

In June 2020, the FRB publicly disclosed its own DFAST and CCAR results along with aggregated results of a sensitivity analysis aimed at gauging the ongoing economic impact of the COVID-19 pandemic on CCAR firms. Each CCAR firm, including HSBC North America, was required to resubmit its capital plan in November 2020 based on additional economic scenarios provided by the FRB to assess the potential impact of the ongoing COVID-19 pandemic. On December 18, 2020, the FRB released certain information related to this second round of bank stress tests, and indicated that it is extending, through March 31, 2021, the time period for notifying CCAR firms, including HSBC North America, whether the FRB will recalculate a firm's SCB. The FRB also announced it is limiting CCAR firms' distributions in the first quarter of 2021. Under these restrictions, IHCs, such as HSBC North America, may make certain capital distributions in the first quarter of 2021, provided that the distributions paid in the final three quarters of 2020 and the first quarter of 2021, in the aggregate, do not exceed the amount of net income the IHC has earned in the preceding four calendar quarters.

Liquidity Risk Management 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 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.

Certain U.S. banking organizations, including HSBC North America and HSBC Bank USA, are subject to the U.S. LCR rule and are required to report their LCRs to U.S. regulators on a daily basis. The Tailoring Rules reduced the U.S. LCR requirement for Category III firms, such as HSBC North America, with weighted short-term wholesale funding under \$75 billion and their depository institution subsidiaries, such as HSBC Bank USA, from 100 to 85 percent beginning January 1, 2020. As a result, under the U.S. LCR rule, a LCR of 100 percent or higher reflects an unencumbered HQLA balance that is equal to or exceeds 85 percent of a Category III firm's liquidity needs for a 30 calendar day liquidity stress scenario.

In October 2020, U.S. regulators issued a final rule to implement the NSFR in the United States, applicable to certain large banking organizations, including HSBC North America and HSBC Bank USA, that will take effect July 1, 2021. Consistent with the Tailoring Rules, an 85 percent NSFR requirement will apply to Category III firms, such as HSBC North America, with weighted short-term wholesale funding under \$75 billion and their depository institution subsidiaries, such as HSBC Bank USA, when the final rule becomes effective July 1, 2021. As a result, under the U.S. NSFR rule, 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 85 percent of a Category III firm's required amount of funding for assets and off-balance sheet exposures.

As a Category III firm, HSBC North America remains subject to liquidity stress testing on a monthly basis and related liquidity buffer and liquidity risk management requirements.

HSBC North America and HSBC Bank USA have 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 and will continue to evaluate the impact of the final U.S. NSFR rule on our operations.

TLAC The U.S. IHCs of non-U.S. global systemically important banks ("G-SIBs"), including HSBC North America, must maintain minimum amounts of total loss-absorbing capacity ("TLAC"), which includes minimum levels of Tier 1 capital and long-term debt satisfying certain eligibility criteria, and a related TLAC buffer. In October 2020, the FRB issued a final rule that aligns the calculation of TLAC buffer for U.S. IHCs of non-U.S. G-SIBs with the calculation methodology used by U.S. G-SIBs beginning which will take effect on April 1, 2021. The TLAC rules also include 'clean holding company requirements' that impose limitations on the types of financial transactions that HSBC North America may engage in. HSBC North America maintains long-term debt to support compliance with the TLAC rules and will continue to assess if additional long-term debt is needed to remain compliant in future periods.

U.S. Resolution Planning 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 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. HSBC and HSBC Bank USA submitted their latest resolution plans in 2018.

Under the FRB and FDIC rule implementing the resolution planning requirements for depository institution holding companies (the "SIFI Plan") in the Dodd-Frank Act (the "SIFI Plan Rule"), HSBC is required to file a SIFI Plan every three years, alternating between a full resolution plan and a targeted resolution plan, which would generally be limited to core areas such as capital and liquidity, as well as identifying material changes in other areas of the plan since its last submission. HSBC's next submission is a targeted resolution plan, which is due by December 17, 2021. HSBC's next full resolution plan submission is not required until July 1, 2024. The SIFI Plan Rule did not revise the resolution plan requirements applicable to HSBC Bank USA, which are administered solely by the FDIC. In April 2019, the FDIC requested comment on an advance notice of proposed rulemaking that would alter the FDIC's separate resolution plan requirements for insured depository institutions (the "IDI Plan") with total consolidated assets of at least \$50 billion ("Covered IDIs"), including HSBC Bank USA. The proposal delayed the requirement for HSBC Bank USA (as well as other Covered IDIs) to file its next IDI Plan until a future date to be specified by the FDIC. Consequently, HSBC Bank USA has not been required to file an IDI Plan since 2018. On January 19, 2021, the FDIC announced it will resume requiring IDI Plan submissions for banks with \$100 billion or more in assets and will provide at least 12 months advance notice to firms required to submit IDI Plans. The FRB has separately established a framework for recovery plans, although HSBC is not currently required to submit a recovery plan to U.S. regulators unless specifically requested to do so.

Non-U.S. Regulatory Capital and Liquidity 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 and information relevant to HSBC's compliance with applicable liquidity requirements.

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 25, "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. In June 2020, the FDIC issued a final rule to mitigate the deposit insurance assessment effects of participating in the Payment Protection Program ("PPP"). Among other changes, the final rule removes the effect of participation in the PPP on various risk measures used to calculate the assessment rate of an insured depository institution like HSBC Bank USA.

Bank Secrecy Act/Anti-Money Laundering We are subject to a framework of federal laws designed to combat money laundering and financing of terrorism, mainly the Bank Secrecy Act ("BSA") and the USA PATRIOT Act, as well as related regulations issued by the U.S. Department of the Treasury and federal banking regulators (collectively, "AML laws"). AML laws require financial institutions (including insured U.S. depository institutions, U.S.-based branches and agencies of foreign banks, U.S. broker-dealers and various other entities) to implement an AML compliance program that is reasonably designed to prevent money laundering and the financing of terrorism. Programs must include, among other things, policies and procedures to verify their customers' identities, verify the identities of beneficial owners of legal entity customers, conduct customer due diligence and enhanced due diligence on certain customers and monitor for and report on suspicious activity. We are examined for compliance with AML laws by our federal banking regulators.

Cybersecurity Regulatory Proposals In 2016, the FRB, FDIC, and OCC issued a joint advance notice of proposed rulemaking to solicit feedback on their development of comprehensive cyber risk management standards for large banking organizations and certain of their service providers.

On December 15, 2020, these agencies issued a notice of proposed rulemaking that would require a banking organization to notify its primary federal regulators within 36 hours of identifying a computer-security incident that meets certain criteria. We are evaluating the potential impact of these proposals on our operations.

Cybersecurity remains an area of significant regulatory focus, and state regulators have also been increasingly active in implementing privacy and cybersecurity standards and regulations. Recently, several states have adopted regulations requiring certain financial institutions to implement cybersecurity programs and providing detailed requirements with respect to these programs, including data encryption requirements. Many states have also recently implemented or modified their data breach notification and data privacy requirements. We expect this trend of state-level activity to continue, and are continually monitoring developments in the states.

Single-Counterparty Credit Limits The FRB limits credit exposures to single counterparties for large BHCs and IHCs, including HSBC North America. As a result, HSBC North America, together with its subsidiaries, is prohibited from having net

credit exposure to a single unaffiliated counterparty in excess of 25 percent of HSBC North America's Tier 1 capital. In addition, HSBC North America, together with its subsidiaries, could become subject to a separate limit on its exposures to certain unaffiliated systemically important counterparties if its parent, HSBC, cannot certify its compliance with a large exposure regime in the U.K. that is consistent with the Basel large exposure framework by July 1, 2021. We continue to evaluate the potential effects of this rule on our operations.

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 implemented the most significant provisions of Title VII applicable to swaps. 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 increased the costs associated with HSBC Bank USA's derivatives businesses.

In addition, as a provisionally registered swap dealer that is a national bank, HSBC Bank USA is subject to the rules jointly finalized by the U.S. banking regulators which established margin requirements (the "Margin Rules") for non-cleared swaps and security-based swaps (together, "swaps") for swap dealers, security-based swap dealers, major swap participants and major security-based swap participants regulated by the agencies ("Swap Entities"). Subject to certain exceptions, the Margin Rules require HSBC Bank USA to collect and post initial and variation margin for swaps entered into with other swap dealers and certain financial end users that exceed a minimum threshold of transactional activity, and for financial end users that do not meet the minimum transactional activity threshold, to collect and post variation margin (but not initial margin).

The 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 and inter-affiliate transactions. The Margin Rules follow a phased implementation schedule, with additional counterparties becoming subject to initial margin requirements in September 2021 and 2022 depending on the transactional volume of the parties and their affiliates. The Margin Rules, as well as parallel margin rules from the CFTC, the SEC, and certain non-U.S. regulators, have increased the costs and liquidity burden associated with trading swaps.

In June 2020, U.S. banking regulators finalized a rule that makes significant amendments to the Margin Rules, including (i) mostly exempts Swap Entities from needing to collect initial margin for swaps with affiliates; (ii) preserves legacy status for swaps that are amended to replace certain interest rate provisions or due to technical amendments, notional reductions, or portfolio compression exercises; (iii) clarifies the time at which initial margin trading documentation must be in place; and (iv) adds a new compliance phase for initial margin requirements. The amendments in the final rule took effect August 31, 2020, which reduced the amount of initial margin we need to collect from many of our affiliates and provided greater clarity around the application of certain aspects of the Margin Rules.

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. The SEC has finalized the key rules governing the application of Title VII requirements to 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 generally come into effect in November 2021. Certain HSBC affiliates, including HSBC Bank USA, may be required to register and become subject to these rules when the registration requirement becomes effective.

The "Volcker Rule" The Volcker Rule prohibits insured depository institutions and companies affiliated with insured depository institutions (collectively, banking entities) from engaging in short-term proprietary trading of certain securities, derivatives, commodity futures and options for their own account. The Volcker Rule also imposes limits on banking entities' investments in, and other relationships with, hedge funds and private equity funds. The Volcker Rule provides exemptions for certain activities, including market-making, underwriting, hedging, trading in government obligations and organizing and offering hedge funds and private equity funds, subject to certain conditions. A banking entity with significant U.S. trading operations, such as HSBC North America, is required to maintain a detailed compliance program to comply with the restrictions of the Volcker Rule.

The federal agencies responsible for administration of the Volcker Rule (the SEC, FDIC, FRB, OCC and CFTC) finalized amendments to simplify and tailor compliance requirements related to the proprietary trading and covered fund provisions of the Volcker Rule. Compliance with the revised covered fund provisions was required by October 1, 2020 and with the revised proprietary trading provisions by January 1, 2021. Given that HSBC North America has more than \$20 billion in trading assets and liabilities, it remains subject to the highest expectations under the Volcker Rule.

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 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. 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 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 Directors Committees, including the Audit Committee, the Compliance and Conduct Committee, the Risk Committee and the Chairman's Committee.

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. To that end, we have adopted a Statement of Business Principles and Code of Ethics (our "Statement of Business Principles") that expresses the principles upon which we operate our business. The Statement of Business Principles is applicable to all employees, including our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer (collectively, the "Senior Financial Officers"). In addition to the Statement of Business Principles, the Senior Financial Officers are subject to the additional policies set forth in the Code of Ethics for Senior Financial Officers, which is intended to supplement the Statement of Business Principles.

Our Statement of Business Principles and Code of Ethics for Senior Financial Officers can be found on our corporate website, www.about.us.hsbc.com, under "Investor Relations." 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. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding amendments to, or waivers from, certain provisions of the Code of Ethics for Senior Financial Officers and Statement of Business Principles by posting such information on our website, at the address and location specified above.

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 23, 2021.

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.

Risks related to the Economy, Financial Markets, Liquidity and Interest Rates

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 U.S. and abroad. Given our concentration of business activities in the United States, we are particularly exposed to downturns in the economy, including housing, high unemployment, the availability of credit and liquidity and reduced economic growth. The impact of the COVID-19 pandemic on economic conditions both in the United States and abroad has created global uncertainty about the future economic environment. 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, wage income levels and declines in wealth;
- trends in corporate earnings;
- 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, climate change, outbreaks of contagious disease (such as coronavirus) 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;
- availability of credit; and
- new laws, regulations or regulatory and law enforcement initiatives.

The COVID-19 pandemic has resulted in disruption to business and economic activity as well as to the capital markets. See "The COVID-19 pandemic has had, and continues to have, a material impact on us" and "Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Overview - 2020 Economic Environment." Unemployment continues to remain high, and if current unemployment levels worsen or do not improve, or additional government support in 2021 does not materialize, losses could be significant in all types of our consumer loans due to decreased consumer income, which will impact demand for products and services offered by many of our commercial loan clients. In addition, on-going domestic and global policy issues, such as trade disputes, the U.K. exiting the European Union ("EU") and the implications of those events will continue to impact the capital markets and trade as well as corporate earnings which also impacts our commercial loan performance. The sustainability of any recovery in economic conditions 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 a rebound in economic conditions stalls or the economy deteriorates further and leads to a sustained 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.

Further deterioration in business and economic conditions may erode consumer and investor confidence, increase volatility of financial markets, and could also adversely affect our fee-based businesses, including financial planning products and services.

The COVID-19 pandemic has had, and continues to have, a material impact on us. In March 2020, the United States declared a federal state of emergency in response to the COVID-19 pandemic, which continues to spread rapidly throughout the United States. The outbreak of this virus has disrupted global financial markets and negatively affected supply and demand across a broad range of industries. There are a number of factors associated with the outbreak and its impact on global economies including the United States that have had and could continue to have a material adverse effect on (among other things) the profitability, capital and liquidity of financial institutions such as HUSI. The pandemic will continue to impact our business in future periods.

The COVID-19 pandemic has caused disruption to our customers, suppliers and staff. A number of states in which we operate have implemented restrictions on the movement of their populations, significantly impacting economic activity in those states. The pandemic resulted in sheltering in place requirements in many states and municipalities and the temporary closure of many businesses. While governments began to ease these restrictions in the late spring and summer, they began to reinstate many of these restrictions during the fourth quarter in response to a significant surge in infections. As a result, the demand for our products and services has been and may continue to be significantly impacted and could vary by region or industry sector. Furthermore, it is unclear how the macroeconomic business environment or societal norms may be impacted after the pandemic. The post-COVID-19 environment may undergo unexpected developments or changes in the financial markets, fiscal, tax and regulatory environments as well as customer and corporate client behavior which could have an adverse impact on our business.

In the United States, the federal government has taken action, and may take further action, to provide financial support to parts of the economy most impacted by the COVID-19 pandemic. The details of how these actions will ultimately impact our customers and therefore the impact on HUSI remains uncertain. Furthermore, it is unclear how these actions will impact the future economic environment, including inflation, interest rates and foreign exchange and our business. The actions taken by the U.S. government and the FRB may indicate a view on the potential severity of a downturn and post recovery environment, which from a commercial, regulatory and risk perspective could be significantly different to past crises and persist for a prolonged period. An immediate financial impact in 2020 has been higher lifetime expected credit losses driven by a worsening in the economic scenarios used to calculate expected credit losses, downgrades reflecting weakness in the financial condition of certain clients and provisions for risks associated with higher-risk client and industry exposures and large loan exposures. See Note 6, "Allowance for Credit Losses," in the accompanying consolidated financial statements for further discussion. In addition, if customers to whom we have provided temporary payment relief due to COVID-19 related financial hardship face long-term financial difficulties, our risk of credit losses will increase.

Unprecedented movement in economic and market drivers related to the COVID-19 pandemic dramatically impact the performance of financial models including retail and wholesale credit loss models, capital models, traded risk models and models used in the asset/liability management process. This has required more ongoing monitoring and more frequent testing of models, particularly for credit loss models. It also has resulted in the use of compensating controls for model limitations, such as adjustments to model outputs to reflect consideration of management judgment. By their nature such compensating controls require a significant degree of management judgment and assumptions to be applied and there is a risk that actual results/performance may differ from such judgments and assumptions. The performance and usage of models over the next 12-18 months will continue to be impacted by the consequences of the COVID-19 pandemic. While it is too early to be certain of the magnitude of change required for our models, it is likely that capital, credit risk and other models will need to be recalibrated or in some cases may need to be replaced with the development of alternative models. The effectiveness of our existing models will depend in large part on the depth and length of the economic downturn.

The pandemic has led to a weakening in gross domestic product and significantly higher unemployment in the United States, which officially entered recession in the second quarter of 2020. In addition, as a result of deteriorating economic conditions, we performed an interim goodwill impairment test as of March 31, 2020 which resulted in the impairment of the goodwill previously allocated to our RBWM and PB reporting units. See "Management's Discussion and Analysis of Financial Position and Results of Operations." In April 2020, Fitch Ratings ("Fitch") changed the rating outlook for both HSBC USA and HSBC Bank USA to negative from stable, and in May 2020, Standard & Poor's ("S&P") downgraded the long-term and short-term issuer credit ratings of HSBC USA and HSBC Bank USA by one notch, following similar ratings actions for HSBC. These changes reflect the economic disruption driven by the COVID-19 pandemic, with S&P also noting HSBC Group's restructuring plan. See "Management's Discussion and Analysis of Financial Position and Results of Operations - Risk Management."

The pandemic may not be fully contained until a vaccine becomes widely available, which might not occur until later in 2021, and the take up rate once available remains uncertain. Should the current economic conditions persist or deteriorate further, it will continue to adversely impact our business which could include, but not be limited to, negative impacts on income due to lower lending and transaction volumes, lower wealth management revenue due to equity markets volatility and weakness and additional credit losses. Other potential risks include the impact of postponed health screenings on the well-being of our employees, credit rating migration which could negatively impact our risk-weighted assets and capital position, and potential liquidity stress due to, among other factors, increased customer drawdowns, notwithstanding the significant initiatives that the U.S. government and the FRB have put in place to support funding and liquidity. Additionally, interest rates have been reduced

since the start of the COVID-19 pandemic, which has and may continue to compress our margins and reduce our net interest income. Further, while we have continued to progress our program for transitioning away from interbank offered rates, including the London Interbank Offered Rate ("LIBOR"), the COVID-19 pandemic has affected our progress as well as the progress of other market participants. See "Management's Discussion and Analysis of Financial Position and Results of Operations - Executive Overview." An economic recovery relies on the successful containment of the virus and the willingness of households and businesses to return towards pre-COVID-19 spending levels.

Central bank and government actions and support measures taken in response to the COVID-19 pandemic may create restrictions in relation to capital. These may limit management's flexibility in managing the business and taking action in relation to capital distribution and capital allocation. The FRB has conducted additional supervisory stress tests to assess the potential impact of the ongoing COVID-19 pandemic and has announced limits on capital distributions by CCAR firms that will continue at least through the first quarter of 2021 and could be extended by the FRB. In order to make distributions within these temporary limits established by the FRB, HSBC North America must also maintain capital levels in excess of its regulatory capital minimums and its stress capital buffer. See "Regulation and Competition - Capital Planning and Stress Testing."

Federal and state legislative and regulatory developments in relation to COVID-19 have also impacted and may continue to impact our business and operations by, for example, requiring forbearance on loans, suspensions of foreclosure sales and imposing restrictions on our ability to charge certain fees. Our participation in these and other measures taken by governments and regulatory authorities could result in potential increased fraud risk as well as reputational harm, and may result in litigation, including class actions, or regulatory and government actions and proceedings. Such actions may result in judgments, settlements, penalties and fines adverse to HUSI.

In addition, we remain committed to our multi-year strategic plan to re-profile our business, and continue to explore strategic options with respect to our retail operations to focus on our high net worth client base and wealth management products.

Any and all such events mentioned above could have or continue to have a material adverse effect on our business, financial condition, results of operations, prospects, liquidity, capital position and credit ratings (including further credit rating agency changes of outlooks or ratings). The extent of such impact will depend on the outcome of certain developments, including but not limited to, the duration and the ability to control the spread of the pandemic as well as its continuing impact on our customers, vendors and employees, all of which are uncertain. To the extent the COVID-19 pandemic continues to adversely affect our business, results of operations and financial condition, it could also have the effect of increasing the likelihood of many of the other risks described in this Annual Report on Form 10-K.

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. The credit performance of our loan portfolios significantly affects our financial results and condition. If the current economic environment were to deteriorate further, 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 lifetime expected credit losses inherent in our various loan and other portfolios carried at amortized cost as well as off-balance sheet credit exposures such as undrawn commitments to lend. 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, lower U.S. Gross Domestic Product ("GDP") estimates, 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, 2020, 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 increase reserves in future periods, which would reduce our earnings.

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 borrowing costs and the return we earn on 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.

Risks related to Regulation, Legislation and Litigation

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 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 provisionally registered as swap dealers and are 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 be required to register as security-based swap dealers beginning November 2021, 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.

The Volcker Rule 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. See "Regulation and Competition - The "Volcker Rule".

U.S. regulatory agencies finalized two rulemakings that modify the proprietary trading and covered fund provisions of the Volcker Rule. Compliance with the revised covered fund provisions was required by October 1, 2020 and with the revised proprietary trading provisions by January 1, 2021. Given that HSBC North America has more than \$20 billion in trading assets and liabilities, it remains subject to the highest expectations under the Volcker Rule.

Our parent, HSBC North America, is subject to assessment by the FRB as part of the CCAR and DFAST programs, which includes annual supervisory stress tests conducted by the FRB and company run stress tests that HSBC North America must conduct annually (with disclosure of the company-run stress tests every other year). See "Regulation and Competition - Capital Planning and Stress Testing."

The total impact of the Dodd-Frank Act and related legislative and regulatory initiatives cannot be fully assessed without taking into consideration how non-U.S. policymakers and regulators may respond 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 U.K., 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. Furthermore, certain large G-SIBs, including HSBC, have in recent years become subject to capital surcharges and other enhanced prudential requirements. In 2020, the Financial Stability Board ("FSB") identified HSBC as one of three G-SIBs subject to a 2 percent surcharge. 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.

Our ultimate parent HSBC is subject to the FSB's TLAC requirements for G-SIBs in the U.K. The TLAC standard also permits authorities in host jurisdictions to require "internal" TLAC to be issued by local entities to either parent entities or third parties. The purpose of the TLAC 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 FRB's rules implementing the FSB's TLAC

standard require the U.S. IHCs of non-U.S. G-SIBs, including HSBC North America, to maintain minimum amounts of TLAC and a related TLAC buffer. To support compliance with the TLAC rules, HSBC North America has issued long-term debt and may be required to issue additional long-term debt in future periods. See "Regulation and Competition - TLAC."

The delivery of our priorities is subject to execution risk. Effective management of transformation projects is required to effectively deliver our strategic priorities, involving delivering both on externally driven programs (regulatory requirements and benchmark rate transition), as well as key business initiatives to deliver revenue growth, product enhancement and operational efficiency outcomes. See "Failure to effectively implement our business strategies may adversely affect our financial performance."

Regulatory requests, legal matters and business initiatives all require a significant amount of time and resources to implement. The magnitude, complexity and, at times, concurrent demands of projects 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 priorities.

Uncertainty surrounding the potential legal, regulatory and policy changes by the new administration in the U.S. may directly impact financial institutions and the global economy. We continue to assess the potential impact the change in administrations may have on financial and economic markets and on our business. Changes by the new administration in federal policy and regulatory agencies could lead to changes involving the level of oversight and focus on the financial services industry as well as changes to the tax code. The nature, timing and economic and political effects of potential future changes to the current legal and regulatory framework and tax code affecting financial institutions remain highly uncertain. It is unclear what additional 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. HSBC USA and its affiliates are routinely named as defendants in, or as parties to, various legal actions, investigations 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 29, "Litigation and Regulatory Matters" in the accompanying consolidated financial statements, which may result in adverse judgments, settlements, fines, penalties, remediation payments, injunctions and other relief. Legal actions and proceedings, including investigations, may increase in the near future, especially in the event of a resurgent recession.

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. 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 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 us to higher compliance risks under U.S. regulations primarily focused on various aspects of global corporate activities, including AML laws and regulations, the Foreign Corrupt Practices Act ("FCPA") and economic sanctions programs administered by the Office of Foreign Assets Control ("OFAC"). 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 laws and regulations, the FCPA, economic sanctions programs, 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 are probable and the costs can be reasonably estimated. However, we may incur legal costs for a matter even if we have not established a reserve for it and the cost of resolving a matter may be substantially higher than amounts reserved for it. It is inherently difficult to predict the outcome of our legal, regulatory and other adversarial proceedings, particularly 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 resolution of a pending legal proceeding could materially adversely affect our business, reputation, results of operations and financial condition.

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 regularly prepare and submit a SIFI Plan. See "Regulation and Competition - Regulatory Capital and Liquidity Requirements."

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.

In July 2019, the Bank of England ("BoE") and the U.K. Prudential Regulation Authority ("PRA") published final policies on the Resolvability Assessment Framework ("RAF"), which places the onus on firms to demonstrate their own resolvability and is designed to increase transparency and accountability for resolution planning. In order to be considered resolvable, HSBC must meet three outcomes: (i) have adequate resources in resolution; (ii) be able to continue business through resolution and restructuring; and (iii) be able to co-ordinate its resolution and communicate effectively with stakeholders. The RAF requires HSBC to perform a self-assessment of its preparedness for resolution, submit a report of the outcome of this self-assessment to the PRA in October 2021 and publish a public summary of the HSBC Group's resolvability in 2022. The BoE will similarly publish a statement concerning the resolvability of HSBC at the same time. HSBC continues to engage with the BoE, PRA and its global regulators in other jurisdictions to ensure that it meets current and future recovery and resolution requirements.

U.S. federal banking agencies may increase regulatory capital, TLAC, long-term debt or liquidity requirements which could require HSBC North America or HSBC Bank USA to issue additional qualifying securities or to take other actions, such as liquidate assets. HSBC North America and HSBC Bank USA are 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 the current regulatory environment, capital and liquidity requirements are frequently introduced and amended. Our regulators may increase regulatory minimum or buffer requirements, change how regulatory capital is calculated or increase liquidity requirements. A significant component of regulatory capital ratios is calculating our risk-weighted assets and our leverage exposure which may increase. The Basel Committee has also revised several key methodologies for measuring risk-weighted assets. These revisions include changes to the standardized approach for credit risk and operational risk, new constraints on the use of internal models, introduction of a capital floor based on the revised standardized approaches, and a new final standard on the minimum capital requirements for market risk. The federal banking agencies may update the U.S. Basel III rule to incorporate the Basel Committee revisions.

Additionally, in October 2020, U.S. banking regulators issued a final rule to implement NSFR requirements which target longer-term liquidity risk and would apply to HSBC North America and HSBC USA Bank. These 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.

Increases in regulatory capital may also be required in response to other U.S. supervisory requirements. 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 under multiple forward-looking stress scenarios across a nine-quarter planning horizon. The FRB has also adopted a final rule on the SCB which, among other things, replaced the current fixed capital conservation buffer with a dynamic, institution-specific risk-based SCB for CCAR firms such as HSBC North America. See "Regulation and Competition - Capital Planning and Stress Testing." These stress testing requirements will influence our regulatory capital and liquidity planning process, and may impose additional operational and compliance costs on us.

Preparation for the U.S. implementation of the Basel Committee's revisions to 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. Changes to and compliance with the regulatory capital and liquidity requirements may impact our operations by requiring us to liquidate assets, increase borrowings, issue additional equity or other securities, cease or alter certain operations, sell company assets, or hold highly liquid assets, which may adversely affect our results of operations.

Failure to meet regulatory requirements and expectations regarding sales practices and incentive compensation programs could negatively impact us and our customers. 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.

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. 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 the HSBC North America 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.

Risks related to our 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 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, with whom we do business;
- 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. Risks have the potential to affect the results of our operations or financial condition. The management of risk is an integral part of all our activities and 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. 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: Unfavorable 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. 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 also have a material adverse effect on our operations, financial condition and prospects.

Failure to effectively implement our business strategies may adversely affect our financial performance. Our business strategy is described under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Overview - 2020 Events." Implementation of our business strategy will require significant time and require us to incur significant expense. See Note 3, "Strategic Initiatives," in the accompanying consolidated financial statements for further detail. The actual costs and time required may exceed our estimates. Additionally, implementation of our business strategy will affect our employees, customers and other stakeholders, and could adversely impact our relationships with stakeholders and our reputation.

Our strategies for business growth include focusing our sales efforts on international connectivity strategies with high quality international corporate clients and internationally minded wealth and personal clients, as well as augmenting our returns through increased cross-selling and cost optimization. We may fail to attract international clients or cross-sell our services to them. 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. Our cross-sell strategy is also 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. Our international corporate strategies are dependent on a stable geopolitical environment. Increased tensions or instability between trading nations and the adoption of protectionist trade policies could adversely affect our ability to obtain new business from existing clients.

Substantial work is required to execute on our growth strategies. 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. Failure to successfully implement our business strategies may have a material adverse effect on our businesses, prospects, financial condition and results of operations.

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 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 \$8,487 million of long-term debt at various points in 2020. 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.

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 United States and abroad and concerns over potential government defaults and related policy initiatives.

Our approach is to meet our capital needs locally through activities which reduce risk. To the extent, however, that local alternatives are insufficient, as a wholly-owned subsidiary of HSBC, we would seek their support. HSBC has provided us with capital support in the past. 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.

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 the challenging economic conditions that followed. 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.

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. 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 as well as 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.

Adverse changes in our credit ratings could have a material adverse effect on our borrowing costs and liquidity. 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 \$8,487 million of long-term debt in 2020. 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, including as a result of credit-related contingent features in certain of our derivative contracts, which could negatively affect our liquidity. During the second quarter of 2020, Fitch changed its rating outlook for both HSBC USA and HSBC Bank USA to negative from stable and S&P downgraded its long- and short-term issuer credit ratings of HSBC USA and HSBC Bank USA by one notch to A- and A-2, respectively for HSBC USA, and A+ and A-1, respectively for HSBC Bank USA. While these rating actions by Fitch and S&P did not have a material impact on our borrowing costs or liquidity, any future actions could have such an impact.

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, 2020, 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 not manage risks associated with the replacement of benchmark rates effectively. The proposed replacement of benchmarks, including LIBOR with alternative benchmark rates, and our development of products linked to alternate 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 and execution risks, relating to documentation changes for new products and the transition of legacy contracts to alternate benchmark rates, which transition will, in turn, depend, to a certain extent, on the availability of alternate benchmark rate products and on the participation of customers and third party market participants in the transition process, legal proceedings, investigations or other actions regarding the interpretation and enforceability of provisions in LIBOR-based contracts, and regulatory investigations or reviews in respect of our preparation and readiness for the replacement of LIBOR with alternative reference rates;
- Financial risks, arising from any changes in the valuation of financial instruments linked to benchmark rates and the implementation of the International Swaps and Derivatives Association's protocol for the transition of derivatives contracts;
- Pricing risks, as changes to benchmark indices could impact pricing mechanisms on some instruments;
- Operational risks, due to the need for us, our customers and the market to adapt IT systems, trade reporting infrastructure, operational processes and controls to accommodate one or more alternative benchmark rates; and
- Conduct risks, through potential material, adverse impact on customers or financial markets, if our customers are not ready and able to adapt their own processes and systems to accommodate the alternative benchmark rate products.

While cessation timelines remain subject to final agreement by the industry and regulatory authorities, we continue to assess how the discontinuation of existing benchmark rates could materially affect our business, financial condition, results of operations, prospects and customers.

Concentrations of credit and market risk 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. Disruptions in the liquidity or transparency of any of the industries, products, financial markets or economies we operate in may result in our inability to sell, syndicate or realize the value of our positions, thereby leading to increased concentrations.

Third parties may use us as a conduit for illegal activities without our knowledge, which could have a material adverse effect on us. A major focus of U.S. government policy relating to financial institutions in recent years has been combating financial crime activity, including money laundering, bribery and corruption and enforcing compliance with economic sanctions. We are required to comply with applicable AML, anti-bribery/corruption and sanctions laws and regulations, the FCPA and economic sanctions programs administered by OFAC, and we have various policies and procedures, including 'Know Your Customer' procedures and other internal controls, that are reasonably designed to achieve such compliance. These policies and procedures are aimed at preventing the use of our products and services for the purpose of committing or concealing financial crime. 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 policies and procedures relating to financial crime compliance (including AML, anti-bribery/anti-corruption and economic sanctions).

A program consisting of policies and procedures that are reasonably designed to achieve compliance with financial crime laws may not always prevent 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), or committing acts of bribery or violations of economic sanctions through us. Becoming a party to violations of financial crime laws or regulations, or accusations of being associated with such activity, could damage our reputation and/or lead 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.

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. See "-A failure in our infrastructure, or those of our third party vendors and other service providers, that results in a loss of information, delays our ability to access information or impacts our ability to provide services to our clients may materially adversely affect our business, financial condition and results of operations." 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 operations.

A failure in our infrastructure, or those of our third party vendors and other service providers, that results in a loss of information, delays our ability to access information or impacts our ability to provide services to our clients may materially adversely affect our business, financial condition and results of operations. Our businesses are highly dependent on our ability to process large volumes of data that require global capabilities and scale from our technology platforms. If our technology or communications fail, or those of industry utilities or our service providers fail, we could experience production and system outages or failures or other significant operational delays. Any such outage, failure or delay could adversely affect our ability to effect transactions or service our clients, which could expose us to liability for damages, result in the loss of business, damage our reputation, subject us to regulatory scrutiny or sanctions or expose us to litigation, any of which could have a material adverse effect on our business, financial condition and results of operations. Security or technology disruptions, failures or delays that impact our communications or information systems could also adversely affect our ability to manage our exposure to risk or expand our business.

Upgrading our computer systems, software and networks may also subject us to disruptions, failures or delays due to the complexity and interconnectedness of our systems, software and networks. The failure to upgrade or maintain these computer systems, software and networks could result in greater susceptibility to attacks, unauthorized access and misuse, and could also prevent us from achieving our business continuity and resiliency objectives. There can be no assurance that any such disruptions, failures or delays will not occur or, if they do occur, that they will be adequately addressed.

Third parties with which we do business or that facilitate our business activities could also be sources of technology risk to us, including from breakdowns, failures or delays of their own systems or capacity constraints or other services that impair our ability to process transactions and communicate with customers and counterparties. In addition, we are exposed to the risk that a technology disruption or other information security event at a vendor used by our third-party service providers could impede their ability to provide products or services to us. We may not be able to effectively monitor or mitigate operational risks relating to the use of vendors by third-party service providers.

As a result of financial entities, central agents, clearing agents and houses, exchanges and technology systems across the globe becoming more interdependent and complex, a technology failure that significantly degrades, deletes or compromises the

systems or data of one or more financial entities or suppliers could have a material impact on counterparties or other market participants, including us and could disrupt the functioning of the overall financial system.

We are subject to a variety of cybersecurity risks that, if realized, 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 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 vulnerabilities continue to be leveraged by criminals to perpetrate crimes at an increasing rate, and pose a significant threat to economic, social and geopolitical stability. HSBC Group and third party vendors we rely on face sophisticated cyber threats from state-sponsored attackers, hackers for hire, organized syndicates, and other threat actors seeking our critical corporate and customer information.

In recent years, distributed denial of service attacks, spearphishing campaigns, advanced malware, ransomware attacks, social engineering and insider threats with the intent to obtain personal customer financial information or proprietary corporate information, disrupt availability of services and to commit fraud have grown in volume and level of sophistication. 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 to 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.

Internet crime or cyberattacks affecting HSBC Group or vendors on which we rely 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, tablets 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 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. 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.

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.

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 third parties, causes a significant operational break-down or failure, either as a result of human error or purposefully. 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. Misconduct risks could be increased if prevent and detect measures are less effective because of remote and home working. 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, including consolidating middle and back office activities to a single wholesale and a single retail offering platform;
- changes to our AML and sanctions policies and the related operations practices;
- our outsourcing of various operations, including outsourcing our mortgage servicing business and outsourcing elements of our fixed-income business to affiliates based in Europe; or
- the decision to insource certain products, services or operations.

Further, in order to react quickly to or meet newly-implemented regulatory requirements, and to effectively implement our strategy, we may need to change or enhance systems within very tight time frames, which would increase operational risk. See "Failure to effectively implement our business strategies may adversely affect our financial performance" and "The delivery of our priorities is subject to execution risk." Failure to implement appropriate 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.

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 or with 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 have significant exposure to counterparty risk and the financial condition of our clients and counterparties could adversely affect us. 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. Significant deterioration in the credit quality of a counterparty may lead to concerns about the credit quality of others in the same industry, exacerbating our credit risk exposure, and increasing losses (including mark-to-market losses) in our market-making and clearing businesses. 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 with it risk. 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. 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.

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.

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.

Failure to appropriately address potential conflicts of interest can result in reputational harm, as well as litigation and enforcement actions. Our ability to appropriately address potential conflicts of interest has become increasingly complex as our business activities encompass more transactions with and among our diversified client and customer base. We can become subject to litigation and enforcement actions, and our reputation can be damaged, by the failure or perceived failure to adequately address or appropriately disclose conflicts of interest, treat clients and customers with the appropriate standard of care, and provide fiduciary products or services in accordance with the applicable legal and regulatory standards.

A failure or perceived failure to appropriately address conflicts of interest or fiduciary obligations could result in customer dissatisfaction, litigation and regulatory fines, penalties or other sanctions, and heightened regulatory scrutiny and enforcement actions, all of which could adversely affect our businesses and reputation.

New customer privacy initiatives may impose additional operational burdens on us, may limit our ability to pursue desirable business initiatives and increase the risks associated with any future use of customer data. Recent legislative and regulatory efforts to protect the privacy of consumer data limit how companies can use customer data and impose obligations on companies in their management of such data. As a financial services company, we necessarily gather, maintain and use a significant amount of customer data. Other jurisdictions may adopt similar requirements that impose different and potentially inconsistent compliance burdens. These initiatives, particularly to the extent multiple jurisdictions adopt inconsistent requirements, could increase compliance complexity and related costs, result in significant financial penalties for compliance failures, and limit our ability to develop new products or respond to technological changes. They also could heighten the reputational impact of perceived misuses of customer data, by us, our vendors, or others who gain unauthorized access to our customer data.

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 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.

Key employees may be difficult to attract or retain. HUSI's continued performance, competitive position, and effectiveness to execute its overall strategy depend on its ability to attract new employees and to retain and motivate the existing workforce. U.S. personnel continue to cope with discomfort due to global economic and geopolitical risks. The U.S. transformation and restructuring efforts aimed to create a more focused, simpler, and more profitable organization create further uncertainty. Employee risk has been mitigated well during the pandemic to date, but an extended recovery timeline may result in impacts to staff mental health and well-being. Providing support to our employees in the current environment is a significant priority and is critical to managing our workforce and achieving our strategic objectives.

The regulatory environment and competitive market in which HUSI operates can make it difficult to hire or retain highly qualified employees. HUSI often competes in the market for talent with industries that are not subject to regulatory restrictions on incentive compensation structure. Compensation implications of the variable pay pool and any future limitations to senior staff or Material Risk Takers could affect retention of top performers and critical skilled staff. This may adversely affect our ability to deliver on the strategic plan. The accelerated pace of change in employment in our industry and any disruptions to our workplace and workforce require a focused effort on future skill development. To enable growth, there is a need to facilitate talent mobility, broaden career growth, allow for formal development, and establish a high impact learning culture.

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. While plan assets were higher than projected plan liabilities resulting in an over-funded status of approximately \$305 million at December 31, 2020, changes in market conditions could result in an under-funded status occurring in future periods. Because these obligations relate to the HSBC North America pension plan, only a portion of any 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 any 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 21, "Pension and Other Postretirement Benefits," in the accompanying consolidated financial statements for further information concerning the HSBC North America defined benefit plan.

Risks relating to our Financial Statements

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 credit 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, credit loss reserve estimates and certain asset and liability valuations such as goodwill are subject to management's judgment and actual results are influenced by factors outside our control. To the extent historical averages are not predictive of future losses and management is unable to accurately evaluate the portfolio risk factors not fully reflected in its current loss estimate, unexpected additional losses could result. Similarly, to the extent assumptions employed in measuring fair value of assets and liabilities are not supported by market prices or other observable parameters do not sufficiently capture their inherent risk, including management estimates of future cash flows used to determine the fair value of goodwill, unexpected additional losses could result.

We are required to establish a valuation allowance for deferred tax assets and record a charge to earnings 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 our 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 17, "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 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. We could be required to apply a new or revised standard retrospectively, 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. For further discussion, see Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements.

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, Virginia 22102. HSBC Bank USA has 152 branches and 30 representative offices across the United States at December 31, 2020.

Item 3. Legal Proceedings

See Note 29, "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 2020 or 2019.

Item 6. Selected Financial Data

Year Ended December 31,	2020	2019	2018	2017	2016
(dollars are in millions)					
Statement of Income (Loss) Data:					
Net interest income.....	\$ 2,174	\$ 2,112	\$ 2,252	\$ 2,273	\$ 2,484
Provision for credit losses.....	810	195	(73)	(165)	372
Total other revenues.....	1,535	1,854	1,899	2,002	1,404
Operating expenses excluding goodwill impairment.....	3,097	3,136	3,638	3,391	3,298
Goodwill impairment.....	784	365	—	—	—
Income (loss) before income tax.....	(982)	270	586	1,049	218
Income tax expense (benefit).....	(42)	157	266	1,228	89
Net income (loss).....	<u>\$ (940)</u>	<u>\$ 113</u>	<u>\$ 320</u>	<u>\$ (179)</u>	<u>\$ 129</u>
Balance Sheet Data at December 31:					
Loans:					
Real estate, including construction.....	\$ 10,464	\$ 11,501	\$ 11,344	\$ 10,533	\$ 10,890
Business and corporate banking.....	13,479	13,479	13,066	12,504	14,080
Global banking.....	13,519	17,915	20,167	20,088	23,481
Other commercial.....	4,137	5,316	4,765	9,910	5,765
Total commercial.....	<u>41,599</u>	<u>48,211</u>	<u>49,342</u>	<u>53,035</u>	<u>54,216</u>
Residential mortgages.....	18,377	17,801	17,383	17,273	17,181
Home equity mortgages.....	727	853	982	1,191	1,408
Credit card.....	1,066	1,405	1,019	721	688
Other consumer.....	319	283	252	343	382
Total consumer.....	<u>20,489</u>	<u>20,342</u>	<u>19,636</u>	<u>19,528</u>	<u>19,659</u>
Total loans.....	<u>62,088</u>	<u>68,553</u>	<u>68,978</u>	<u>72,563</u>	<u>73,875</u>
Loans held for sale.....	337	289	512	715	1,809
Total assets.....	196,434	175,375	172,448	187,235	201,301
Total deposits.....	145,150	119,693	110,955	118,702	129,248
Long-term debt.....	19,979	26,697	30,628	34,966	37,739
Preferred stock.....	1,265	1,265	1,265	1,265	1,265
Common equity.....	17,026	16,991	19,241	18,829	19,090
Tangible common equity ⁽¹⁾	16,560	15,734	17,613	17,194	17,444
Total equity.....	<u>18,291</u>	<u>18,256</u>	<u>20,506</u>	<u>20,094</u>	<u>20,355</u>

Year Ended December 31,	2020	2019	2018	2017	2016
Selected Financial Ratios:					
Rate of return on average:					
Total assets	(.5)%	.1 %	.2 %	(.1)%	.1 %
Risk-weighted assets	(.8)	.1	.3	(.1)	.1
Common equity	(6.0)	.2	1.3	(1.3)	.3
Tangible common equity	(6.2)	.2	1.4	(1.4)	.3
Total equity	(5.1)	.6	1.6	(.9)	.6
Net interest margin	1.16	1.27	1.42	1.28	1.28
Loans to deposits ratio ⁽²⁾	48.90	71.60	75.02	73.70	75.67
Efficiency ratio	104.6	88.3	87.6	79.3	84.8
Allowance as a percent of loans ⁽³⁾	1.63	.93	.78	.94	1.38
Commercial allowance as a percent of loans ⁽³⁾	1.96	1.05	.93	1.15	1.72
Commercial net charge-off ratio ⁽³⁾	.22	.09	.09	.30	.34
Consumer allowance as a percent of loans ⁽³⁾	.98	.64	.42	.37	.44
Consumer two-months-and-over contractual delinquency	2.27	2.04	2.05	2.48	4.05
Consumer net charge-off ratio ⁽³⁾	.39	.27	.13	.11	.33
Common equity Tier 1 capital to risk-weighted assets	14.7	13.1	13.6	14.2	13.7
Tier 1 capital to risk-weighted assets	15.9	14.1	14.6	15.3	14.5
Total capital to risk-weighted assets	19.2	16.3	17.2	18.4	18.3
Tier 1 leverage ratio	8.6	9.9	11.0	9.9	9.2
Supplementary leverage ratio	7.8	6.9	7.6	7.3	6.5
Total equity to total assets	9.3	10.4	11.9	10.7	10.1

⁽¹⁾ The following table provides a reconciliation of common equity to tangible common equity:

Year Ended December 31,	2020	2019	2018	2017	2016
(dollars are in millions)					
Common equity	\$ 17,026	\$ 16,991	\$ 19,241	\$ 18,829	\$ 19,090
Less: Goodwill	458	1,242	1,607	1,607	1,612
Less: Intangible assets - purchased credit card relationships	8	15	21	28	34
Tangible common equity	<u>\$ 16,560</u>	<u>\$ 15,734</u>	<u>\$ 17,613</u>	<u>\$ 17,194</u>	<u>\$ 17,444</u>

⁽²⁾ Represents period end loans, net of allowance for credit 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.

⁽³⁾ Excludes loans held for sale.

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. All discussions related to strategy, including the matters discussed under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Overview" and discussions of those matters elsewhere in this Form 10-K are forward-looking statements. These matters or statements will relate to our future structure, operations, strategy, 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:

- the impact of the coronavirus ("COVID-19") pandemic and subsequent outbreaks, including the economic downturn and recovery, effect on global trade and changes in customer behavior and corporate strategy;
- our ability to effectively implement and deliver on our business strategies, and the effect implementation of our business strategy may have on our operations and relationships with our customers, regulators, employees and other stakeholders;
- uncertainty concerning the future market and economic conditions in the United States and abroad, including but not limited to, changes in interest rates, energy prices and unemployment levels, a decline in housing prices, the availability of credit and 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 trade disputes and the United Kingdom ("U.K.") exiting the European Union ("EU");
- compliance with the Chinese National Security Law and the Hong Kong Autonomy Act, which may impact, among other things, individuals or entities with which we are able to conduct business;
- changes in laws and regulatory requirements;
- the potential impact of any legal, regulatory or policy changes affecting financial institutions and the global economy as a result of the new administration;
- the ability to deliver on our regulatory priorities;
- capital and liquidity requirements under Basel guidance, 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" or "Dodd-Frank") 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 or removal 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 (together with its subsidiaries, "HSBC Bank USA") to fulfill the requirements imposed by applicable consent orders or 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;
- increases in our allowance for credit losses and changes in our assessment of our loan portfolios;
- 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 or retain key employees, including foreign workers, and customers;
- 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, climate change, outbreaks of contagious disease, 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;
- 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;
- possible negative impact of regulatory investigations and legal proceedings related to alleged foreign exchange manipulation;
- changes in the methodology for determining benchmark rates and the implementation of alternative benchmark rates, such as the Secured Overnight Financing Rate ("SOFR");
- 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;
- the potential for 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

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."

2020 Economic Environment The U.S. economy partially rebounded during the second half of 2020 after deteriorating rapidly into recession earlier in the year driven by the COVID-19 pandemic which resulted in disruption to business and economic activity as well as to the capital markets. COVID-19's effects in the U.S. and globally have been extreme, and the duration of the pandemic and its ultimate repercussions continue to remain unclear as recently introduced vaccines may not be widely available to the general public for some time and the take-up rate, once available, is uncertain. Unprecedented government economic intervention has likely dampened the pandemic's effects, but at uncertain long-term cost, and additional government support beyond what was enacted in 2020 is currently being considered. U.S. Gross Domestic Product ("GDP") contracted at an estimated annual rate of 3.5 percent in 2020, while the total unemployment rate continues to remain high at 6.7 percent at December 2020 as compared with 3.5 percent at December 2019. After cutting short-term interest rates by 150 basis points (to near zero) in March 2020 and announcing various other initiatives to enhance liquidity and support the flow of credit to households and businesses, the FRB held short-term interest rates steady for the remainder of the year and has indicated it expects short-term rates to remain low for some time until it is confident that the economy is far along in a recovery.

The impact of the COVID-19 pandemic on economic conditions both in the United States and abroad during 2020 has created global uncertainty about the future economic environment including the length and depth of a global recession. Concerns over interest rate levels, energy prices, domestic and global policy issues, including civil unrest in the U.S., trade policy in the U.S. and geopolitical events as well as the implications of those events on the markets in general further add to this global uncertainty. Interest rate levels and energy prices, in combination with global economic conditions, fiscal and monetary policy and the level of regulatory and government scrutiny of financial institutions will continue to impact our results in 2021 and beyond.

2020 Events

- As mentioned above, the COVID-19 pandemic has disrupted global financial markets and negatively affected supply and demand across a broad range of industries and has caused disruption to our customers, vendors and employees. This pandemic has had a significant impact on our business, financial condition and results of operations during the year, including the impairment of the goodwill previously allocated to our Retail Banking and Wealth Management and Private Banking reporting units and an increase to the provision for credit losses on our loan portfolio. Additionally, in April 2020, Fitch Ratings ("Fitch") changed its rating outlook for both HSBC USA and HSBC Bank USA to negative from stable and, in May 2020, Standard and Poor's ("S&P") downgraded its long- and short-term issuer credit ratings of HSBC USA and HSBC Bank USA by one notch, following similar rating actions for HSBC. The circumstances around this pandemic will continue to impact our business in future periods. Should the current economic conditions persist or deteriorate further, it will continue to adversely impact our business which could include, but not be limited to, negative impacts on income due to lower interest rates, lower lending and transaction volumes, higher expected credit losses, lower wealth management revenue due to equity markets volatility and weakness, and increased model risk including credit loss models, capital models and asset/liability management models. Other potential risks include the impact of postponed health screenings on the well-being of our employees, credit rating migration which could negatively impact our risk-weighted assets and capital position, and potential liquidity stress due to, among other factors, increased customer drawdowns, notwithstanding the significant initiatives that the U.S. Government and the FRB have put in place to support funding and liquidity. This could have a material adverse effect on our business, prospects, liquidity, financial condition, results of operations and credit ratings in future periods. The extent of such impact will depend on the outcome of certain developments, including but not limited to, the duration of the pandemic given that the pandemic may not be fully contained until a vaccine becomes widely available which might not occur until later in 2021, as well as its continuing impact on our customers, vendors and employees, all of which are uncertain. See Part II, Item 1A, "Risk Factors - Risks related to the impact of COVID-19" for further discussion.
- During the first quarter of 2020, as a result of the deterioration in economic conditions caused by the COVID-19 pandemic and the amount of headroom calculated in our previous annual impairment test for certain reporting units, we performed an interim goodwill impairment test for all of our reporting units as of March 31, 2020 and concluded that the fair value of our Commercial Banking reporting unit exceeded its carrying value, including goodwill. However, the cash flow projections for our Retail Banking and Wealth Management and our Private Banking reporting units were significantly lower than previous estimates which, in conjunction with valuation estimates under a market approach and in consideration of a challenging macroeconomic outlook, resulted in a fair value that was significantly lower than their book values, including goodwill. As a result, we recorded a non-cash impairment charge of \$784

million in the first quarter of 2020, representing the entire amount of goodwill previously allocated to these reporting units. Beginning in the second quarter of 2020, our Retail Banking and Wealth Management and our Private Banking reporting units are being reported together within a newly created Wealth and Personal Banking segment for segment reporting purposes. As discussed in "Critical Accounting Policies and Estimates," our goodwill impairment testing is highly sensitive to certain assumptions and estimates used. For additional discussion of the results of our goodwill impairment testing, see Note 10, "Goodwill and Other Long-Lived Assets," in the accompanying consolidated financial statements.

- In February 2020, we announced a strategic plan to restructure our operations ("Restructuring Plan") in alignment with HSBC's global strategy to refocus our wholesale operations to better serve our international corporate clients and restructure our retail operations to better meet the needs of globally mobile and affluent clients. Our Restructuring Plan also includes streamlining our functional and operations support model by removing duplication and reducing the size of our balance sheet to better align with the scope and scale of the U.S. opportunity. We currently expect to incur pre-tax charges in connection with this Restructuring Plan largely over the two-year period of 2020-2021 of approximately \$520-\$590 million (\$390-\$450 million after-tax). During 2020, we recorded pre-tax charges in connection with our Restructuring Plan totaling \$280 million. See Note 3, "Strategic Initiatives," in the accompanying consolidated financial statements for a more detailed discussion of these costs.

Our Restructuring Plan is moving forward, including consolidation of our wholesale and retail middle and back office functions, each under a single operations structure, simplification of our support service functions, the exit of certain derivative contracts and the transfer of interest rate derivative contracts associated with Fixed Income activities to HSBC Bank plc. In 2020, we also completed the creation of our Wealth and Personal Banking business and the consolidation of our retail branch network, closing 76 branches during the year. As a result of these actions, we have lowered staffing levels by approximately 13 percent and reduced risk-weighted assets by approximately 11 percent as compared with December 31, 2019, and are on track to exceed our commitment to reduce total operating expenses by 10-15 percent by 2022. We remain committed to our multi-year strategic plan to re-profile our business, and continue to explore strategic options with respect to our retail operations to focus on our high net worth client base and wealth management products.

Performance, Developments and Trends Net income (loss) was a loss of \$940 million during 2020 compared with income of \$113 million and \$320 million during 2019 and 2018, respectively. Income (loss) before income tax was a loss of \$982 million during 2020 compared with income of \$270 million and \$586 million during 2019 and 2018, respectively. The decrease in income (loss) before income tax during 2020 compared with 2019 was due to a higher provision for credit losses driven by the deterioration of economic conditions caused by the COVID-19 pandemic, higher operating expenses driven by higher goodwill impairment charges as discussed above and lower other revenues driven by lower trading revenue. These decreases were partially offset by higher net interest income. The decrease in income (loss) before income tax during 2019 compared with 2018 was due to a higher provision for credit losses, lower net interest income due primarily to higher rates paid on deposits and lower other revenues, partially offset by lower operating expenses as the impact of a \$365 million goodwill impairment charge recorded in 2019 was more than offset by expense of \$492 million recorded in 2018 related to the settlement of a mortgage securitization legal matter.

Our reported results in all periods were impacted by certain items management believes to be significant, which affect 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,	2020	2019	2018
	(in millions)		
Income (loss) before income tax, as reported	\$ (982)	\$ 270	\$ 586
Goodwill impairment	784	365	—
Costs to achieve ⁽¹⁾	278	—	—
Losses related to Visa Inc. Class B common shares previously sold ⁽²⁾	9	52	7
Lease impairment ⁽³⁾	—	38	—
Severance costs ⁽⁴⁾	—	33	—
Gains on extinguishment of debt, net ⁽⁵⁾	(12)	(70)	—
Expense related to the settlement of certain mortgage loan legal matters	—	—	516
Adjusted performance ⁽⁶⁾	<u>\$ 77</u>	<u>\$ 688</u>	<u>\$ 1,109</u>

- (1) Reflects costs related to the delivery of our Restructuring Plan as discussed further above. Costs to achieve primarily consisted of lease impairment and other related costs, severance costs, allocated costs from HSBC Technology & Services ("HTSU"), and trading losses associated with the exit of certain derivative contracts. See Note 3, "Strategic Initiatives," in the accompanying consolidated financial statements for a more detailed discussion of these costs. The expense during 2020 also includes \$18 million of gains on sales of certain owned retail branch properties and \$16 million of allocated costs from other HSBC affiliates related to the HSBC Group's restructuring activities.
- (2) Reflects losses on the swap agreements we entered into to retain the litigation risk associated with the Visa Inc. ("Visa") Class B common shares ("Class B Shares") we sold to a third party in 2016 and 2017. See Note 27, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," in the accompanying consolidated financial statements for addition information. In 2020, the loss primarily related to extending the maturity of the total return swap position used to economically hedge the periodic payments made under the swap agreements. In 2019, the loss related to an increase in the expected timing of the final resolution of the related litigation and, to a lesser extent, changes in the Visa Class B Share conversion rate. In 2018, the loss related to changes in the Visa Class B Share conversion rate.
- (3) Includes lease impairment and other related costs of \$19 million related to a decision to exit certain branches in 2019 as well as \$19 million of allocated lease impairment costs from HTSU.
- (4) Reflects severance costs associated with a 2019 global effort aimed to right-size our cost base.
- (5) The gain in 2020 related to the extinguishment of time deposits reflecting early client withdrawals. In 2019, HSBC Bank USA repurchased long-term debt that was designated under fair value option and recorded a net pre-tax gain on extinguishment of \$84 million. The extinguishment resulted in the realization of a cumulative gain attributable to our own credit spread that was previously recorded in accumulated other comprehensive income (loss) which more than offset the premium paid to extinguish the debt. The net gain in 2019 also includes a loss of \$14 million on extinguishment of certain repurchase agreements.
- (6) Represents a non-U.S. GAAP financial measure.

Excluding the impact of the items in the table above, our adjusted performance during 2020 decreased \$611 million compared with 2019 due primarily to a higher provision for credit losses driven by the deterioration of economic conditions caused by the COVID-19 pandemic and lower other revenues driven by lower trading revenue which were partially offset by lower operating expenses and higher net interest income. Excluding the impact of the items in the table above, our adjusted performance during 2019 decreased \$421 million compared with 2018 due to a higher provision for credit losses, lower net interest income due primarily to higher rates paid on deposits and lower other revenues, partially offset by lower operating expenses.

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.

London Interbank Offered Rate ("LIBOR") Transition Regulators and central banks in various national jurisdictions continue to actively work to help transition from interbank offered rates ("IBORs") to acceptable alternative rates, such as the Secured Overnight Financing Rate ("SOFR") recommended by the Alternative Reference Rates Committee ("ARRC") convened by the FRB. In 2020, the FASB issued changes to the U.S. GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens associated with this transition. Under the new guidance, an entity is permitted to account for the modification of a contract affected by reference rate reform as a continuation of the existing contract, if certain conditions are met. In addition, the new guidance allows an entity to elect on a hedge-by-hedge basis to continue to apply hedge accounting for hedging relationships in which the critical terms change due to reference rate reform, if certain conditions are met.

We have a considerable number of contracts referencing IBORs, primarily U.S. dollar ("USD") LIBOR, such as loans, derivatives and long-term debt, extending past 2021 when the U.K. Financial Conduct Authority ("FCA") originally announced it will no longer require banks to submit rates for LIBOR. In November 2020, the Intercontinental Exchange Benchmark Administration ("IBA"), the FCA-regulated and authorized administrator of LIBOR, announced a proposal to cease publication of the one-week and two-month USD LIBOR term rates by the end of 2021 and extend publication of the remaining overnight, one-month, three-month, six-month and twelve-month USD LIBOR term rates, which are more heavily used, to the end of June 2023, subject to consultation. Concurrently, U.S. banking regulators issued a statement that acknowledged extending the publication of certain LIBOR term rates would allow most legacy LIBOR-based contracts to mature before LIBOR experiences disruption, but also encouraged banks to cease entering into new LIBOR-based contracts as soon as practicable and in any event by the end of 2021.

HSBC has established a global transition program in which we actively participate with the objective of facilitating an orderly transition of all products, processes, models and curves, as well as all legacy LIBOR-based contracts, onto replacement rates. This program is aimed to minimize the risks arising from the transition by developing alternative rate product capabilities and transitioning legacy contracts. The program is significant in terms of scale and complexity and will impact all global businesses as well as multiple products, currencies, systems and processes. Transition results in a number of risks, mainly conduct risk, execution risk, financial risk and non-financial risk. We have developed a risk inventory, including mitigating actions, and the identified risks are being monitored. Furthermore, the transition could have a range of adverse impacts on our business, including legal proceedings or other actions regarding the interpretation and enforceability of provisions in LIBOR contracts and regulatory investigations or reviews regarding our preparation and readiness for the replacement of LIBOR with alternative reference rates.

While we continue to transact in LIBOR, our framework for limiting the sale of LIBOR-based products has been established and our businesses continue to inform their clients that there are risks associated with engaging in new LIBOR-based products. We have implemented risk disclosures for new sales of LIBOR-based contracts across all of our business lines and have incorporated the ARRC recommended fallback language into new LIBOR-based contracts for syndicated loans, bilateral loans, floating rate notes and adjustable rate mortgage ("ARM") loans. During 2020, we updated the existing ARRC recommended fallback language for syndicated loans and bilateral loans with the revised hardwired fallback language published by the ARRC, under which the trigger events that would cause transition to a new benchmark rate and a waterfall of identified successor rates are specified. In addition, the International Swaps and Derivatives Association updated its benchmark fallback language for new LIBOR-based derivative contracts and established its industry protocol to facilitate the incorporation of the new fallback language into legacy non-cleared derivative contracts. We are adhering to the protocol, which became effective in January 2021. Separately, central clearing counterparties are expected to amend their rules no later than the first half of 2021 to incorporate the new fallback language and adhere to the protocol for cleared derivative contracts.

Our businesses continue to actively develop their capabilities to offer alternative rate products and the supporting processes and systems. During 2020, we implemented the capabilities to offer SOFR-based ARM loans in our Wealth and Personal Banking business, SOFR-based syndicated loans and real estate bilateral loans in our Commercial Banking business and SOFR-based syndicated loans, bilateral loans and derivatives in our Global Banking and Markets business. Additional SOFR-based derivative and bilateral loan capabilities are scheduled for implementation in 2021. However, the COVID-19 pandemic has impacted the speed at which we are able to develop these capabilities and the readiness of our customers to use alternative rate products. Consequently, the sale of LIBOR-based products will continue for longer than initially anticipated. In addition, the COVID-19 pandemic has likely affected the pace at which many of our customers will have been preparing to use alternative rate products and, therefore, also to transition their legacy contracts onto replacement rates.

The ability of HUSI and its clients to transition legacy contracts onto replacement rates is dependent on the availability of products that reference replacement rates, including SOFR, and on our customers being ready and able to adapt their own processes and systems to accommodate the replacement products. We have finalized pricing and data/workflow requirements related to transitioning legacy contracts onto replacement rates and, during the first quarter of 2021, will begin to engage our clients to increase awareness, provide alternative products and determine their ability and readiness to transition. We also continue to formulate plans to enable us to transition our LIBOR-based debt and other LIBOR-based debt where we are the payment agent, though execution of these transition plans will, to a certain extent, also depend on the engagement of third party market participants in the transition process.

The IBA proposal to extend the publication of certain USD LIBOR term rates to June 2023 discussed above will significantly aid in reducing the risks associated with transitioning legacy contracts onto replacement rates. The anticipated longer timeframe for transition may, however, increase potential timing differences between USD LIBOR-based assets and liabilities moving to SOFR prior to June 2023. In addition, the exit or transfer of certain derivative contracts as part of our Restructuring Plan and the sale of substantially all of our LIBOR-linked variable rate debt securities maturing beyond 2021 have led to a reduction in our LIBOR exposures during 2020. We continue to engage with industry participants, the official sector and our clients to support an orderly transition and the mitigation of the risks resulting from the transition.

Other COVID-19 Related Developments

The COVID-19 pandemic has significantly disrupted economic activity in many countries, including the United States, and the U.S. Government has taken multiple actions to mitigate the magnitude and persistence of the effects of the COVID-19 pandemic. The United States has been operating under a presidentially declared national emergency since March 2020. In March 2020, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), which provides financial assistance for businesses and individuals and targeted regulatory relief for financial institutions, was signed into law. In December 2020, additional COVID-19 relief legislation was enacted that extends many of the CARES Act programs and provides additional financial assistance for businesses and individuals.

Loan Forbearance Initiatives The CARES Act created a forbearance program for federally-backed mortgage loans and provided financial institutions with the option to temporarily suspend certain requirements under U.S. GAAP related to troubled debt restructurings ("TDR Loans") beginning March 1, 2020. This TDR Loan guidance has been extended and can now be applied until the earlier of January 1, 2022 or 60 days following the termination of the presidentially declared national emergency. During the third quarter of 2020, we elected to adopt the TDR Loan guidance in the CARES Act and are not applying TDR Loan classification to COVID-19 related loan modifications in the form of a long-term payment deferral (for commercial loans all payment modifications, including all payment deferrals) granted to borrowers that were current (less than 30 days past due) as of December 31, 2019 which otherwise may have been reported as TDR Loans. The CARES Act also prohibits servicers of federally-backed mortgage loans from initiating any foreclosure action on any residential property that is not vacant or abandoned for a period of 60 days. This moratorium has been extended until June 30, 2021. In addition to these federal measures, some state governments have taken action to require forbearance with respect to certain loans and fees. We

are continuing to monitor federal, state and international regulatory developments in relation to COVID-19 and their potential impact on our operations.

In April 2020, federal banking regulators issued a revised interagency statement on loan modifications and the reporting for financial institutions working with customers affected by the COVID-19 pandemic ("Interagency Statement"). The Interagency Statement confirmed that COVID-19 related short-term loan modifications (e.g., payment deferrals of six months or less) provided to borrowers that were current (less than 30 days past due) at the time the relief was granted are not TDR Loans. Borrowers that do not meet the criteria in the CARES Act or the Interagency Statement are assessed for TDR Loan classification in accordance with our accounting policies. Through December 31, 2020, these loans were not significant.

In addition, under the Interagency Statement, for COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period and, if the loan was accruing at the time the relief was granted, the loan will generally not be placed on nonaccrual status as long as the borrower utilizes a payment deferral of six months or less. For consumer mortgage loans, when a borrower utilizes a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and, if the loan does not meet the criteria in the CARES Act, assessed for TDR Loan classification. Any accrued interest recorded on these loans is generally not reversed against income and will remain recorded as accrued interest receivable. We have not modified our commercial loan nonaccrual policies as a result of this guidance.

We have implemented various loan modification payment deferral programs to provide borrowers relief from the economic impacts of the COVID-19 pandemic. The following table summarizes information about loans under these programs as of December 31, 2020. Not included in the following table are loans that have exited the programs as well as other forms of relief that we have provided to commercial clients affected by the impact of COVID-19, such as covenant waivers and amendments, and deferrals of financial statement and covenant compliance reporting requirements.

	December 31, 2020			Program Details
	Number of Loans (in thousands)	Loan Amount (in millions)	% of Loans with Payment ⁽¹⁾	
Commercial:				
Real estate, including construction.....	—	\$ 584	0%	Primarily deferrals of up to twelve months
Business and corporate banking	—	150	0	Primarily deferrals of up to twelve months
Global banking.....	—	190	0	Primarily deferrals of up to twelve months
Total commercial ⁽²⁾	—	924	0	
Consumer:				
Residential mortgages ⁽³⁾	1.8	863	30	Deferrals of either three or six month increments up to a maximum of twelve months
Home equity mortgages ⁽³⁾	0.4	43	32	Deferrals of either three or six month increments up to a maximum of twelve months
Credit cards	4.7	22	58	Deferrals of either three, four or six months increments up to a maximum of nine months
Other consumer.....	0.6	3	49	Deferrals of either three, four or six months increments up to a maximum of nine months
Total consumer.....	7.5	931	30	
Total.....	7.5	\$ 1,855	15	

⁽¹⁾ Represents the percentage of loans under a COVID-19 related payment deferral program at December 31, 2020 for which at least one payment was collected during the fourth quarter of 2020.

⁽²⁾ Total number of commercial loans is less than 25.

⁽³⁾ Includes \$763 million of consumer mortgage loans where the borrowers were provided with extended payment deferral relief of more than six months at December 31, 2020. Due to our CARES Act election, \$736 million of these loans were exempted from TDR assessment. In addition, \$590 million of these loans have been placed on nonaccrual status, because the borrowers utilized a payment deferral of more than six months.

When the payment relief period ends, borrowers have various options, including repaying the deferred payments in full, repaying the deferred payments over an installment period or moving the deferred payments to the end of the loan. If a borrower is experiencing financial difficulty when the payment relief period ends, they may enter into a modification program to reduce the interest rate and extend the term of the loan which would result in the loan being classified as a TDR Loan. As of December 31, 2020, \$480 million and \$910 million of commercial and consumer loans, respectively, have exited a COVID-19

related payment deferral program, of which nil and \$23 million, respectively, entered into a modification program upon exiting that resulted in the loans being classified as TDR Loans. Of the commercial and consumer loans that have exited a COVID-19 related payment deferral program, 100 percent and 82 percent, respectively, were current or less than 30 days past due as of December 31, 2020.

Paycheck Protection Program The CARES Act created a new loan guarantee program entitled the Paycheck Protection Program ("PPP") targeted to provide small businesses with support to cover payroll and certain other expenses. Loans made under the PPP are fully guaranteed by the Small Business Administration ("SBA"), whose guarantee is backed by the full faith and credit of the United States. PPP covered loans also afford borrowers forgiveness up to the principal amount of the PPP covered loan, plus accrued interest, if the loan proceeds are used to retain workers and maintain payroll or to make certain mortgage interest, lease and utility payments, and certain other criteria are satisfied. The SBA will reimburse PPP lenders for any amount of a PPP covered loan that is forgiven, and PPP lenders will not be held liable for any representations made by PPP borrowers in connection with their requests for loan forgiveness. Lenders receive pre-determined fees for processing and servicing PPP loans. In addition, PPP loans are risk-weighted at zero percent under the generally-applicable Standardized Approach used to calculate risk-weighted assets for regulatory capital purposes. HSBC Bank USA is a PPP participating lender and had loans funded under the PPP which totaled \$1,043 million at December 31, 2020. The SBA deadline for accepting PPP loan applications from participating lenders has been extended until March 31, 2021.

Main Street Lending Program The Main Street Lending Program ("MSLP") was established by the FRB under the CARES Act to support lending to small and medium-sized businesses that were in sound financial condition before the onset of the COVID-19 pandemic. The MSLP operates under various facilities depending on the size and other characteristics of the eligible businesses. The Federal Reserve Bank of Boston has set up a special purpose vehicle which will purchase 95 percent of each MSLP loan that is submitted to the program, provided that the required documentation is complete and the transactions are consistent with the relevant MSLP facility's requirements. As such, MSLP lenders will retain only 5 percent of an MSLP loan. We were not a participating lender in the MSLP, which expired on January 8, 2021.

Future Prospects Our operations are dependent upon our ability to grow revenues, 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 capital markets volatility, the counterparty credit limits of investors to the HSBC Group, and our management of the credit risks inherent in our business and 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 2021 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. Failure to successfully implement our business strategies may also have a material effect on our financial condition and 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. 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,	2020	2019	2018
	(in millions)		
Profit (loss) before tax – U.S. GAAP basis	\$ (982)	\$ 270	\$ 586
Adjustments:			
Expected credit losses	204	36	124
Goodwill impairment	91	156	—
Loans held for sale	13	(1)	(18)
Renewable energy tax credit investments	11	7	10
Deposit incentives	7	17	11
Loan origination	6	8	18
Leases	(9)	(17)	—
Pension and other postretirement benefit costs	(15)	(12)	8
Other long-lived assets impairment	(264)	—	—
Debt extinguishment	—	(123)	—
Other	9	15	(10)
Profit (loss) before tax – Group Reporting Basis	<u>\$ (929)</u>	<u>\$ 356</u>	<u>\$ 729</u>

The significant differences between U.S. GAAP and the Group Reporting Basis as they impact our results are summarized in Note 24, "Business Segments," in the accompanying consolidated financial statements. Differences in reported profit (loss) before tax in the table above that were individually significant for 2020 and 2019 are explained below. See "Basis of Reporting" in our Annual Report on Form 10-K for the year ended December 31, 2019 ("2019 Form 10-K") for an explanation of the differences in reported profit before tax in the table above that were individually significant for 2018.

During 2020, expected credit losses were higher under U.S. GAAP than under the Group Reporting Basis. Under the Group Reporting Basis, a majority of our loans are considered to be in "stage 1" (which requires a 12-month expected credit losses estimate), while under U.S. GAAP such loans require a lifetime expected credit losses estimate. Primarily as a result of the different approaches, loss provisions in 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic, which resulted in a worsening of economic forecasts used to calculate expected credit losses and downgrades reflecting weakness in the financial condition of certain clients, were more pronounced under U.S. GAAP.

During 2019, credit loss estimates were higher under U.S. GAAP than under the Group Reporting Basis due primarily to the impact of downgrades in the commercial loan portfolio, which was more pronounced under U.S. GAAP. In addition, expected credit losses under the Group Reporting Basis reflect a release in credit loss reserves due to the upgrade of a single oil and gas industry client which resulted in reclassification from "stage 2" (which requires a lifetime expected credit losses estimate) to stage 1 (which requires a 12-month expected credit losses estimate). The higher credit loss estimates under U.S. GAAP were partially offset by a release in credit loss reserves under U.S. GAAP for risk factors associated with fraud.

During 2020 and 2019, goodwill impairment charges were lower under the Group Reporting Basis than under U.S. GAAP. Under the Group Reporting Basis, goodwill was amortized until 2005, however goodwill was amortized under U.S. GAAP until 2002, which resulted in lower carrying amounts of goodwill and, therefore, lower impairment charges under the Group Reporting Basis.

During 2020, we determined that long-lived assets comprising capitalized software, property, plant and equipment and operating lease right-of-use assets may not be recoverable and tested the long-lived asset group for impairment. Under the Group Reporting Basis, we recorded an impairment charge of \$277 million to write down the long-lived asset group to its estimated fair value, consisting of the write-off of all the capitalized software and a portion of the leasehold improvements

primarily associated with our Wealth and Personal Banking business segment. Under U.S. GAAP, the estimated undiscounted cash flows of the long-lived asset group exceeded its carrying amount and no impairment charge was required. Consequently, the carrying amounts of capitalized software and leasehold improvements are higher under U.S. GAAP than under the Group Reporting Basis and, as a result, corresponding amortization expense is higher under U.S. GAAP. See Note 24, "Business Segments," in the accompanying consolidated financial statements for additional discussion.

During 2019, extinguishment of long-term debt resulted in a gain under U.S. GAAP compared with a loss under the Group Reporting Basis. We previously elected to apply fair value option accounting to this debt. Under U.S. GAAP, the extinguishment resulted in the realization of a gain associated with our own credit spread that was previously recorded in accumulated other comprehensive loss which more than offset the premium paid to extinguish the debt. Under the Group Reporting Basis, the gain associated with our own credit spread remains in equity and does not get recognized in earnings.

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 our 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. On January 1, 2020, we adopted new accounting guidance which requires entities to estimate and recognize an allowance for lifetime expected credit losses ("lifetime ECL") for loans and other financial assets measured at amortized cost. Prior to January 1, 2020, an allowance for credit losses on loans was recognized based on probable incurred losses. See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements for further discussion of our accounting policies and methodologies for establishing the allowance for credit losses and liability for off-balance sheet credit exposures. Consequently, we currently maintain an allowance for credit losses that reflects our estimate of lifetime ECL for loans and other financial assets measured at amortized cost. Allowance for credit loss estimates are reviewed periodically and adjustments are recognized in the provision for credit losses during 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 and other portfolios carried at amortized cost, including debt securities, and they assess and independently approve our allowance for credit losses.

The accounting estimates relating to the allowance for credit losses is a "critical accounting estimate" for the following reasons:

- Changes in the provision for credit losses 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, based on a reasonable and supportable forecast period utilizing forward-looking economic scenarios in order to estimate probability of default and loss given default;
- Credit losses are influenced by factors outside of our control such as industry and business trends, geopolitical events and the effects of laws and regulations as well as economic conditions such as trends in housing prices, interest rates, GDP, inflation, energy prices and unemployment; and
- Judgment is required to determine whether the models used to generate the allowance for credit losses produce an estimate that is sufficient to encompass the current view of lifetime ECL.

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 lifetime ECL is inherently uncertain because it is highly sensitive to changes in economic conditions and other factors outside of our control. Changes in such estimates could significantly impact our allowance and provision for credit losses.

As discussed further in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements, we utilize a minimum of three forward-looking economic scenarios to estimate lifetime ECL. In periods with high economic uncertainty, we supplement the lifetime estimate with alternative scenarios, each assigned a weighting based upon management's assessment of the likelihood of occurrence. This was the case beginning in 2020 as the economic conditions caused by the COVID-19 pandemic created significant economic uncertainty. As a result, we developed and utilized a fourth scenario for estimating lifetime ECL, referred to as the "Alternative Downside scenario".

As an illustration of the effect of changes in estimates relating to the allowance for credit losses, using a 100 percent weighting for the Alternative Downside scenario instead of using the four weighted scenarios at December 31, 2020 would have resulted in a combined increase to our allowance for credit losses and liability for off-balance sheet credit exposures of approximately \$385 million. This illustration only represents the effect of changes in the weighting of these scenarios on our existing modeled portfolios and does not consider changes in the allowance related to management judgment that might occur.

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 the respective assets on the balance sheet, includes reserves for lifetime ECL associated with loans and other financial assets carried at amortized cost. A reserve is also maintained for off-balance sheet risk, which is recorded in other liabilities and includes lifetime ECL arising from off-balance sheet arrangements such as letters of credit and undrawn commitments to lend.

The allowances include amounts calculated for 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. In addition, the allowance for credit losses on consumer and commercial loans reflects management judgment of risk factors that may not be fully reflected in the lifetime ECL generated by our models. In making this determination, we consider the characteristics of our portfolio and any other significant factors that are relevant. Management review committees have been established in order to review and approve the results of the lifetime ECL calculations. The management review committees have representatives from Credit Risk and Finance and are responsible for final approval of our lifetime ECL for the period. The 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 and Other Long-Lived Asset 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 the targets assigned and monitored through our capital management monitoring 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. 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 our judgment 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 which could result in an impairment charge and a negative impact to net income (loss).

Impairment testing of goodwill requires that the fair value of each reporting unit be compared with its carrying amount, including goodwill. 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 historically established July 1 of each year as the date for conducting our annual goodwill impairment assessment. Goodwill impairment is measured and an impairment charge is recorded at the amount by which a reporting unit's carrying amount, including allocated goodwill, exceeds its fair value. Any impairment charge recognized is limited to the carrying amount of goodwill assigned to a reporting unit. Subsequent reversals of goodwill impairments are not permitted.

During the first quarter of 2020, as a result of the deterioration in economic conditions caused by the COVID-19 pandemic and the amount of headroom calculated in our previous annual impairment test for certain reporting units, we performed an interim goodwill impairment test for all of our reporting units as of March 31, 2020. As a result, we recorded a non-cash impairment charge of \$784 million, representing the entire amount of goodwill allocated to our previously separate Retail Banking and Wealth Management and Private Banking reporting units. During the third quarter of 2020, we completed our annual impairment test of goodwill and determined that the fair value of our Commercial Banking reporting unit exceeded its carrying value, with its fair value being approximately 110 percent of book value, including allocated goodwill. For additional discussion of the results of our goodwill impairment testing, see Note 10, "Goodwill and Other Long-Lived Assets," in the accompanying consolidated financial statements.

During the fourth quarter of 2020, in order to better align with our annual internal planning and budgeting process, we changed our annual impairment assessment to be as of October 1. As a result of this change, we performed a goodwill impairment assessment of our Commercial Banking reporting unit under a qualitative analysis and determined that a quantitative test was not necessary as there were no events or changes in circumstances to indicate that it is more likely than not the fair value of our Commercial Banking reporting unit has reduced below its carrying amount.

Our fair value calculations are highly sensitive to certain assumptions and estimates used as discussed above. We will continue to monitor changes to our business forecasts as we continue to perform periodic analyses of the risks and strategies of our business and product offerings. If 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 goodwill impairment tests could again be required, which may result in an impairment charge.

In addition, we generally conduct impairment tests of capitalized software and other long-lived assets at the reporting unit level when events or circumstances indicate their carrying amount may not be recoverable. If impairment testing is required, long-lived assets are grouped at the lowest level for which there are identifiable cash flows. If the estimated undiscounted cash flows of the long-lived asset group exceed its carrying amount, an impairment is not recognized. However, if the estimated undiscounted cash flows are less than the carrying amount of the long-lived asset group, a second step is performed to determine fair value and an impairment loss is required if the carrying amount of the long-lived asset group exceeds fair value. Impairment losses are not reversible. Fair value calculations when required are consistent with the methodology used to determine fair value for goodwill impairment.

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 equity securities. 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, certain of our own debt issuances, and, beginning January 1, 2020, certain student loans held for investment. 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 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 as discussed further in Note 28, "Fair Value Measurements," in the accompanying consolidated financial statements. 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 1.1 percent at December 31, 2020.

Imprecision in estimating unobservable market inputs can impact the amount of revenue, expense or other comprehensive income 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 additional discussion of the determination of fair value for individual financial assets and liabilities carried at fair value see Note 28, "Fair Value Measurements," in the accompanying consolidated financial statements. The following is a description of the methodologies used in the valuation of significant 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 valuation 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 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. We calculate the credit valuation 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. 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.
- *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.

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.

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 Federal and State net operating losses. Our net deferred tax assets, including deferred tax liabilities, totaled \$1.0 billion and \$1.3 billion at December 31, 2020 and 2019, 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 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, 2020 and 2019 can be found in Note 17, "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 29, "Litigation and Regulatory Matters," in the accompanying consolidated financial statements.

Balance Sheet Review

The following table provides balance sheet totals at December 31, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From	
		December 31, 2019	
	December 31, 2020	Amount	%
(dollars are in millions)			
Period end assets:			
Short-term investments.....	\$ 51,401	\$ 29,781	*
Loans, net.....	61,073	(6,843)	(10.1)
Loans held for sale.....	337	48	16.6
Trading assets.....	27,284	(1,168)	(4.1)
Securities.....	49,653	697	1.4
All other assets.....	6,686	(1,456)	(17.9)
	<u>\$ 196,434</u>	<u>\$ 21,059</u>	<u>12.0 %</u>
Period end liabilities and equity:			
Total deposits.....	\$ 145,150	\$ 25,457	21.3 %
Trading liabilities.....	5,397	2,162	66.8
Short-term borrowings.....	4,952	1,293	35.3
Long-term debt.....	19,979	(6,718)	(25.2)
Interest, taxes and other liabilities.....	2,665	(1,170)	(30.5)
Total equity.....	18,291	35	.2
	<u>\$ 196,434</u>	<u>\$ 21,059</u>	<u>12.0 %</u>

* Percentage change is greater than 100 percent.

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 increased compared with December 31, 2019 due to an increase in overall liquidity driven primarily by higher deposits as we actively raised funds in advance of their usage and our customers increased their demand and savings deposits in response to the economic uncertainty caused by the COVID-19 pandemic and the actions taken by the U.S. Government to provide financial support to households and businesses.

Loans, Net The following table summarizes our loan balances at December 31, 2020 and increases (decreases) since December 31, 2019:

	December 31, 2020	Increase (Decrease) From December 31, 2019	
		Amount	%
(dollars are in millions)			
Commercial loans:			
Real estate, including construction.....	\$ 10,464	\$ (1,037)	(9.0)%
Business and corporate banking.....	13,479	—	—
Global banking ⁽¹⁾	13,519	(4,396)	(24.5)
Other commercial ⁽²⁾	4,137	(1,179)	(22.2)
Total commercial.....	41,599	(6,612)	(13.7)
Consumer loans:			
Residential mortgages.....	18,377	576	3.2
Home equity mortgages.....	727	(126)	(14.8)
Credit cards.....	1,066	(339)	(24.1)
Other consumer.....	319	36	12.7
Total consumer.....	20,489	147	.7
Total loans.....	62,088	(6,465)	(9.4)
Allowance for credit losses ⁽³⁾	1,015	378	59.3
Loans, net.....	\$ 61,073	\$ (6,843)	(10.1)%

⁽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 GBM relationship managers.

⁽²⁾ Includes loans to HSBC affiliates which totaled \$1,100 million and \$2,343 million at December 31, 2020 and 2019, respectively.

⁽³⁾ See "Credit Quality" in this MD&A for a discussion of trends in our allowance for credit losses on loans.

Commercial loans decreased compared with December 31, 2019 due primarily to the impact of our efforts to improve returns through disciplined lending as well as lower demand from global banking clients reflecting increased capital markets activity coupled with economic uncertainty caused by the COVID-19 pandemic. Also contributing to the decrease was lower loans to affiliates. These decreases were partially offset by PPP loan originations in business and corporate banking. The decline in commercial non-affiliate loans was primarily in the diversified financial, real estate, energy, capital goods and semiconductor industries.

Consumer loans increased modestly compared with December 31, 2019 as higher residential mortgage loans which we continue to target towards our Premier and Advance customer relationships were largely offset by paydowns in credit card receivables due to lower customer spending and changes in underwriting criteria driven by the current economic environment as well as a continued decline in home equity mortgages. The increase in other consumer loans reflects higher personal loans 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, 2020		December 31, 2019	
	First Lien	Second Lien	First Lien	Second Lien
LTV < 80%	97.6 %	96.8 %	98.1 %	96.4 %
80% ≤ LTV < 90%	2.1	2.7	1.6	2.8
90% ≤ LTV < 100%	.2	.4	.2	.7
LTV ≥ 100%	.1	.1	.1	.1
Average LTV for portfolio	52.6	46.2	50.1	46.4

⁽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 Price 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, 2020 and 2019, respectively.

Loans Held for Sale The following table summarizes loans held for sale at December 31, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From	
		December 31, 2019	
	December 31, 2020	Amount	%
		(dollars are in millions)	
Commercial loans:			
Real estate, including construction.....	\$ 10	\$ (73)	(88.0)%
Business and corporate banking.....	—	(35)	(100.0)
Global banking.....	119	25	26.6
Total commercial.....	129	(83)	(39.2)
Consumer loans:			
Residential mortgages.....	208	131	*
Total consumer.....	208	131	*
Total loans held for sale.....	\$ 337	\$ 48	16.6 %

* Percentage change is greater than 100 percent.

Commercial loans held for sale decreased compared with December 31, 2019. Included in commercial loans held for sale are certain loans that we have elected to designate under the fair value option which consists of 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 \$36 million and \$178 million at December 31, 2020 and 2019, 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 were transferred to held for sale which totaled \$93 million and \$34 million at December 31, 2020 and 2019, respectively.

Consumer loans held for sale increased compared with December 31, 2019. Included in residential mortgage loans held for sale are agency-eligible residential mortgage loans which are originated and held for sale to third parties, currently on a servicing retained basis. Balances will fluctuate from period to period depending on the volume and level of activity. Gains and losses from the sale of these residential mortgage loans are reflected as a component of other income in the accompanying consolidated statement of income (loss).

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 nil and \$2 million at December 31, 2020 and 2019, respectively. The valuation allowance on commercial loans held for sale was \$1 million and nil at December 31, 2020 and 2019, respectively.

Trading Assets and Liabilities The following table summarizes trading assets and liabilities at December 31, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From	
		December 31, 2019	
	December 31, 2020	Amount	%
(dollars are in millions)			
Trading assets:			
Securities ⁽¹⁾	\$ 19,494	\$ (3,994)	(17.0)%
Precious metals.....	4,989	3,080	*
Derivatives, net.....	2,801	(254)	(8.3)
	<u>\$ 27,284</u>	<u>\$ (1,168)</u>	<u>(4.1)%</u>
Trading liabilities:			
Securities sold, not yet purchased.....	\$ 727	\$ (455)	(38.5)%
Payables for precious metals.....	2,312	2,188	*
Derivatives, net.....	2,358	429	22.2
	<u>\$ 5,397</u>	<u>\$ 2,162</u>	<u>66.8 %</u>

* Percentage change is greater than 100 percent.

⁽¹⁾ See Note 4, "Trading Assets and Liabilities," in the accompanying consolidated financial statements for a breakout of trading securities by category.

Trading securities balances were lower compared with December 31, 2019 due primarily to decreases in foreign sovereign and U.S. Treasury positions. Trading security positions are held as economic hedges of interest rate, credit and equity derivative products issued to clients of domestic and emerging markets. Also contributing to the decrease was a decrease in corporate bond positions of \$501 million reflecting the unwind of one of our unconsolidated variable interest entities ("VIEs") which resulted in the termination of our investment in the VIE during the third quarter of 2020. Balances of securities sold, not yet purchased were lower compared with December 31, 2019 driven by a decrease 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, 2019 due primarily to increases in our own gold and silver inventory positions as well as higher spot prices. Payables for precious metals were higher compared with December 31, 2019 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 balances decreased compared with December 31, 2019 mainly from market movements and reduced positions driven by the exit or transfer of certain derivative contracts as part of our Restructuring Plan. Derivative liability balances increased compared with December 31, 2019 as lower balances from market movements and reduced positions driven by the exit or transfer of certain derivative contracts as part of our Restructuring Plan were more than offset by the impact of lower netting of outstanding positions and lower netting of cash collateral posted. Market movements resulted in lower valuations of interest rate and credit derivatives, partially offset by higher valuations of foreign exchange, equity and commodity derivatives.

Securities Securities include securities available-for-sale and securities held-to-maturity, net. Securities balances were higher compared with December 31, 2019 driven by net purchases of U.S. Government sponsored mortgage-backed and foreign sovereign securities as part of our continuing strategy to maximize returns while balancing the securities portfolio for risk management purposes as well as favorable market valuations due to decreasing yields. These increases were partially offset by net sales and paydowns of U.S. Government agency mortgage-backed securities as well as the sale of \$340 million of LIBOR-linked variable rate held-to-maturity securities during the second quarter of 2020. See Note 5, "Securities," in the accompanying consolidated financial statements for further discussion.

At December 31, 2018, our securities available-for-sale portfolio, which totaled \$31,379 million, consisted of \$27,897 million of U.S. Treasury, U.S. Government agency and U.S. Government sponsored obligations and \$3,482 million of other available-for-sale securities and our securities held-to-maturity portfolio, which totaled \$14,670 million, consisted of \$14,657 million of U.S. Government agency and U.S. Government sponsored obligations, \$11 million of U.S. state and political subdivision obligations and \$2 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 decreased compared with December 31, 2019 due primarily to a goodwill impairment charge of \$784 million recorded during the first quarter of 2020, representing the entire amount of goodwill allocated to our previously separate Retail Banking and

Wealth Management and Private Banking reporting units. For additional discussion of the results of our goodwill impairment testing, see Note 10, "Goodwill and Other Long-Lived Assets," in the accompanying consolidated financial statements. Also contributing to the decrease was lower outstanding clearing receivables from correspondent banks, lower deferred tax assets and lower lease assets. These decreases were partially offset by increased investments in Federal Home Loan Bank ("FHLB") stock.

Deposits The following table summarizes deposit balances by major depositor categories at December 31, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From	
		December 31, 2019	
	December 31, 2020	Amount	%
		(dollars are in millions)	
Individuals, partnerships and corporations.....	\$ 132,465	\$ 24,440	22.6 %
Domestic and foreign banks.....	10,220	1,516	17.4
U.S. government and states and political subdivisions.....	321	(40)	(11.1)
Foreign governments and official institutions.....	2,144	(459)	(17.6)
Total deposits.....	<u>\$ 145,150</u>	<u>\$ 25,457</u>	<u>21.3 %</u>
Total core deposits ⁽¹⁾	<u>\$ 125,586</u>	<u>\$ 30,333</u>	<u>31.8 %</u>

⁽¹⁾ 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 increased compared with December 31, 2019 as we actively raised funds and our customers increased their demand and savings deposits in response to the economic uncertainty caused by the COVID-19 pandemic and the actions taken by the U.S. Government to provide financial support to households and businesses. Also contributing to the increase in deposits was higher deposits from affiliates which reflects \$5.0 billion of long-term debt obligations issued to HSBC North America that were recharacterized as time deposits during 2020 as discussed below. These increases were partially offset by a decline in time deposits.

Short-Term Borrowings Short-term borrowings increased compared with December 31, 2019 reflecting higher securities sold under repurchase agreements and higher commercial paper outstanding.

Long-Term Debt Long-term debt decreased compared with December 31, 2019 as the impact of debt issuances, including increased borrowings from the FHLB, was more than offset by debt retirements and \$5.0 billion of long-term debt obligations issued to HSBC North America that were recharacterized as time deposits during 2020. See Note 23, "Related Party Transactions," for additional information. Debt issuances during 2020 totaled \$8,487 million, of which \$5,093 million was issued by HSBC Bank USA.

Incremental issuances from our shelf registration statement with the SEC totaled \$3,394 million of senior structured notes during 2020. Total long-term debt outstanding under this shelf was \$9,138 million and \$13,295 million at December 31, 2020 and 2019, respectively.

Incremental issuances from the HSBC Bank USA Global Bank Note Program totaled \$343 million during 2020. Total debt outstanding under this program was \$1,888 million and \$2,908 million at December 31, 2020 and 2019, respectively.

Borrowings from the FHLB totaled \$4,250 million and \$1,000 million at December 31, 2020 and 2019, respectively.

Interest, Taxes and Other Liabilities Interest, taxes and other liabilities were lower compared with December 31, 2019 due primarily to lower outstanding settlement balances related to security purchases, a decline in accrued interest payable, lower margin requirements related to futures trading and lower lease liabilities. These decreases were partially offset by a higher liability for off-balance sheet credit exposures.

Results of Operations

2019 compared with 2018 See "Results of Operations" in our 2019 Form 10-K for a discussion of our operating results for 2019 compared with 2018. See below for a discussion of our operating results for 2020 compared with 2019.

Net Interest Income Net interest income is the total interest income on earning assets less the total interest expense on deposits and borrowed funds. An analysis of consolidated average balances and interest rates 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,	2020	2020 Compared with 2019 Increase (Decrease)		2019	2019 Compared with 2018 Increase (Decrease)		2018
		Volume	Rate		Volume	Rate	
(dollars are in millions)							
Interest income:							
Short-term investments.....	\$ 143	\$ 282	\$ (712)	\$ 573	\$ (206)	\$ 134	\$ 645
Trading securities.....	288	(6)	3	291	116	(38)	213
Securities.....	897	52	(343)	1,188	102	(45)	1,131
Commercial loans.....	1,484	(33)	(572)	2,089	138	111	1,840
Consumer loans.....	718	26	(75)	767	7	11	749
Other.....	42	24	(64)	82	(2)	7	77
Total interest income.....	<u>3,572</u>	<u>345</u>	<u>(1,763)</u>	<u>4,990</u>	<u>155</u>	<u>180</u>	<u>4,655</u>
Interest expense:							
Deposits.....	755	306	(1,026)	1,475	57	346	1,072
Short-term borrowings.....	69	9	(171)	231	44	15	172
Long-term debt.....	558	(218)	(361)	1,137	(49)	63	1,123
Tax liabilities and other.....	16	(9)	(10)	35	(11)	10	36
Total interest expense.....	<u>1,398</u>	<u>88</u>	<u>(1,568)</u>	<u>2,878</u>	<u>41</u>	<u>434</u>	<u>2,403</u>
Net interest income.....	<u>\$2,174</u>	<u>\$ 257</u>	<u>\$ (195)</u>	<u>\$2,112</u>	<u>\$ 114</u>	<u>\$ (254)</u>	<u>\$2,252</u>
Yield on total interest earning assets.....	1.91 %			3.00 %			2.94 %
Cost of total interest bearing liabilities.....	.96			2.21			1.91
Interest rate spread.....	.95			.79			1.03
Benefit from net non-interest paying funds ⁽¹⁾	.21			.48			.39
Net interest margin on average earning assets.....	1.16 %			1.27 %			1.42 %

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

Net interest income increased during 2020 due primarily to lower interest expense from interest bearing liabilities driven by lower rates paid and a shift in mix to lower cost deposits as well as the favorable impact of higher average interest earning asset balances, primarily short-term investments and securities. These increases were partially offset by lower interest income from interest earning assets driven by lower yields on short-term investments, loans and securities. Despite the increase in net interest income, net interest margin on average earning assets declined during 2020 driven primarily by an increase in overall liquidity which was deployed into lower yielding short-term investments.

Short-term investments Interest income decreased during 2020 due to lower yields earned on these balances reflecting the impact of lower market rates, partially offset by higher average balances.

Trading securities Interest income decreased slightly during 2020 due to lower average balances driven by declines in foreign sovereign and U.S. Treasury positions, partially offset by a shift in mix to higher yielding equity positions. Interest income associated with trading securities was partially offset within trading revenue by the performance of the associated derivatives as discussed further below.

Securities Interest income was lower during 2020 due to lower yields reflecting the impact of lower market rates, partially offset by higher average balances. Higher average balances were driven by increases in U.S. Treasury, foreign sovereign and

U.S. Government agency mortgage-backed securities, partially offset by a decline in U.S. Government sponsored mortgage-backed securities.

Commercial loans Interest income was lower during 2020 due primarily to lower yields reflecting the impact of lower market rates on variable rate loans and lower rates on newly originated PPP loans. Also contributing to the decrease was lower average balances driven by the impact of our efforts to improve returns through disciplined lending, lower demand from global banking clients reflecting increased capital markets activity coupled with economic uncertainty caused by the COVID-19 pandemic as well as lower loans to affiliates.

Consumer loans Interest income decreased during 2020 due to lower yields reflecting the impact of lower market rates, partially offset by higher average balances due primarily to growth in residential mortgage loans.

Other Lower interest income during 2020 was due to lower yields on cash collateral posted reflecting the impact of lower market rates, partially offset by higher average cash collateral balances.

Deposits Interest expense decreased during 2020 due to lower rates paid reflecting the impact of lower market rates, partially offset by higher average balances. Higher average balances were due primarily to growth in savings and demand deposits as we actively raised funds and our customers increased their deposits in response to the economic uncertainty caused by the COVID-19 pandemic and the actions taken by the U.S. Government to provide financial support to households and businesses. Also contributing to the increase was higher deposits from affiliates.

Short-term borrowings Lower interest expense during 2020 was due to lower rates paid reflecting the impact of lower market rates, partially offset by higher average borrowings driven by an increase in securities sold under repurchase agreements.

Long-term debt Interest expense decreased during 2020 due to lower rates paid reflecting the impact of lower market rates on variable rate borrowings and lower average borrowings.

Tax liabilities and other Interest expense was lower during 2020 driven by lower rates paid and lower average borrowings in securities sold, not yet repurchased.

Provision for Credit Losses As discussed further in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements, beginning January 1, 2020, the provision for credit losses is recognized based on lifetime ECL for loans, off-balance sheet credit exposures, securities held-to-maturity and certain other financial assets measured at amortized cost, as well as credit losses on securities available-for-sale. Prior to January 1, 2020, the provision for credit losses was recognized based on probable incurred losses for loans only while debt securities were assessed for other-than-temporary impairment and credit loss expense for probable incurred losses on off-balance sheet credit exposures was separately recorded as a component of other expense within operating expenses as discussed below. As a result, current period amounts in the table below are not directly comparable to the prior year periods. The following table summarizes the components of the provision for credit losses:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Loans:			
Commercial loans:			
Real estate, including construction	\$ 116	\$ 37	\$ 34
Business and corporate banking	274	62	(31)
Global banking	149	1	(109)
Other commercial	2	(6)	(3)
Total commercial loans	541	94	(109)
Consumer loans:			
Residential mortgages	55	(3)	(18)
Home equity mortgages	6	(2)	(3)
Credit cards	107	101	55
Other consumer	27	5	2
Total consumer loans	195	101	36
Total loans	736	195	(73)
Securities held-to-maturity	(1)	—	—
Other financial assets measured at amortized cost	(2)	—	—
Securities available-for-sale	(2)	—	—
Off-balance sheet credit exposures ⁽¹⁾	79	—	—
Total provision for credit losses	\$ 810	\$ 195	\$ (73)

⁽¹⁾ As discussed below, prior to January 1, 2020, credit loss expense for off-balance sheet credit exposures was recorded in other expense.

Our provision for credit losses increased \$615 million during 2020 due to a higher provision for credit losses on our commercial loan portfolio and, to a lesser extent, a higher provision for credit losses on our consumer loan portfolio as well as a provision for credit losses on off-balance sheet credit exposures recorded in 2020.

The provision for credit losses on our commercial loan portfolio increased \$447 million. The loss provision in 2020 was driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts we use for calculating lifetime ECL, downgrades reflecting weakness in the financial condition of certain clients and provisions for risk factors associated with higher risk client and industry exposures, large loan exposures and economic uncertainty. In 2019, the loss provision was due primarily to downgrades reflecting weakness in the financial condition of certain clients exposed to the energy and retail sectors, partially offset by releases in credit reserves due to paydowns and improvements in credit conditions associated with certain clients as well as a release in credit reserves for risk factors associated with fraud.

The provision for credit losses on our consumer loan portfolio increased \$94 million. The loss provision in 2020 was driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts we use for calculating lifetime ECL and higher dollars of delinquency as well as provisions for risk factors associated with economic uncertainty and forbearance accounts. Also contributing to the loss provision in 2020 was growth in personal loan balances due to new product promotions. The loss provision in 2020 was partially offset by a decline in credit card balances due to lower customer spending and changes in underwriting criteria driven by the current environment. In 2019, the loss provision was due primarily to a provision for credit losses on credit cards reflecting growth in balances due to increased customer activity and new product promotions, including higher dollars of delinquency and higher delinquency roll rates.

The provision for credit losses on off-balance sheet credit exposures reflects a loss provision in 2020 resulting from the deterioration of economic conditions caused by the COVID-19 pandemic consistent with commercial loans as discussed above.

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,	2020	2019	2018
	(in millions)		
Credit card fees, net.....	\$ 38	\$ 67	\$ 50
Trust and investment management fees.....	132	132	135
Other fees and commissions.....	567	619	684
Trading revenue.....	273	591	625
Other securities gains, net.....	137	88	24
Servicing and other fees from HSBC affiliates.....	347	354	356
Gain (loss) on instruments designated at fair value and related derivatives.....	34	(13)	19
Other income:			
Valuation of loans held for sale.....	(22)	1	5
Residential mortgage banking revenue (expense).....	11	1	(6)
Insurance.....	7	12	11
Gains on extinguishment of debt, net.....	12	70	—
Miscellaneous income (loss).....	(1)	(68)	(4)
Total other income.....	7	16	6
Total other revenues.....	<u>\$ 1,535</u>	<u>\$ 1,854</u>	<u>\$ 1,899</u>

Credit card fees, net Credit card fees, net declined during 2020 driven by lower interchange fees due to lower customer spending, partially offset by lower cost estimates associated with our credit rewards program.

Trust and investment management fees Trust and investment management fees were flat during 2020.

Other fees and commissions Other fees and commissions decreased during 2020 due primarily to lower fees from loan commitments, loan syndication, wire transfers and other account services. These decreases were partially offset by higher fees from guarantees and standby letters of credit. See Note 22, "Fee Income from Contracts with Customers," in the accompanying consolidated financial statements for additional information including a summary of the components of other fees and commissions.

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 associated with 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 revenue related to the mortgage banking business are included as a component of other income.

Year Ended December 31,	2020	2019	2018
	(in millions)		
Business Activities:			
Derivatives ⁽¹⁾⁽²⁾	\$ (81)	\$ 260	\$ 107
Foreign Exchange.....	241	179	185
Metals.....	132	117	315
Markets Treasury ⁽³⁾	(17)	16	24
Global Banking.....	(2)	—	(2)
Other trading.....	—	19	(4)
Total trading revenue.....	<u>\$ 273</u>	<u>\$ 591</u>	<u>\$ 625</u>

⁽¹⁾ Includes derivative contracts related to the Credit, Rates and Equities business activities within Global Markets as well as our legacy structured credit products. Derivative contracts related to the Foreign Exchange and Metals business activities within Global Markets as well as derivative products related to Markets Treasury, Global Banking and other trading are reported separately within those respective business activities.

⁽²⁾ 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.

⁽³⁾ During the fourth quarter of 2020, Balance Sheet Management was renamed Markets Treasury.

Trading revenue decreased during 2020 due primarily to lower Derivatives revenue reflecting the impact of our decision to exit or transfer certain derivative contracts as part of our Restructuring Plan which resulted in lower revenue from emerging markets

rate products and interest rate swaps, including trading losses of \$67 million recorded in 2020. Also contributing to the decrease was lower Markets Treasury revenue due to the unfavorable performance of economic hedge positions used to manage interest rate risk and lower other trading revenue reflecting the impact of favorable funding spread adjustments in 2019. These decreases were partially offset by higher Foreign Exchange and Metals revenue due primarily to market volatility driven by the COVID-19 pandemic which resulted in increased trading opportunities as well as the non-recurrence of a loss of \$39 million recorded in 2019 related to the unwind of one of our unconsolidated VIEs.

Other securities gains, net We maintain securities portfolios as part of our balance sheet diversification and risk management strategies. During 2020 and 2019, we sold \$12,197 million and \$12,878 million, respectively, of primarily U.S. Treasury, U.S. Government agency mortgage-backed and U.S. Government sponsored mortgage-backed securities as part of a continuing strategy to maximize returns while balancing the securities portfolio for risk management purposes. Other securities gains, net increased during 2020 driven by higher gains from the sale of U.S. Treasury securities. The gross realized gains and losses from sales of securities, which are included as a component of other securities gains, net above, are summarized in Note 5, "Securities," in the accompanying consolidated financial statements.

Servicing and other fees from HSBC affiliates Servicing and other fees from HSBC affiliates decreased during 2020 due primarily to lower cost reimbursements associated with shared services performed on behalf of other HSBC affiliates, including internal audit and marketing, partially offset by higher cost reimbursements associated with trading activities performed on behalf of HSBC Bank plc and higher sales commissions from HSBC Bank plc.

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 of our own fixed-rate debt issuances, all of our hybrid instruments issued, including structured notes and deposits, and, beginning January 1, 2020, certain student loans held for investment. We also use derivatives to economically hedge the interest rate and other risks associated with certain financial assets and liabilities for which fair value option accounting has been elected. Gain (loss) on instruments designated at fair value and related derivatives improved during 2020 attributable primarily to favorable movements related to the economic hedging of interest rate risk within our own debt, partially offset by unfavorable fair value adjustments on certain commercial loans held for sale which were impacted by the COVID-19 pandemic. See Note 16, "Fair Value Option," in the accompanying consolidated financial statements for additional information including a breakout of these amounts by individual component.

Other income Other income was lower during 2020 due primarily to higher valuation losses on commercial loans held for sale, higher losses on sales of commercial loans, unfavorable fair value adjustments on equity investments and lower net gains on extinguishment of debt. In 2020, we recorded a \$12 million gain on extinguishment of time deposits reflecting early client withdrawals compared with a gain of \$84 million on extinguishment of long-term debt and a loss of \$14 million on extinguishment of certain repurchase agreements recorded in 2019. These decreases were partially offset by \$18 million of gains on sales of certain owned retail branch properties recorded in 2020, higher residential mortgage banking revenue driven by higher gains on sales of residential mortgage loans and lower losses on the swap agreements entered into in conjunction with the sales of Visa Class B Shares. In 2020, we recorded a loss of \$9 million primarily related to extending the maturity of the total return swap position used to economically hedge the periodic payments made under the swap agreements compared with a loss of \$52 million recorded in 2019 related to an increase in the expected timing of the final resolution of the related litigation and, to a lesser extent, changes in the Visa Class B Share conversion rate.

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

Year Ended December 31,	2020	2019	2018
	(dollars are in millions)		
Salaries and employee benefits.....	\$ 767	\$ 822	\$ 830
Support services from HSBC affiliates:			
Fees paid to HTSU.....	1,066	1,153	1,198
Fees paid to HSBC Markets (USA) Inc. ("HMUS").....	89	100	105
Fees paid to other HSBC affiliates.....	396	385	300
Total support services from HSBC affiliates.....	1,551	1,638	1,603
Occupancy expense, net.....	281	197	185
Goodwill impairment.....	784	365	—
Other expenses:			
Equipment and software.....	95	83	60
Marketing.....	64	133	108
Outside services.....	61	62	59
Professional fees.....	80	69	90
Off-balance sheet credit reserves ⁽¹⁾	—	8	(11)
FDIC assessment fees.....	71	24	135
Expense related to legal matters (excluding attorney's fees).....	68	54	522
Miscellaneous.....	59	46	57
Total other expenses.....	498	479	1,020
Total operating expenses.....	\$3,881	\$ 3,501	\$ 3,638
Personnel - average number.....	4,371	4,694	4,770
Efficiency ratio.....	104.6 %	88.3 %	87.6 %

⁽¹⁾ As discussed above, beginning January 1, 2020, credit loss expense for off-balance sheet credit exposures is recorded in the provision for credit losses.

Salaries and employee benefits Salaries and employee benefits expense decreased during 2020 due primarily to lower incentive compensation expense, lower pension expense and lower salaries expense driven by staff reductions related to our Restructuring Plan. These decreases were partially offset by higher severance costs and lower health care reimbursements.

Support services from HSBC affiliates Servicing and other fees from HSBC affiliates decreased during 2020 due primarily to lower cost allocations from our technology, risk and compliance support service functions driven by the execution of our Restructuring Plan. These decreases were partially offset by higher allocated severance, lease impairment and other related costs from HTSU and other HSBC affiliates. In 2020, \$80 million of costs were allocated to us from HTSU and other HSBC affiliates related to restructuring activities, primarily severance costs, support service project costs and contract cancellation, equipment removal and other costs associated with the office space consolidation and branch exits discussed below. In 2019, \$37 million of severance and lease impairment costs were allocated to us from HTSU related to cost initiatives and the decision to exit certain office space in 2019. A summary of the services received from various HSBC affiliates is included in Note 23, "Related Party Transactions," in the accompanying consolidated financial statements.

Occupancy expense, net Occupancy expense, net was higher during 2020 due to higher lease impairment and other related costs, partially offset by lower operating lease costs. In 2020, we recorded lease impairment and other related costs of \$121 million related to the consolidation of our retail branch network and certain office space as part of our Restructuring Plan. See Note 3, "Strategic Initiatives," in the accompanying consolidated financial statements for additional information. In 2019, we recorded lease impairment and other related costs of \$19 million related to the decision to exit certain branches in 2019.

Goodwill impairment During the first quarter of 2020, we recorded a goodwill impairment charge of \$784 million, representing the entire amount of goodwill allocated to our previously separate Retail Banking and Wealth Management and Private Banking reporting units. During 2019, we recorded a goodwill impairment charge of \$365 million, representing a portion of the goodwill allocated to our previously separate Retail Banking and Wealth Management reporting unit. For additional discussion of the results of our goodwill impairment testing, see Note 10, "Goodwill and Other Long-Lived Assets," in the accompanying consolidated financial statements.

Other expenses Other expenses were higher during 2020 due to increased deposit insurance assessment fees driven primarily by lower unsecured debt balances, lower levels of expense capitalization related to internally developed software, higher expense related to legal matters, higher capitalized software amortization expense and higher professional fees. These increases were partially offset by lower marketing expense, lower travel expense and lower losses associated with card fraud.

Efficiency ratio Our efficiency ratio increased during 2020 due to higher operating expenses driven by higher goodwill impairment charges and lower other revenues driven by lower trading revenue, partially offset by higher net interest income as discussed in detail above.

Income tax expense (benefit) Our effective tax rate was (4.3) percent in 2020 compared with 58.1 percent in 2019 and 45.4 percent in 2018. For a complete analysis of the differences between effective tax rates based on the provision for income taxes attributable to pretax income (loss) and the statutory U.S. Federal income tax rate, see Note 17, "Income Taxes," in the accompanying consolidated financial statements.

Segment Results – Group Reporting Basis

We have four distinct business segments that we utilize for management reporting and analysis purposes, which are aligned with HSBC's global business strategy: Wealth and Personal Banking ("WPB") which was created in 2020 and is discussed further below, Commercial Banking ("CMB"), Global Banking and Markets ("GBM") and a Corporate Center ("CC"). See Item 1, "Business," in this Form 10-K for a description of our segments which are based upon our global businesses, including a discussion of the main business activities of the segments and a summary of their products and services.

We previously announced as part of our Restructuring Plan that we would combine our Retail Banking and Wealth Management ("RBWM") and Private Banking ("PB") businesses to create a single WPB business. During 2020, we implemented a change to our internal management reporting to report what was historically RBWM and PB together within a newly created WPB segment and, as a result, we have aligned our segment reporting to reflect this change for all periods presented.

During 2020, we also decided to implement a change to our internal management reporting to allocate Balance Sheet Management, which was historically reported within the CC segment, to the WPB, CMB and GBM businesses to better align the revenue and expense to the businesses generating or utilizing this activity. As a result, we have aligned our segment reporting to reflect this change for all periods presented. During the fourth quarter of 2020, Balance Sheet Management was renamed Markets Treasury.

See Note 24, "Business Segments," in the accompanying consolidated financial statements for a table that summarizes the impact of these changes on reported segment profit (loss) before tax, total assets and total deposits as of and for the years ended December 31, 2019 and 2018. There have been no additional changes in the basis of our segmentation as compared with the presentation in our 2019 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 that includes both interest rate and liquidity components. 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 that incorporate both repricing (interest rate risk) and tenor (liquidity) characteristics. The objective of these charges/credits is to transfer interest rate risk to one centralized unit in Markets Treasury. Markets Treasury income statement and balance sheet results are allocated to each of the global businesses based upon tangible equity levels and levels of any surplus liabilities.

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 have not been eliminated, and we generally account for them 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 IFRSs as issued by the IASB. 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.

There have been no changes in the measurement of segment profit as compared with the presentation in our 2019 Form 10-K.

The significant differences between U.S. GAAP and the Group Reporting Basis as they impact our results are summarized in Note 24, "Business Segments," in the accompanying consolidated financial statements.

2019 compared with 2018 See "Segment Results - Group Reporting Basis" in our 2019 Form 10-K for a discussion of our segment results for 2019 compared with 2018. See below for a discussion of our segment results for 2020 compared with 2019.

Wealth and Personal Banking The following table summarizes the Group Reporting Basis results for our WPB segment:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Net interest income	\$ 837	\$ 1,018	\$ 1,132
Other operating income	368	330	394
Total operating income ⁽¹⁾	1,205	1,348	1,526
Expected credit losses	189	115	35
Net operating income	1,016	1,233	1,491
Operating expenses	2,203	1,645	1,538
Loss before tax	\$ (1,187)	\$ (412)	\$ (47)

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

Year Ended December 31,	2020	2019	2018
	(in millions)		
Retail banking current accounts, savings and deposits	\$ 503	\$ 663	\$ 696
Retail banking mortgages, credit cards and other personal lending	306	240	227
Wealth and asset management products	96	96	108
Private banking	169	204	245
Retail business banking and other ⁽²⁾	131	145	250
Total operating income	\$ 1,205	\$ 1,348	\$ 1,526

⁽²⁾ Includes cost reimbursements associated with activities performed on behalf of other HSBC affiliates and allocated Markets Treasury revenue.

Our WPB segment reported a higher loss before tax during 2020 due primarily to higher operating expenses driven by higher impairment charges recorded in 2020, including a goodwill impairment charge, representing the entire amount of remaining goodwill previously recorded, and an impairment charge related to the write-off of all the capitalized software associated with our WPB business segment, which collectively totaled \$900 million. In 2019, we recorded a goodwill impairment charge of \$209 million, representing a portion of the goodwill previously recorded. Also contributing to the higher loss before tax during 2020 was lower net interest income and higher expected credit losses, partially offset by higher other operating income.

Net interest income decreased during 2020 due primarily to lower deposit spreads reflecting the impact of lower market rates, partially offset by improved loan spreads and higher residential mortgage loan balances.

Other operating income increased during 2020 due to higher residential mortgage banking revenue driven by higher gains on sales of residential mortgage loans, the non-recurrence of a loss on extinguishment of long-term debt recorded in 2019 and lower losses on the swap agreements entered into in conjunction with the sales of Visa Class B Shares. In 2020, we recorded a loss of \$9 million primarily related to extending the maturity of the total return swap position used to economically hedge the periodic payments made under the swap agreements compared with a loss of \$52 million recorded in 2019 related to an increase in the expected timing of the final resolution of the related litigation and, to a lesser extent, changes in the Visa Class B Share conversion rate. These increases were partially offset by lower credit card fees due to lower customer spending.

Expected credit losses were higher during 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts used for calculating ECL and higher dollars of delinquency as well as higher loss estimates for risk factors associated with economic uncertainty and forbearance accounts. Also contributing to the increase was growth in personal loan balances due to new product promotions. These increases were partially offset by a decline in credit card balances due to lower customer spending and changes in underwriting criteria driven by the current environment.

Excluding the impairment charges as discussed above, operating expenses decreased during 2020 due to lower marketing expense, lower pension expense, lower salaries expense driven by staff reductions related to our Restructuring Plan, lower cost allocations from our technology and risk support service functions and lower losses associated with card fraud. These decreases were partially offset by higher deposit insurance assessment fees, lower levels of expense capitalization related to internally developed software, higher expense related to legal matters and higher severance costs.

Client Assets The following table provides information regarding private banking client assets during 2020 and 2019:

Year Ended December 31,	2020	2019
	(in millions)	
Client assets at beginning of period	\$ 39,295	\$ 36,017
Net new money (outflows)	(532)	145
Client transfers to UBS Wealth Management Americas ("UBS") ⁽¹⁾	—	(26)
Value change	5,341	3,159
Client assets at end of period	<u>\$ 44,104</u>	<u>\$ 39,295</u>

⁽¹⁾ Reflects client asset transfers associated with the sale of certain private banking client relationships to UBS, which concluded in 2019.

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

Year Ended December 31,	2020	2019	2018
	(in millions)		
Net interest income	\$ 821	\$ 829	\$ 821
Other operating income	234	239	234
Total operating income ⁽¹⁾	1,055	1,068	1,055
Expected credit losses	293	55	(42)
Net operating income	762	1,013	1,097
Operating expenses	587	581	595
Profit before tax	<u>\$ 175</u>	<u>\$ 432</u>	<u>\$ 502</u>

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

Year Ended December 31,	2020	2019	2018
	(in millions)		
Lending and Transaction Management	\$ 464	\$ 457	\$ 443
Global Liquidity and Cash Management, current accounts and savings deposits	429	458	462
Global Trade and Receivables Finance	56	53	48
Investment banking products and other ⁽²⁾	106	100	102
Total operating	<u>\$ 1,055</u>	<u>\$ 1,068</u>	<u>\$ 1,055</u>

⁽²⁾ Includes allocated Markets Treasury revenue.

Our CMB segment reported a lower profit before tax during 2020 due primarily to higher expected credit losses and, to a lesser extent, lower net interest income, lower other operating income and higher operating expenses.

Net interest income decreased during 2020 due to lower deposit spreads reflecting the impact of lower market rates, partially offset by higher average deposit and loan balances.

Other operating income decreased during 2020 due primarily to higher losses on sales of loans and lower fees from loan syndication and loan commitments, partially offset by the non-recurrence of a loss on extinguishment of long-term debt recorded in 2019.

Expected credit losses were higher during 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts used for calculating ECL, downgrades reflecting weakness in the financial condition of certain clients and higher loss estimates for risk factors associated with higher risk client and industry exposures.

Operating expenses increased during 2020 due primarily to higher deposit insurance assessment fees, higher salaries expense, higher severance costs and higher cost allocations from our support service functions. These increases were partially offset by lower incentive compensation expense, lower marketing expense and lower travel expense.

Global Banking and Markets The following table summarizes the Group Reporting Basis results for our GBM segment:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Net interest income.....	\$ 398	\$ 521	\$ 712
Other operating income.....	970	900	788
Total operating income ⁽¹⁾	1,368	1,421	1,500
Expected credit losses.....	140	1	(192)
Net operating income.....	1,228	1,420	1,692
Operating expenses.....	841	849	858
Profit before tax.....	\$ 387	\$ 571	\$ 834

⁽¹⁾ The following table summarizes the impact of key activities on the total operating income of our GBM segment. For purposes of the discussion below the table, total operating income is referred to as revenue.

Year Ended December 31,	2020	2019	2018
	(in millions)		
Credit.....	\$ 11	\$ 27	\$ 43
Rates.....	38	108	46
Foreign Exchange and Metals.....	426	231	298
Equities.....	49	32	38
Total Global Markets.....	524	398	425
Global Banking ⁽²⁾	261	372	458
Global Liquidity and Cash Management.....	398	483	504
Securities Services ⁽²⁾	28	26	18
Global Trade and Receivables Finance.....	61	58	59
Credit and funding valuation adjustments.....	11	24	(43)
Other ⁽³⁾	85	60	79
Total operating income.....	\$ 1,368	\$ 1,421	\$ 1,500

⁽²⁾ Beginning in June 2020, we changed our presentation for issuer services revenue that was previously reported in Securities Services and began reporting this revenue in Global Banking. As a result, we have reclassified \$36 million and \$38 million of operating income from Securities Services to Global Banking in 2019 and 2018, respectively, to conform to the current year presentation.

⁽³⁾ Includes cost reimbursements associated with activities performed on behalf of other HSBC affiliates, allocated Markets Treasury revenue and certain corporate funding charges not assigned to products.

Our GBM segment reported a lower profit before tax during 2020 due primarily to higher expected credit losses and lower net interest income, partially offset by higher other operating income.

Credit revenue decreased during 2020 due primarily to lower revenue from structuring and collateralized financing related activity.

Rates revenue decreased during 2020 due to lower revenue from interest rate swaps as well as trading losses of \$67 million recorded in 2020 associated with the exit of certain derivative contracts as part of our Restructuring Plan. These decreases were partially offset by higher revenue from emerging markets rate products.

Foreign Exchange and Metals revenue increased during 2020 due primarily to market volatility driven by the COVID-19 pandemic which resulted in increased trading opportunities.

Equities revenue increased during 2020 due to trading opportunities in derivatives and increased client activity in prime brokerage.

Global Banking revenue decreased during 2020 due primarily to lower fees from loan commitments and loan syndication, higher losses on sales of loans and lower net interest income from spread compression and lower loan balances. Lower loan balances were driven by the impact of our efforts to improve returns through disciplined lending as well as lower demand reflecting increased capital markets activity by clients coupled with economic uncertainty caused by the COVID-19 pandemic.

Global Liquidity and Cash Management revenue decreased during 2020 due to lower net interest income driven by lower deposit spreads reflecting the impact of lower market rates, partially offset by higher deposit balances.

Securities Services revenue was relatively flat during 2020.

Global Trade and Receivables Finance revenue was higher during 2020 due to higher fees from standby letters of credit.

Credit and funding valuation adjustments were lower during 2020 attributable primarily to lower gains from credit valuation adjustments on derivative assets reflecting the impact of market volatility caused by the COVID-19 pandemic as well as the impact of lower market rates.

Other revenue increased during 2020 due to lower corporate funding charges, higher allocated Markets Treasury revenue and the non-recurrence of a loss on extinguishment of long-term debt recorded in 2019, partially offset by higher liquidity charges and lower cost reimbursements.

Expected credit losses increased during 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts used for calculating ECL, downgrades reflecting weakness in the financial condition of certain clients and higher loss estimates for risk factors associated with oil and gas industry loan exposures and higher risk client exposures.

Operating expenses were lower during 2020 due primarily to lower incentive compensation expense, lower salaries expense and lower cost allocations from our technology, risk, and compliance support service functions. These decreases were partially offset by higher expense related to legal matters, higher deposit insurance assessment fees and higher severance costs.

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

Year Ended December 31,	2020	2019	2018
	(in millions)		
Net interest expense.....	\$ (30)	\$ (65)	\$ (106)
Other operating income.....	129	68	188
Total operating income ⁽¹⁾	99	3	82
Expected credit losses.....	—	—	—
Net operating income.....	99	3	82
Operating expenses.....	403	238	642
Loss before tax.....	\$ (304)	\$ (235)	\$ (560)

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

Year Ended December 31,	2020	2019	2018
	(in millions)		
Legacy structured credit products.....	\$ 11	\$ (31)	14
Other.....	88	34	68
Total operating income.....	\$ 99	\$ 3	\$ 82

Our CC segment reported a higher loss before tax during 2020 due to higher operating expenses, partially offset by higher other operating income and lower net interest expense.

Net interest expense was lower during 2020 driven by improved net interest income from legacy structured credit products and lower retained liquidity charges.

Other operating income increased during 2020 due to favorable movements related to the economic hedging of interest rate risk within our own debt, the non-recurrence of a \$39 million loss recorded in 2019 related to the unwind of one of our unconsolidated VIEs and \$18 million of gains on sales of certain owned retail branch properties recorded in 2020. These increases were partially offset by lower valuation gains on legacy structured credit products, lower cost reimbursements associated with shared services performed on behalf of other HSBC affiliates, including internal audit and marketing, as well as unfavorable fair value adjustments on equity investments.

Operating expenses were higher during 2020 due primarily to higher lease impairment and other related costs. In 2020, we recorded lease impairment and other related costs of \$185 million related to the consolidation of our retail branch network and certain office space as part of our Restructuring Plan, including an impairment charge of \$55 million recorded during the third quarter of 2020 related to the write-off of a portion of the leasehold improvements associated with our WPB business. In 2019, we recorded lease impairment and other related costs of \$21 million related to the decision to exit certain branches in 2019. Also contributing to the increase were higher allocated severance, lease impairment and other related costs from HTSU and other HSBC affiliates. These increases were partially offset by lower cost allocations from our technology, risk and compliance support service functions driven by the execution of our Restructuring Plan.

Reconciliation of Segment Results As previously discussed, segment results are reported on a Group Reporting Basis. See Note 24, "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 United States and, on a limited basis, internationally.

COVID-19 Loan Forbearance Initiatives We have implemented various loan modification payment deferral programs to provide borrowers relief from the economic impacts of the COVID-19 pandemic. Substantially all of the loans under these programs are not classified as TDR Loans at December 31, 2020 due to our election to suspend TDR Loan classification under the CARES Act or their short-term nature as discussed under the Interagency Statement. In addition, under the Interagency Statement, for COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period and, if the loan was accruing at the time the relief was granted, the loan will generally not be placed on nonaccrual status as long as the borrower utilizes a payment deferral of six months or less. For consumer mortgage loans, when a borrower utilizes a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and, if the loan does not meet the criteria in the CARES Act, assessed for TDR Loan classification. We have not modified our commercial loan nonaccrual policies as a result of this guidance. These COVID-19 related payment deferral programs could delay the recognition of delinquencies, nonaccrual status, and net charge-offs for those customers who may have otherwise moved into past due or nonaccrual status had such relief not been offered. See "Executive Overview," in this MD&A for additional information.

Allowance for Credit Losses / Liability for Off-Balance Sheet Credit Exposures Our accounting policies and methodologies related to the allowance for credit losses and liability for off-balance sheet credit exposures 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.

As discussed further in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements, beginning January 1, 2020, an allowance for credit losses is recognized based on lifetime ECL for loans, securities held-to-maturity and certain other financial assets measured at amortized cost, and an allowance for credit losses is also recognized for securities available-for-sale. Prior to January 1, 2020, an allowance for credit losses was recognized based on probable incurred losses for loans only while debt securities were assessed for other-than-temporary impairment. In addition, beginning January 1, 2020, the liability for off-balance sheet credit exposures is recognized based on lifetime ECL while, prior to January 1, 2020, it was recognized based on probable incurred losses. The new guidance also requires inclusion of expected recoveries of amounts previously written off, limited to the cumulative amount of prior write-offs, when estimating the allowance for credit losses for in scope financial assets (including collateral-dependent assets). Prior to January 1, 2020, these expected recoveries were not recognized.

Comparative credit information at January 1, 2020, reflecting the adoption of the new accounting guidance, has been included in the tables below where available. Credit information at December 31, 2019, 2018, 2017 and 2016, which is not comparable to 2020 as it does not reflect the adoption of the new accounting guidance, has been retained as previously reported.

The following table summarizes our allowance for credit losses and the liability for off-balance sheet credit exposures:

	December 31, 2020	January 1, 2020	December 31, 2019
	(in millions)		
Allowance for credit losses:			
Loans:			
Commercial loans	\$ 814	\$ 381	\$ 507
Consumer loans	201	86	130
Total loans	1,015	467	637
Securities held-to-maturity	2	2	—
Other financial assets measured at amortized cost ⁽¹⁾	2	3	—
Securities available-for-sale	1	3	—
Total allowance for credit losses	\$ 1,020	\$ 475	\$ 637
Liability for off-balance sheet credit exposures	\$ 237	\$ 158	\$ 104

⁽¹⁾ Primarily includes accrued interest receivables and customer acceptances.

See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in the accompanying consolidated financial statements for a discussion of the changes in our allowance for credit losses and liability for off-balance sheet credit exposures at January 1, 2020 as compared with December 31, 2019.

The total allowance for credit losses at December 31, 2020 increased \$545 million or 115 percent as compared with January 1, 2020 due to higher loss estimates on our commercial loan portfolio and, to a lesser extent, higher loss estimates on our consumer loan portfolio.

Our commercial allowance for credit losses at December 31, 2020 increased \$433 million or 114 percent as compared with January 1, 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts we use for calculating lifetime ECL, downgrades reflecting weakness in the financial condition of certain clients and higher loss estimates for risk factors associated with higher risk client and industry exposures, large loan exposures and economic uncertainty.

Our consumer allowance for credit losses at December 31, 2020 increased \$115 million or 134 percent as compared with January 1, 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in a worsening of the economic forecasts we use for calculating lifetime ECL and higher dollars of delinquency as well as higher loss estimates for risk factors associated with economic uncertainty and forbearance accounts. Also contributing to the increase was growth in personal loan balances due to new product promotions. These increases were partially offset by a decline in credit card balances due to lower customer spending and changes in underwriting criteria driven by the current environment.

The liability for off-balance sheet credit exposures at December 31, 2020 increased \$79 million or 50 percent as compared with January 1, 2020 resulting from the deterioration of economic conditions caused by the COVID-19 pandemic consistent with commercial loans as discussed above.

Summary of Credit Loss Experience for Loans

The following table presents the allowance for credit losses on loans by major loan categories:

	% 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		% of Loans to Total Loans	
	Amount		Amount		Amount		Amount		Amount		Amount	
	December 31, 2020		January 1, 2020		December 31, 2019		December 31, 2018		December 31, 2017		December 31, 2016	
	(dollars are in millions)											
Commercial ⁽¹⁾	\$ 814	67.0 %	\$ 381	70.3 %	\$ 507	70.3 %	\$ 458	71.5 %	\$ 608	73.1 %	\$ 930	73.4 %
Consumer:												
Residential mortgages.....	(9)	29.6	(74)	26.0	12	26.0	13	25.2	25	23.8	26	23.3
Home equity mortgages.....	22	1.2	13	1.2	6	1.2	7	1.4	11	1.6	20	1.9
Credit cards.....	161	1.7	137	2.0	105	2.0	58	1.5	32	1.0	34	.9
Other consumer.....	27	.5	10	.5	7	.5	5	.4	5	.5	7	.5
Total consumer.....	201	33.0	86	29.7	130	29.7	83	28.5	73	26.9	87	26.6
Total.....	\$ 1,015	100.0 %	\$ 467	100.0 %	\$ 637	100.0 %	\$ 541	100.0 %	\$ 681	100.0 %	\$ 1,017	100.0 %

⁽¹⁾ See Note 7, "Allowance for Credit Losses," in the accompanying consolidated financial statements for components of the commercial allowance for credit losses.

The following table sets forth key ratios for the allowance for credit losses on loans for the periods indicated:

	December 31, 2020	January 1, 2020	December 31, 2019	December 31, 2018	December 31, 2017	December 31, 2016
Ratio of Allowance for credit losses to:						
Loans: ⁽¹⁾						
Commercial:						
Non-affiliates.....	2.01 %	.83 %	1.11 %	.97 %	1.31 %	1.83 %
Affiliates.....	—	—	—	—	—	—
Total commercial.....	1.96	.79	1.05	.93	1.15	1.72
Consumer:						
Residential mortgages.....	(.05)	(.42)	.07	.07	.14	.15
Home equity mortgages.....	3.03	1.52	.70	.71	.92	1.42
Credit cards.....	15.10	9.75	7.47	5.69	4.44	4.94
Other consumer.....	8.46	3.53	2.47	1.98	1.46	1.83
Total consumer.....	.98	.42	.64	.42	.37	.44
Total loans.....	1.63	.68	.93	.78	.94	1.38
Net charge-offs: ⁽²⁾						
Commercial ⁽³⁾	754 %	847 %	1,127 %	1,117 %	405 %	463 %
Consumer.....	251	159	241	319	348	132
Total net charge-offs.....	540	472	643	807	398	381
Nonperforming loans: ⁽¹⁾⁽⁴⁾						
Commercial.....	150 %	160 %	213 %	318 %	99 %	118 %
Consumer.....	17	19	29	20	15	17
Total nonperforming loans.....	59	67	92	97	61	77

⁽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. Ratios at January 1, 2020 reflect full year net charge-offs for 2019.

⁽³⁾ Our commercial net charge-off coverage ratio for the years ended December 31, 2020, 2019, 2018, 2017 and 2016 was 90 months, 135 months, 134 months, 49 months and 56 months, respectively. The net charge-off coverage ratio represents the commercial allowance for credit losses at period end divided by average monthly commercial net charge-offs during the period. Our commercial net charge-off coverage ratio for January 1, 2020, calculated by dividing the commercial allowance for credit losses at January 1, 2020 by average monthly commercial net charge-offs during 2019, was 102 months.

⁽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 on loans by product or line of business during the years ended December 31, 2020, 2019, 2018, 2017 and 2016:

	Commercial Loans				Consumer Loans					
	Real Estate, including Construction	Business and Corporate Banking	Global Banking	Other Comm'l	Residential Mortgages	Home Equity Mortgages	Credit Cards	Other Consumer	Total Loans	
(in millions)										
Year Ended December 31, 2020										
Allowance for credit losses – beginning of period.....	\$ 153	\$ 239	\$ 106	\$ 9	\$ 12	\$ 6	\$ 105	\$ 7	\$ 637	
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses.....	(112)	(60)	51	(5)	(86)	7	32	3	(170)	
Allowance for credit losses – beginning of period, adjusted.....	41	179	157	4	(74)	13	137	10	467	
Provision charged (credited) to income.....	116	274	149	2	55	6	107	27	736	
Charge-offs.....	(12)	(90)	(20)	—	(2)	(3)	(90)	(11)	(228)	
Recoveries.....	—	12	1	1	12	6	7	1	40	
Net (charge-offs) recoveries.....	(12)	(78)	(19)	1	10	3	(83)	(10)	(188)	
Allowance for credit losses – end of period	\$ 145	\$ 375	\$ 287	\$ 7	\$ (9)	\$ 22	\$ 161	\$ 27	\$ 1,015	
Year Ended December 31, 2019										
Allowance for credit losses – beginning of period.....	\$ 116	\$ 219	\$ 108	\$ 15	\$ 13	\$ 7	\$ 58	\$ 5	\$ 541	
Provision charged (credited) to income.....	37	62	1	(6)	(3)	(2)	101	5	195	
Charge-offs.....	—	(45)	(3)	—	(8)	(4)	(60)	(5)	(125)	
Recoveries.....	—	3	—	—	10	5	6	2	26	
Net (charge-offs) recoveries.....	—	(42)	(3)	—	2	1	(54)	(3)	(99)	
Allowance for credit losses – end of period	\$ 153	\$ 239	\$ 106	\$ 9	\$ 12	\$ 6	\$ 105	\$ 7	\$ 637	
Year Ended December 31, 2018										
Allowance for credit losses – beginning of period.....	\$ 82	\$ 244	\$ 264	\$ 18	\$ 25	\$ 11	\$ 32	\$ 5	\$ 681	
Provision charged (credited) to income.....	34	(31)	(109)	(3)	(18)	(3)	55	2	(73)	
Charge-offs.....	—	(41)	(48)	—	(7)	(7)	(35)	(4)	(142)	
Recoveries.....	—	47	1	—	13	6	6	2	75	
Net (charge-offs) recoveries.....	—	6	(47)	—	6	(1)	(29)	(2)	(67)	
Allowance for credit losses – end of period	\$ 116	\$ 219	\$ 108	\$ 15	\$ 13	\$ 7	\$ 58	\$ 5	\$ 541	
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	

⁽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.

⁽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 on loans at December 31, 2020 increased \$548 million or 117 percent as compared with January 1, 2020 due to higher loss estimates on our commercial loan portfolio and, to a lesser extent, higher loss estimates on our consumer loan portfolio as discussed in detail above.

The allowance for credit losses on loans at December 31, 2019 increased \$96 million or 18 percent as compared with December 31, 2018 due to higher loss estimates in both our commercial and consumer loan portfolios. Our commercial allowance for credit losses at December 31, 2019 increased \$49 million or 11 percent as compared with December 31, 2018 due primarily to downgrades reflecting weakness in the financial condition of certain clients exposed to the energy and retail sectors, partially offset by releases in credit reserves due to paydowns and improvements in credit conditions associated with certain clients as well as charge-offs and a release in credit reserves for risk factors associated with fraud. Our consumer allowance for credit losses at December 31, 2019 increased \$47 million or 57 percent as compared with December 31, 2018 due primarily to a higher allowance for credit losses in credit cards reflecting growth in balances due to increased customer activity and new product promotions, including higher dollars of delinquency and higher delinquency roll rates.

The allowance for credit losses on loans at December 31, 2018 decreased \$140 million or 21 percent as compared with December 31, 2017 due to lower loss estimates in our commercial loan portfolio, partially offset by higher loss estimates in our consumer loan portfolio. Our commercial allowance for credit losses decreased \$150 million or 25 percent as compared with December 31, 2017 reflecting improvements in the credit quality of our portfolio driven by paydowns, sales and maturities as well as improvements in credit conditions associated with certain clients. These decreases were partially offset by a higher provision for risk factors associated with geopolitical risks and market volatility inherent in certain segments of the portfolio and higher provisions for downgrades reflecting weakness in the financial condition of certain client relationships. Our consumer allowance for credit losses increased \$10 million or 14 percent as compared with December 31, 2017 due to a higher allowance for credit losses in credit cards reflecting growth in customer activity driven by new product promotions along with an associated increase in dollars of delinquency, partially offset by a lower allowance for credit losses in residential mortgages and home equity mortgages due to improvements in economic and credit conditions, including lower dollars of delinquency.

The allowance for credit losses on loans 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 focused 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 improvements in economic and credit conditions, the 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.

The allowance for credit losses on loans as a percentage of total loans held for investment at December 31, 2020 as compared with January 1, 2020 and at December 31, 2019, 2018 and 2017 as compared with their respective prior year periods increased or decreased due primarily to the changes in the allowance for credit losses for the reasons discussed above.

The allowance for credit losses on loans as a percentage of net charge-offs at December 31, 2020 increased as compared with January 1, 2020 as the increase in our allowance for credit losses for the reasons discussed above outpaced an increase in dollars of net charge-offs driven by higher charge-offs in both our commercial and consumer loan portfolios. In 2019, the allowance for credit losses on loans as a percentage of net charge-offs decreased as an increase in dollars of net charge-offs driven by higher charge-offs in our consumer loan portfolio, primarily credit cards, outpaced the increase in our allowance for credit losses for the reasons discussed above. In 2018, the allowance for credit losses on loans as a percentage of net charge-offs increased as a decrease in dollars of net charge-offs driven by lower charge-offs in our commercial loan portfolio associated with a single mining client relationship and loan sales outpaced the decrease in our overall allowance for credit losses for the reasons discussed above. In 2017, the allowance for credit losses on loans as a percentage of net charge-offs was relatively flat 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.

The allowance for credit losses on loans as a percentage of nonperforming loans held for investment at December 31, 2020 decreased as compared with January 1, 2020 as an increase in nonperforming loans driven by higher nonperforming loans in both our consumer and commercial loan portfolios outpaced the increase in our allowance for credit losses for the reasons discussed above. In 2019, the allowance for credit losses on loans as a percentage of nonperforming loans held for investment was relatively flat as an increase in nonperforming loans driven by higher nonperforming loans in both our commercial and consumer loan portfolios was offset by the increase in our allowance for credit losses for the reasons discussed above. In 2018,

the allowance for credit losses on loans as a percentage of nonperforming loans held for investment increased driven by a decrease in nonperforming loans due primarily to managed reductions in certain exposures in our commercial loan portfolio which was partially offset by a decrease in our overall allowance for credit losses for the reasons discussed above. In 2017, the allowance for credit losses on loans as a percentage of nonperforming loans held for investment decreased 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.

Delinquency The following table summarizes dollars of two-months-and-over contractual delinquency and two-months-and-over contractual delinquency as a percentage of total loans ("delinquency ratio"). For COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period.

	December 31, 2020		December 31, 2019	
	Delinquent Loans	Delinquency Ratio	Delinquent Loans	Delinquency Ratio
(dollars are in millions)				
Commercial.....	\$ 109	.26 %	\$ 41	.08 %
Consumer:				
Residential mortgages ⁽¹⁾⁽²⁾	404	2.20	350	1.96
Home equity mortgages ⁽¹⁾⁽²⁾	25	3.44	25	2.93
Credit cards.....	28	2.63	34	2.42
Other consumer.....	8	2.51	7	2.47
Total consumer.....	465	2.27	416	2.04
Total.....	\$ 574	.92	\$ 457	.66

⁽¹⁾ At December 31, 2020 and 2019, consumer mortgage loan delinquency includes \$281 million and \$256 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less costs to sell.

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

	December 31, 2020		December 31, 2019	
	Delinquent Loan	Delinquency Ratio	Delinquent Loan	Delinquency Ratio
(dollars are in millions)				
Interest-only loans.....	\$ 34	.94 %	\$ 32	.95 %
ARM loans.....	191	1.46	142	1.14

Our two-months-and-over contractual delinquency ratio increased 26 basis points compared with December 31, 2019 due to higher dollars of delinquency in both our commercial and consumer loan portfolios and, to a lesser extent, lower outstanding loan balances driven by lower commercial loans.

Our commercial loan two-months-and-over contractual delinquency ratio increased 18 basis points compared with December 31, 2019 due primarily to higher dollars of delinquency driven by the deterioration of economic conditions caused by the COVID-19 pandemic, including a global banking client with became 60 days delinquent. Also contributing to the increase in the ratio was lower outstanding loan balances.

Our consumer loan two-months-and-over contractual delinquency ratio increased 23 basis points compared with December 31, 2019 due primarily to higher dollars of delinquency in residential mortgages driven by the deterioration of economic conditions caused by the COVID-19 pandemic as some customers did not seek forbearance relief or became 60 days delinquent prior to seeking forbearance relief. The increase was partially offset by lower dollars of delinquency in credit cards reflecting a decline in balances due to lower customer spending and changes in underwriting criteria driven by the current environment.

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

	Year Ended December 31,					
	2020		2019		2018	
	Net Charge-off Dollars	Net Charge-off Ratio	Net Charge-off Dollars	Net Charge-off Ratio	Net Charge-off Dollars	Net Charge-off Ratio
(dollars are in millions)						
Commercial:						
Real estate, including construction.....	\$ 12	.11 %	\$ —	— %	\$ —	— %
Business and corporate banking.....	78	.48	42	.30	(6)	(.05)
Global banking.....	19	.11	3	.01	47	.24
Other commercial.....	(1)	(.02)	—	—	—	—
Total commercial.....	<u>108</u>	<u>.22</u>	<u>45</u>	<u>.09</u>	<u>41</u>	<u>.09</u>
Consumer:						
Residential mortgages.....	(10)	(.05)	(2)	(.01)	(6)	(.03)
Home equity mortgages.....	(3)	(.38)	(1)	(.11)	1	.09
Credit cards.....	83	6.94	54	4.61	29	3.43
Other consumer.....	10	3.56	3	1.22	2	.65
Total consumer.....	<u>80</u>	<u>.39</u>	<u>54</u>	<u>.27</u>	<u>26</u>	<u>.13</u>
Total.....	<u>\$ 188</u>	<u>.27</u>	<u>\$ 99</u>	<u>.14</u>	<u>\$ 67</u>	<u>.10</u>

Our net charge-off ratio as a percentage of average loans increased 13 basis points in 2020 compared with 2019 due to higher levels of net charge-offs in our commercial loan portfolio driven by the deterioration of two corporate banking loans and loan sales as well as higher levels of net charge-offs in our consumer loan portfolio driven by higher charge-offs in credit cards and other consumer loans reflecting the deterioration of economic conditions. These increases were partially offset by improved net charge-offs in residential mortgages.

Our net charge-off ratio as a percentage of average loans increased 4 basis points in 2019 compared with 2018 due primarily to higher levels of net charge-offs in our consumer loan portfolio driven by higher charge-offs in credit cards reflecting growth in balances due to increased customer activity and new product promotions.

Nonperforming Loans The following table summarizes nonperforming loans, including nonaccrual loans and accruing loans contractually 90 days or more past due, as well as nonperforming loans as a percentage of total loans ("nonperforming ratio"):

	December 31, 2020		December 31, 2019		December 31, 2018	
	Nonperforming Loans ⁽¹⁾	Nonperforming Ratio	Nonperforming Loans ⁽¹⁾	Nonperforming Ratio	Nonperforming Loans ⁽¹⁾	Nonperforming Ratio
(dollars are in millions)						
Commercial.....	\$ 544	1.31 %	\$ 238	.49 %	\$ 144	.29 %
Consumer:						
Residential mortgages ⁽²⁾⁽³⁾⁽⁴⁾ ..	1,079	5.87	381	2.14	341	1.96
Home equity mortgages ⁽²⁾⁽³⁾ ..	63	8.67	46	5.39	55	5.60
Credit cards ..	19	1.78	24	1.71	14	1.37
Other consumer ..	2	.63	5	1.77	6	2.38
Total consumer ..	1,163	5.68	456	2.24	416	2.12
Total ..	\$ 1,707	2.75	\$ 694	1.01	\$ 560	.81
Other real estate owned ⁽⁵⁾ ..	\$ 3		\$ 10		\$ 12	

⁽¹⁾ See Note 6, "Loans," in the accompanying consolidated financial statements for a breakout of nonaccrual loans and accruing loans contractually 90 days or more past due. At December 31, 2020, 2019 and 2018, total nonperforming loans include \$21 million, \$30 million and \$21 million, respectively, of accruing loans contractually 90 days or more past due, primarily credit cards and other consumer loans.

⁽²⁾ At December 31, 2020, 2019 and 2018, nonperforming consumer mortgage loans include \$375 million, \$289 million and \$289 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell.

⁽³⁾ Nonperforming 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. At December 31, 2020, nonaccrual consumer mortgage loans also include \$590 million of loans under COVID-19 related payment deferral programs where the borrowers utilized a payment deferral of more than six months and, as a result, have been placed on nonaccrual status.

⁽⁴⁾ Nonperforming consumer mortgage loans for all periods does not include guaranteed loans purchased from the Government National Mortgage Association. Repayment of these loans is predominantly insured by the Federal Housing Administration and as such, these loans have different risk characteristics from the rest of our customer loan portfolio.

⁽⁵⁾ Includes \$1 million or less of commercial other real estate owned at December 31, 2020, 2019 and 2018, respectively.

Our nonperforming loans ratio increased 174 basis points at December 31, 2020 compared with December 31, 2019 due primarily to higher nonperforming loans in both our consumer and commercial loan portfolios. Our consumer nonperforming loans ratio increased 344 basis points at December 31, 2020 compared with December 31, 2019 due primarily to higher nonperforming loans in residential mortgages driven by the deterioration of economic conditions caused by the COVID-19 pandemic, including customers that did not seek forbearance relief, were placed on nonaccrual status prior to seeking forbearance relief or utilized a payment deferral of more than six months. Our commercial nonperforming loans ratio increased 82 basis points at December 31, 2020 compared with December 31, 2019 due primarily to higher nonperforming loans reflecting downgrades driven by the deterioration of economic conditions caused by the COVID-19 pandemic.

Our nonperforming loans ratio increased 20 basis points at December 31, 2019 compared with December 31, 2018 due to higher nonperforming loans in both our commercial and consumer loan portfolios. Our commercial nonperforming loans ratio increased 20 basis points at December 31, 2019 compared with December 31, 2018 driven by downgrades, partially offset by paydowns and charge-offs. Our consumer nonperforming loans ratio increased 12 basis points at December 31, 2019 compared with December 31, 2018 largely due to some private banking residential mortgage customer which became 90 days due and higher nonperforming loans in credit cards reflecting growth in balances due to increased customer activity and new product promotions.

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, as updated for COVID-19 related loan modifications.

Criticized Commercial Loans The following table summarizes criticized commercial loans:

At December 31,	2020	2019	2018
	(in millions)		
Special mention.....	\$ 2,649	\$ 1,178	\$ 907
Substandard.....	1,908	785	685
Doubtful.....	340	38	19
Total.....	<u>\$ 4,897</u>	<u>\$ 2,001</u>	<u>\$ 1,611</u>

Criticized loans increased in 2020 due to downgrades across a broad range of industries driven by the deterioration of economic conditions caused by the COVID-19 pandemic. In 2019, criticized loans increased due to downgrades, partially offset by paydowns and improvements in credit conditions associated with certain client relationships.

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.

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:

	December 31, 2020		December 31, 2019	
	Commercial Utilized	Unused Commercial Commitments	Commercial Utilized	Unused Commercial Commitments
	(in millions)			
Real estate.....	\$ 8,323	\$ 2,163	\$ 9,200	\$ 3,115
Diversified financials.....	7,644	13,058	9,247	12,562
Consumer services.....	4,619	3,692	4,601	3,347
Retailing.....	2,286	4,989	2,413	4,143
Chemicals.....	2,012	4,025	2,197	3,879
Commercial and professional services.....	1,877	5,245	2,101	5,072
Energy.....	1,849	6,123	2,560	6,337
Capital goods.....	1,696	5,884	2,189	9,579
Consumer durables and apparel.....	1,457	2,914	1,649	3,367
Technology hardware and equipment.....	1,329	7,054	1,531	6,520
Utilities.....	839	1,371	607	812
Software and services.....	823	2,322	910	1,861
Health care equipment and services.....	761	1,957	898	1,780
Semiconductors and semiconductor equipment.....	705	1,951	991	1,506
Transportation.....	676	398	447	935
Food, beverage and tobacco.....	612	3,030	565	2,884
Pharmaceuticals, biotechnology & life science.....	605	3,912	389	4,812
Food and staples retailing.....	522	2,055	654	2,322
Banks.....	476	187	320	63
Metals and mining.....	455	1,158	517	1,185
Total commercial credit exposure in top 20 industries ⁽¹⁾	<u>39,566</u>	<u>73,488</u>	<u>43,986</u>	<u>76,081</u>
All other industries.....	<u>933</u>	<u>11,912</u>	<u>1,882</u>	<u>10,808</u>
Total commercial credit exposure ⁽²⁾	<u>\$ 40,499</u>	<u>\$ 85,400</u>	<u>\$ 45,868</u>	<u>\$ 86,889</u>

⁽¹⁾ Based on utilization at December 31, 2020.

⁽²⁾ Excludes commercial credit exposures with affiliates.

Geographic Concentrations The following table reflects regional exposure at December 31, 2020 and 2019 for our real estate secured loan portfolios:

	Commercial Real Estate, including Construction Loans	Residential Mortgages and Home Equity Mortgages
December 31, 2020		
New York State.....	27.1 %	30.6 %
California.....	25.6	45.9
North Central United States.....	3.9	1.4
North Eastern United States, excluding New York State.....	6.2	7.7
Southern United States.....	29.8	9.4
Western United States, excluding California.....	7.4	5.0
Total.....	<u>100.0 %</u>	<u>100.0 %</u>
December 31, 2019		
New York State.....	29.9 %	31.1 %
California.....	21.6	44.6
North Central United States.....	3.5	1.8
North Eastern United States, excluding New York State.....	7.4	7.7
Southern United States.....	32.2	10.0
Western United States, excluding California.....	5.4	4.8
Total.....	<u>100.0 %</u>	<u>100.0 %</u>

Residential Mortgage Loans 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 at December 31, 2020 and 2019. Each category is not mutually exclusive and loans may appear in more than one category below.

At December 31,	2020	2019
	(in millions)	
Interest-only residential mortgage and home equity mortgage loans.....	\$ 3,597	\$ 3,362
ARM loans ⁽¹⁾	13,038	12,487

⁽¹⁾ During 2021 and 2022, approximately \$652 million and \$762 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 \$208 million and \$77 million at December 31, 2020 and 2019, respectively.

At December 31,	2020	2019
	(in millions)	
Closed end:		
First lien.....	\$ 18,377	\$ 17,801
Second lien.....	31	35
Revolving ⁽¹⁾	696	818
Total.....	<u>\$ 19,104</u>	<u>\$ 18,654</u>

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

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; 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, 2020:			
Japan	\$ 5	\$ 8,209	\$ 8,214
Brazil	178	1,846	2,024
Canada	1,545	429	1,974
United Kingdom	1,017	822	1,839
Germany	530	973	1,503
Total	<u>\$ 3,275</u>	<u>\$ 12,279</u>	<u>\$ 15,554</u>
December 31, 2019:			
Japan	\$ 17	\$ 7,100	\$ 7,117
Brazil	175	5,575	5,750
United Kingdom	821	815	1,636
Cayman Islands	1,412	224	1,636
Total	<u>\$ 2,425</u>	<u>\$ 13,714</u>	<u>\$ 16,139</u>
December 31, 2018:			
Japan	\$ 32	\$ 6,986	\$ 7,018
Brazil	402	2,932	3,334
United Kingdom	1,696	1,594	3,290
Cayman Islands	2,268	183	2,451
Canada	841	1,146	1,987
Total	<u>\$ 5,239</u>	<u>\$ 12,841</u>	<u>\$ 18,080</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 may 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 and/or regulatory requirements.

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;
- creditworthiness 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 general risk-based capital rules of the Basel III Standardized Approach 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. Furthermore, 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,	2020	2019
	(in millions)	
Risk associated with derivative contracts:		
Total credit risk exposure.....	\$ 21,624	\$ 33,076
Less: collateral held against exposure.....	5,907	7,704
Net credit risk exposure.....	<u>\$ 15,717</u>	<u>\$ 25,372</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	
	2020	2019
AAA to AA—.....	51 %	46 %
A+ to A—.....	29	41
BBB+ to BBB—.....	14	11
BB+ to B—.....	6	2
CCC+ and below.....	—	—
Total.....	<u>100 %</u>	<u>100 %</u>

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 and funding risk management, including information regarding the key measures employed to define, monitor and control our liquidity and funding risk.

During 2020, the COVID-19 pandemic caused disruption to the financial markets as well as business and economic activity. We continue to actively monitor and control our liquidity and funding risk in accordance with HSBC policy. To date, we have not experienced any significant impact to our liquidity or funding capabilities as a result of this disruption. While there was elevated commercial loan demand in March as clients drew on their available lines of credit during the deterioration in economic conditions, we actively raised deposits, short-term borrowings in the form of securities sold under repurchase agreements, and borrowed from the FHLB in order to support the elevated client demand for loans while maintaining adequate liquidity and increasing cash. In addition, substantially all of the commercial lines of credit that were drawn in March have been repaid. We continuously monitor the impact of market events on our liquidity positions and will continue to adapt our framework as necessary to reflect market events.

FRB Liquidity Facilities The FRB announced the creation of several facilities aimed at stabilizing the markets, addressing immediate liquidity concerns, and facilitating lending and other assistance to businesses and individuals affected by shutdowns due to COVID-19. These programs include, among others, the Money Market Mutual Fund Liquidity Facility, the Term Asset-Backed Securities Loan Facility, the Commercial Paper Funding Facility, the Primary Market Corporate Credit Facility and the Paycheck Protection Program Liquidity Facility. We have not utilized any of these facilities.

Interest Bearing Deposits with Banks totaled \$14,353 million and \$2,038 million at December 31, 2020 and 2019, respectively, of which \$13,895 million and \$1,801 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 \$35,746 million and \$17,838 million at December 31, 2020 and 2019, 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 \$19,494 million and \$23,488 million at December 31, 2020 and 2019, 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 \$49,653 million and \$48,956 million at December 31, 2020 and 2019, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on trends.

Short-Term Borrowings totaled \$4,952 million and \$3,659 million at December 31, 2020 and 2019, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on short-term borrowing trends.

Deposits totaled \$145,150 million and \$119,693 million at December 31, 2020 and 2019, respectively, which included \$125,586 million and \$95,253 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 \$19,979 million at December 31, 2020 from \$26,697 million at December 31, 2019. The following table summarizes issuances and retirements of long-term debt during 2020 and 2019:

Year Ended December 31,	2020	2019
	(in millions)	
Long-term debt issued	\$ 8,487	\$ 4,686
Long-term debt repaid	(10,427)	(10,666)
Net long-term debt repaid	<u>\$ (1,940)</u>	<u>\$ (5,980)</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 2020.

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. During 2020, due to an anticipated decrease in utilization of the shelf registration statement, the Board of Directors approved a reduction in the amount we are authorized to issue from \$30,000 million at December 31, 2019 to \$25,000 million, of which \$15,862 million was available at December 31, 2020. HSBC Bank USA has a \$40,000 million Global Bank Note Program that provides for the issuance of subordinated and senior notes, of which \$12,949 million was available at December 31, 2020. 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.

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, 2020, long-term debt included \$4,250 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 \$12,458 million.

Preferred Equity See Note 18, "Preferred Stock," in the accompanying consolidated financial statements for information regarding all outstanding preferred share issues.

Common Equity During 2020, 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 capital ratios calculated as of December 31, 2020 and 2019:

At December 31,	2020	2019
Common equity Tier 1 capital to risk-weighted assets.....	14.7 %	13.1 %
Tier 1 capital to risk-weighted assets.....	15.9	14.1
Total capital to risk-weighted assets.....	19.2	16.3
Tier 1 leverage ratio ⁽¹⁾	8.6	9.9
Supplementary leverage ratio ⁽²⁾	7.8	6.9

⁽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.

⁽²⁾ Total leverage exposure, the SLR denominator, includes adjusted quarterly average assets plus certain off-balance sheet exposures.

In response to the COVID-19 pandemic, the federal banking agencies issued a final rule that provides the option to transition in the regulatory capital impacts of the new current expected credit loss accounting standard over a five-year period. HSBC North America and HSBC Bank USA have elected the five-year transition option and, as a result, beginning in 2020, our capital ratios are reported in accordance with the transition rules in the final rule. Accordingly, during 2020 and 2021, we will exclude from regulatory capital the change in retained earnings resulting from adoption of the new accounting standard on January 1, 2020 as well as 25 percent of the change in the allowance for credit losses recognized between January 1, 2020 and December 31, 2021. Beginning January 1, 2022, the excluded impacts will be phased in to regulatory capital over a three-year transition period and will be fully reflected at January 1, 2025.

Also in response to the COVID-19 pandemic, the FRB issued a final rule adopting a temporary change to the calculation of the SLR that permits IHCs, such as HSBC North America, to exclude U.S. Treasury securities and deposits at Federal Reserve Banks from the denominator of their SLR. This change, which took effect April 1, 2020, will remain in place until at least March 31, 2021 and is designed to allow banking institutions to expand their balance sheets to accommodate increased customer deposits while continuing to provide credit to companies and households. The federal banking agencies have also issued a final rule that permits depository institutions such as HSBC Bank USA to exclude temporarily U.S. Treasury securities and deposits at Federal Reserve Banks from the denominator of their SLR. This change took effect June 1, 2020 and will remain in place until March 31, 2021 although it may be extended if the adverse economic impacts of the COVID-19 pandemic persist.

We manage 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 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, as a wholly-owned subsidiary of HSBC, we would seek support from our ultimate parent. Regulatory capital requirements are based on the amount of capital required to be held, plus applicable capital buffers, as defined by regulations, and the amount of risk-weighted assets and leverage exposure, also calculated based on regulatory definitions.

We are subject to regulatory capital rules issued by U.S. banking regulators including Basel III (the "Basel III rule"). The Basel III rule establishes minimum capital ratios and overall capital adequacy standards for banks and bank holding companies ("BHCs"). In 2019, the FRB and the other federal banking agencies jointly finalized rules to implement the Economic Growth, Regulatory Relief and Consumer Protection Act ("Relief Act") that tailor the application of the enhanced prudential standards for large BHC and foreign banking organizations (the "Tailoring Rules"). The Tailoring Rules assign each BHC and IHC with \$50 billion or more in total U.S. assets into one of five classifications (Categories I through IV, and 'other firms') based on its size and four risk-based indicators. Under the Tailoring Rules, HSBC North America and HSBC Bank USA are subject to Category III standards beginning with March 31, 2020 reporting. For additional discussion of the Basel III final rule requirements, including required minimum capital ratios, as well as further discussion of the Tailoring Rules and other related regulatory developments and their expected impact see Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in this Form 10-K. We continue to review the composition of our capital structure and capital buffers in light of these developments.

Capital Planning and Stress Testing The FRB requires certain U.S. top-tier BHCs and IHCs, including HSBC North America, to comply with the FRB's capital plan rule and CCAR program, as well as the annual supervisory stress tests conducted by the FRB, and annual company-run stress tests as required under Dodd-Frank (collectively, "DFAST"). Disclosure of the company-run stress tests is required only every other year. The company-run stress tests are forward looking exercises to assess the impact of hypothetical macroeconomic baseline and severely adverse scenarios provided by the FRB (and internally developed scenarios for the company-run exercises) on the financial condition and capital adequacy of a CCAR firm over a nine quarter planning horizon. For further discussion of capital planning and stress testing, including detail regarding the FRB's supervisory assessment as part of the CCAR process, see Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in this Form 10-K.

HSBC North America submitted its 2020 CCAR capital plan and its 2020 annual company-run DFAST results in April 2020. In July 2020, HSBC North America publicly disclosed its 2020 annual DFAST results.

In June 2020, the FRB publicly disclosed its own DFAST and CCAR results along with aggregated results of a sensitivity analysis aimed at gauging the economic impact of the COVID-19 pandemic on CCAR firms. Each CCAR firm, including HSBC North America, was required to resubmit its capital plan in November 2020 based on additional economic scenarios provided by the FRB to assess the potential impact of the ongoing COVID-19 pandemic. On December 18, 2020, the FRB released certain information related to this second round of bank stress tests, and indicated that it is extending, through March 31, 2021, the time period for notifying CCAR firms, including HSBC North America, whether the FRB will recalculate a firm's stress capital buffer. The FRB also announced it is limiting CCAR firms' distributions in the first quarter of 2021. Under these restrictions, IHCs, such as HSBC North America, may make certain capital distributions in the first quarter of 2021, provided that the distributions paid in the final three quarters of 2020 and the first quarter of 2021, in the aggregate, do not exceed the amount of net income the IHC has earned in the preceding four calendar quarters. 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. Capital planning and stress testing for HSBC North America may impact our future capital and liquidity.

While BHC regulatory capital compliance is generally performed at the HSBC North America level, and also separately for HSBC Bank USA, as a BHC 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 25, "Retained Earnings and Regulatory Capital Requirements," in the accompanying consolidated financial statements.

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 commercial and consumer banking products and related financial services, including derivatives, liquidity and cash management, trade finance and investment solutions. HSBC USA's main source of funds is cash received from financing activities, primarily through debt issuance to third parties and affiliates. In addition, it receives cash from affiliates by issuing preferred stock, from subsidiaries in the form of dividends and from its parent by receiving capital contributions when necessary.

HSBC USA received cash dividends from its subsidiaries of \$121 million and \$138 million in 2020 and 2019, respectively. During 2020 and 2019, 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 in both 2020 and 2019. HSBC USA did not pay any dividends

on its common stock during either 2020 or 2019. 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 2020 and 2019, HSBC USA did not make any capital contributions to its subsidiary, HSBC Bank USA.

As of December 31, 2020, 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 2018 through 2020 was impacted by a net loss in 2020 driven by the deterioration of economic conditions caused by the COVID-19 pandemic which resulted in the impairment of the goodwill previously allocated to our RBWM and PB reporting units and an increase to the provision for credit losses. Any reduction of permanent capital of HSBC Bank USA would also require OCC approval, as consistent with prior practice. See Note 25, "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, 2020, 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.

2021 Funding Strategy Our current estimate for funding needs and sources for 2021 are summarized in the following table:

	(in billions)
Increase (decrease) in funding needs:	
Net change in loans.....	\$ 4
Net change in short-term investments and securities.....	(10)
Net change in trading and other assets.....	—
Total funding needs.....	<u>\$ (6)</u>
Increase (decrease) in funding sources:	
Net change in deposits.....	\$ —
Net change in trading and other short-term liabilities.....	—
Net change in long-term debt.....	(6)
Total funding sources.....	<u>\$ (6)</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 also continue to sell new agency-eligible mortgage loan originations to third parties.

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. For further discussion, see Part I, "Regulation and Competition - Affiliate Transaction Restrictions," in this Form 10-K.

See "Risk Management" in this MD&A for further discussion relating to our liquidity contingency plans and our approach to liquidity and funding risk management.

Capital Expenditures We made capital expenditures of \$24 million and \$62 million during 2020 and 2019, respectively. In addition to these amounts, during 2020 and 2019, we capitalized \$93 million and \$122 million, respectively, relating to improving and modernizing our business systems.

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, 2020 by period due:

	2021	2022	2023	2024	2025	Thereafter	Total
	(in millions)						
Long-term debt ⁽¹⁾	\$ 6,480	\$ 2,886	\$ 1,521	\$ 1,457	\$ 3,854	\$ 3,781	\$ 19,979
Other postretirement benefit obligations ⁽²⁾	4	4	4	3	3	13	31
Operating lease obligations ⁽³⁾	121	122	115	111	74	167	710
Purchase obligations ⁽⁴⁾	50	47	29	15	—	—	141
Total	<u>\$ 6,655</u>	<u>\$ 3,059</u>	<u>\$ 1,669</u>	<u>\$ 1,586</u>	<u>\$ 3,931</u>	<u>\$ 3,961</u>	<u>\$ 20,861</u>

⁽¹⁾ Represents expected future payments related to our long-term debt instruments included in Note 14, "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, 2020. See Note 21, "Pension and Other Postretirement Benefits," in the accompanying consolidated financial statements.

⁽³⁾ Represents expected future payments related to our operating lease liabilities included in Note 11, "Leases," 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. In addition, implementation of our business strategy (as described under the heading "Executive Overview - 2020 Events") will affect our contractual obligations over time, including with respect to credit derivatives. As a result, we believe that the contractual amount is not representative of the actual future credit exposure or funding requirements.

	2021	2022	2023	2024	2025	Thereafter	Balance at December 31,	
	(in millions)						2020	2019
Standby letters of credit, net of participations ⁽¹⁾	\$ 6,686	\$ 936	\$ 408	\$ 352	\$ 95	\$ 68	\$ 8,545	\$ 9,436
Commercial letters of credit	161	25	5	6	—	—	197	126
Credit derivatives ⁽²⁾	2,727	2,828	6,608	5,027	1,495	815	19,500	38,739
Other commitments to extend credit:								
Commercial ⁽³⁾	20,665	9,808	21,806	23,081	7,398	5,117	87,875	88,191
Consumer	8,173	—	—	—	—	—	8,173	7,906
Total	<u>\$ 38,412</u>	<u>\$ 13,597</u>	<u>\$ 28,827</u>	<u>\$ 28,466</u>	<u>\$ 8,988</u>	<u>\$ 6,000</u>	<u>\$124,290</u>	<u>\$144,398</u>

⁽¹⁾ Includes \$1,836 million and \$1,623 million issued for the benefit of HSBC affiliates at December 31, 2020 and 2019, respectively.

⁽²⁾ Includes \$13,550 million and \$18,391 million issued for the benefit of HSBC affiliates at December 31, 2020 and 2019, respectively.

⁽³⁾ Includes \$2,475 million and \$1,302 million issued for the benefit of HSBC affiliates at December 31, 2020 and 2019, 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. 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. See Note 27, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," in the accompanying consolidated financial statements for additional information related to standby letter of credit 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 27, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," in the accompanying consolidated financial statements for further discussion of credit derivative 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 comprise 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

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 over-the-counter ("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. Government sponsored enterprises 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, non-exchange-traded derivative contracts, asset-backed securities, obligations of U.S. states and political subdivisions, corporate debt securities, certain foreign government-backed debt, preferred securities, securities purchased and sold under resale and repurchase agreements, precious metals, certain loans held for sale, residential mortgage loans whose carrying amount was reduced based on the fair value of the underlying collateral, real estate owned and, beginning January 1, 2020, certain student loans held for investment 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 meets the fair value objective and, where appropriate, this pricing data is back-tested to market trade executions. 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, 2020 and 2019, our Level 3 measurements included the following: certain structured deposits and structured notes for which the embedded credit, foreign exchange or equity derivatives that have significant unobservable inputs (e.g., volatility or default correlations), asset-backed credit default swaps with certain inputs which are unobservable, certain asset-backed securities, individually assessed commercial loans, derivatives referenced to illiquid assets of less desirable credit quality and swap agreements entered into in conjunction with the sales of Visa Class B Shares for which the fair value is dependent upon the final resolution of the related litigation and, at December 31, 2019, certain corporate debt securities. See Note 28, "Fair Value Measurements," in the accompanying consolidated financial statements for additional information on Level 3 inputs.

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, 2020 and 2019:

At December 31,	2020	2019
	(dollars are in millions)	
Level 3 assets ⁽¹⁾⁽²⁾	\$ 1,111	\$ 1,349
Total assets measured at fair value ⁽¹⁾⁽³⁾	98,633	98,322
Level 3 liabilities ⁽¹⁾	1,620	1,350
Total liabilities measured at fair value ⁽¹⁾	49,380	55,224
Level 3 assets as a percent of total assets measured at fair value	1.1 %	1.4 %
Level 3 liabilities as a percent of total liabilities measured at fair value	3.3 %	2.4 %

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

⁽²⁾ Includes \$838 million of recurring Level 3 assets and \$273 million of non-recurring Level 3 assets at December 31, 2020. Includes \$925 million of recurring Level 3 assets and \$424 million of non-recurring Level 3 assets at December 31, 2019.

⁽³⁾ Includes \$97,975 million of assets measured on a recurring basis and \$658 million of assets measured on a non-recurring basis at December 31, 2020. Includes \$97,866 million of assets measured on a recurring basis and \$456 million of assets measured on a non-recurring basis at December 31, 2019.

Significant Changes in Fair Value for Level 3 Assets and Liabilities In 2020, 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 \$501 million at the time of unwind. See Note 26, "Variable Interest Entities," in the accompanying consolidated financial statements for additional information.

See Note 28, "Fair Value Measurements," in the accompanying consolidated financial statements for information on additions to and transfers into (out of) Level 3 measurements during 2020 and 2019 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 \$8 million or a decrease of the overall fair value measurement of approximately \$10 million at December 31, 2020. 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 and certain deal-contingent forward starting interest rate derivatives.

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 across the organization and across all risk types underpinned by our risk culture. This framework fosters continuous monitoring, promotes risk awareness and encourages sound operational and strategic decision-making. It also ensures a consistent approach to identifying, assessing, managing and reporting the risks we accept and incur in our activities.

Our risk culture refers to norms, attitudes and behaviors related to risk awareness, risk taking and risk management. We have long recognized the importance of a strong risk management culture, the fostering of which is a key responsibility of senior executives. Our risk culture is reinforced by our values and principles. It is instrumental in aligning the behaviors of individuals with our attitude to assuming and managing risk, which helps to ensure that our risk profile remains in line with our risk appetite. We use clear and consistent employee communication on risk to convey strategic messages and set the tone from senior management and the Board of Directors. We also deploy mandatory training on risk and compliance topics to embed skills and understanding in order to strengthen our risk culture and reinforce the attitude to risk in the behavior expected of employees, as described in our risk policies. We operate a global whistleblowing platform, HSBC Confidential, allowing staff to report matters of concern confidentially. Our risk culture is also reinforced by our approach to remuneration. Individual

awards, including those for senior executives, are based on compliance with our values and the achievement of financial and non-financial objectives, which are aligned to our risk appetite and strategy.

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;
- 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. It is advised on risk matters by the Risk Committee and the Compliance and Conduct Committee ("CCC") of the Board of Directors. In particular, the Risk Committee of the Board of Directors 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. 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.

Executive accountability for the ongoing monitoring, assessment and management of the risk environment and the effectiveness of the risk management framework resides with the HSBC North America Chief Risk Officer ("CRO") who is supported by the Risk Management Meeting of the HSBC USA Executive Committee ("RMM"). The management of financial crime risk resides with the U.S. Head of Financial Crime and Bank Secrecy Act ("BSA") Officer who is supported by the Financial Crime Risk Management Committee. Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making.

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. This model delineates management accountabilities and responsibilities for risk management and the control environment, and underpins our approach to 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 in line with risk appetite, and ensuring that the right controls and assessments are in place to mitigate them. The Second LoD sets the policy and guidelines for managing specific risk areas, provides advice and guidance in relation to the risk, and challenges the First LoD on effective risk management. The Third LoD is our Internal Audit function, which provides independent assurance that our risk management, governance and internal control processes are designed and operating effectively.

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 of Directors and its 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 function, headed by the CRO, is responsible for our risk management framework. This responsibility includes establishing policies, monitoring risk profiles and forward-looking risk identification and management. Our Risk function is made up of sub-functions covering all risks to our business. 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 CRO reports to the HSBC North America Chief Executive Officer ("CEO"), to the Risk Committee of the Board of Directors 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 CRO, supported by the RMM.

Specific oversight of various risk management processes occurs through the following meetings:

- 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 ("LoB") risk management and oversight meetings.

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 capital, liquidity, interest rate and market risk and is chaired by the HUSI Chief Financial Officer. 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 CEO in carrying out his financial crime risk responsibilities. Additionally, the U.S. Head of Financial Crime, who serves as the designated BSA Compliance Officer for HUSI, is the delegated chair of the FCRMC.

The RRCSC structure ensures appropriate consideration of customers and transactions that may adversely affect our public perception. RRCSCs exist in each business and comprise senior members from the business, risk, legal, financial crime and compliance departments 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.

The LoB risk management and oversight meetings provide recommendations and advice, as requested, to their respective LoB senior management teams 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 risk management tools are summarized below:

- Risk appetite - The CRO oversees the development of our risk appetite which defines, shapes and monitors our risk profile. The HSBC North America Risk Appetite Statement ("RAS") is a written articulation of 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 both financial and non-financial risks. Non-financial risk is defined as the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events.

Performance against the RAS metrics is monitored by senior management and reported to the RMM and Risk Committee of the Board of Directors on a periodic 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 residual risk profile across a range of both financial and non-financial 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. Risks that have an 'amber' or 'red' rating require a rating justification to outline the key issues and monitoring and mitigating action plans to be in place 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 risks with the potential to threaten the execution of our strategy or operations. The top and emerging risks framework enables us to take action which either stop these risks from materializing or limit 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 arise across any number of risk map categories or businesses and crystallize within a one-year time horizon 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 provide 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 and built upon existing risk management tools such as top and emerging risk reporting as well as risk and control assessments. The risk identification process takes place on a quarterly basis and involves senior representatives from the First and Second LoD. Senior management governance is provided by the RMM with results presented to the Risk Committee of the

Board of Directors on an annual basis. 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 processes. It includes execution of stress tests mandated by our regulators, 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 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.
- **Models** - In the course of our regular risk management activities, we use 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 within the parameters for which the models have been built and calibrated to operate, 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, actual results may differ significantly from model projections.

The severe projections of macroeconomic variables during the current COVID-19 pandemic represent events outside the parameters for which the models have been built. As a result, adjustments to model outputs to reflect consideration of management judgment are used with stringent governance in place to ensure appropriate results. Where models do not require adjustments, enhanced model monitoring confirms models are performing as intended.

Key developments in 2020 In 2020, we actively managed the risks resulting from the COVID-19 pandemic and its impacts on our customers and operations. We maintained high levels of service as our people, processes and systems responded to the required changes. To meet the additional challenges, we increased our focus on the quality and the timeliness of the data used to inform management decisions through measures such as early warning indicators, prudent and active management of our risk appetite and ensuring regular communication with our stakeholders. We continued to evolve our risk appetite by allocating resources to ensure we remained able to support our customers and our strategic goals. The financial impact of COVID-19 requires close monitoring. We conducted reviews of our portfolios that are highly vulnerable to general economic conditions and additional review measures have been implemented for new credit requests. We actively managed our capital and liquidity position to ensure we had the capacity to provide increasing levels of financial support to our customers. We also conducted a range of internal stress tests during 2020 including stress tests covering several potential COVID-19 related outcomes to assess the resilience of key balance sheet metrics including capital adequacy and liquidity. Our balance sheet and capital adequacy remain resilient based on these tests.

Also in 2020, we undertook a number of key initiatives to enhance our approach to the management of risk, including:

- We further simplified our approach and articulation of risk management through the combination of our enterprise risk management framework and our operational risk management framework.
- We continued to focus on simplifying our approach to non-financial risk management. We are driving more effective oversight and better end-to-end identification and management of non-financial risks.
- In response to a continually evolving threat landscape that the wider industry faces within non-financial risk, we formed a new Operational & Resilience Risk combined sub-function. See "Resilience Risk Management" below for further discussion.
- We updated our risk taxonomy to combine interest rate risk with capital and liquidity risk into a new category named treasury risk. The Second LoD for the Markets Treasury function was also re-named Treasury Risk Management ("TRM"). TRM will oversee treasury risk-related activities including capital, liquidity and funding, and interest rate risk. Through these changes we expect to be better able to effectively manage treasury risk across HUSI.

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

- *Credit risk* is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract;
- *Treasury risk* is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including pension risk. Treasury risk also includes the risk to our earnings due to changes in market interest rates;
- *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;

- *Resilience risk* is the risk that we are unable to provide critical services to our customers, affiliates and counterparties as a result of sustained and significant operational disruption;
- *Regulatory compliance risk* is the risk that we fail to observe the letter and spirit of relevant laws, codes, rules, regulations and standards of good market practice, which as a consequence incur fines and penalties and suffer damage to our business;
- *Financial crime risk* is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity, including money laundering, fraud, bribery and corruption, tax evasion, sanctions breaches, and terrorist and proliferation financing;
- *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; and
- *Model risk* is the potential for adverse consequences from business decisions informed by models, which can be exacerbated by errors in methodology, design or the way they are used.

Credit Risk Management Credit risk is managed through a robust risk identification and control framework which outlines clear and consistent policies, principles and guidance for risk managers. Credit risk is monitored using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities.

The principle objectives of credit risk management are to:

- maintain a strong culture of responsible lending, and robust risk policies and control frameworks;
- both partner with and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- ensure there is independent scrutiny of credit risks, their cost and their mitigation.

Credit risk arises from various on- and off-balance sheet instruments and arrangements, such as:

- loan portfolios;
- investment portfolios;
- unfunded commitments such as letters of credit and lines of credit and unutilized credit card lines that customers can draw upon; and
- derivative financial instruments, such as interest rate swaps, which 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 WPB Chief Risk Officer, who report directly to the CRO and maintain independent risk functions. The credit risk associated with wholesale commercial portfolios is managed by the Chief Credit Officer, while credit risk associated with retail consumer loan portfolios, such as residential mortgages, credit cards and installment loans, is managed by the WPB Chief Risk Officer. Further discussion of credit risk, including risk associated with cross-border exposures, 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. Stress testing results are taken into consideration 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. In addition, as a result of market volatility and economic uncertainty driven by the COVID-19 pandemic, we re-reviewed the credit ratings assigned to substantially all of our material commercial loans during the first half of 2020. During the second half of 2020, we continued to monitor the performance as conditions evolved and took necessary credit actions where warranted.

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 wholesale 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 Risk Committee of the Board of Directors.
- *Approving new credit exposures and independently assessing large exposures annually* – Credit approval authorities are delegated by the Risk Committee of the Board of Directors to the CRO with the authority to sub-delegate to the

Chief Credit Officer and WPB Chief Risk Officer. The Chief Credit Officer and WPB Chief Risk Officer in turn delegate limited credit authority to the various lending units. However, most wholesale 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. Large retail credits are escalated to the WPB Chief Risk Officer for review and concurrence.

- *Overseeing retail credit and collateral risk* – The WPB Chief Risk Officer manages the credit and collateral risk associated with retail portfolios, supported by expertise from a dedicated advanced risk analytics unit. Collateral risk in retail arises when the underlying value of the property securing a retail loan loses value due to macroeconomic, housing market or industry conditions. This risk is actively managed through on-going monitoring of House Price Indices in the Metropolitan Statistical Areas in which the mortgage portfolio is concentrated. In areas where property values are declining, maximum loan to value requirements will be adjusted downward to compensate for this risk.
- *Maintaining and developing the governance and operation of the wholesale 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 rating system comprises 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 in certain internal 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 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 Risk Committee of the Board of Directors.
- *Establishing counterparty and portfolio limits* – We monitor and limit our wholesale 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 Risk Committee of the Board of Directors. Retail establishes portfolio limits by product as well as limits on new products and higher-risk segments such as investment property, high LTV mortgages and credit cards. These limits are approved by the WPB Chief Risk Officer and monitored by a retail credit risk management committee. 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, termination clauses, and off-setting positions within the portfolio.
- *Managing problem loans* – Special attention is paid to problem loans. When appropriate, our wholesale Loan Management Unit and retail Collection and Recovery teams provide customers with intensive management and support in order to help them avoid default wherever possible and maximize recoveries.
- *Establishing allowances for credit losses* – The Chief Credit Officer and the WPB Chief Risk Officer share responsibility with the Chief Financial Officer for establishing appropriate levels of allowances for credit losses inherent in our various loan and other portfolios carried at amortized cost.

On January 1, 2020, we adopted the requirements of ASU 2016-13, "Financial Instruments - Credit Losses" ("ASU 2016-13"). The implementation of ASU 2016-13 represents a significant challenge to our Risk and Finance functions. The ASU introduces new concepts and measures such as lifetime ECL. Some of these new concepts and measures differ significantly from the IFRS 9, "Financial Instruments" ("IFRS 9") credit loss reporting that we implemented in 2018 for segment reporting under the Group Reporting Basis. As a result of ASU 2016-13 adoption, management has additional insight and measures not previously utilized which, over time, may influence our risk appetite and risk management processes.

The ASU 2016-13 process comprises three main areas:

- *Modeling* - The Risk function had pre-existing models developed in conjunction with our IFRS 9 reporting to HSBC. These models were enhanced or supplemented to address the requirements of ASU 2016-13 such as incorporating

forward economic guidance for a reasonable and supportable forecast period, reversion to historical losses, the expectation for zero losses under certain conditions, and lifetime ECL for undrawn credit exposures, with the appropriate governance and independent review. The models vary in complexity and inputs depending upon the size of the portfolio, the amount of data available and the sophistication of the market concerned.

- **Implementation** - A centralized impairment engine has been implemented to perform the lifetime ECL calculation. The impairment engine receives data, which is subject to a number of validation checks and enhancements, from a variety of client, finance and risk systems. Once the lifetime ECL calculation has been performed, there are further data analysis checks and review and challenge of the results prior to commencing formal governance. Risk and Finance work closely together throughout the execution of this process.
- **Governance** - Management review committees have been established in order to review and approve the results of the lifetime ECL calculations. The management review committees have representatives from Credit Risk and Finance and are responsible for final approval of our lifetime ECL for the period.

Sustainability risk is a component of credit risk and represents the risk that financial services provided to customers indirectly result in unacceptable impacts on people or on the environment. We measure sustainability risk by assessing the potential sustainability impacts of a customer's activities and assigning a sustainability risk rating. Sustainability risk is monitored by the businesses and the Credit Approval Unit, as well as HSBC Group Sustainability Risk, who are actively responsible for developing policies, guidance, processes and training. Sustainability Risk Managers in the Wholesale Credit Risk function, with input from HSBC 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, mining and metals, Ramsar Wetlands and UNESCO World Heritage Sites);
- undertaking an independent review of transactions, including escalating transactions to HSBC 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.

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 Delegation of Authority 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 Risk Committee of the Board of Directors has oversight of the Credit Review annual and ongoing plan, quarterly plan updates and results of reviews.

Treasury Risk Management Treasury risk arises from changes to the respective resources and risk profiles driven by customer behavior, management decisions or the external environment.

Capital risk is the risk that we fail to meet our regulatory capital requirements. Capital risk arises from a deterioration in the capital base due to losses and increased risk profile from management activity or the external environment. We aim to maintain a strong capital base to support the risks inherent in our business and invest in accordance with our strategy, meeting regulatory capital requirements at all times. See "Liquidity and Capital Resources" in this MD&A for a full discussion of our approach to capital risk management, including our capital ratios and regulatory capital requirements.

Liquidity and funding risk is the risk that we do not have sufficient financial resources to meet our obligations as they fall due or that we cannot raise funding or can only do so at excessive cost. Liquidity and funding risk arises from mismatches in the timing of cash flows or when illiquid asset positions cannot be funded at the expected terms and when required. We continuously monitor the impact of market events on our liquidity positions and will continue to adapt our liquidity and funding 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 and funding risk management is performed at the HSBC North America, HSBC USA and HSBC Bank USA levels. 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 funding;
- 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 and funding 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, 2020 and 2019, HSBC USA's LCR under the European 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. HSBC North America and HSBC Bank USA are also subject to the U.S. LCR rule and are required to report their LCR to U.S. regulators on a daily basis. The Tailoring Rules reduced the U.S. LCR requirement for Category III firms with weighted short-term wholesale funding under \$75 billion, including HSBC North America, and their depository institution subsidiaries, such as HSBC Bank USA, from 100 to 85 percent beginning January 1, 2020. As a result, under the U.S. LCR rule, a LCR of 100 percent or higher reflects an unencumbered HQLA balance that is equal to or exceeds 85 percent of a Category III firm's liquidity needs for a 30 calendar day liquidity stress scenario. During 2020, HSBC Bank USA's LCR under the U.S. LCR rule remained above the 100 percent minimum requirement.

The European calibration of the Basel Committee based Net Stable Funding Ratio ("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 guidance, which may differ in future periods depending on completion of the European calibration and further implementation guidance from regulators. The Basel NSFR guidance has been interpreted in certain instances to include expected changes from the Capital Requirements Directive and Regulation, commonly referred to as "CRR2". Our calculation of NSFR will fully follow the CRR2 reporting rules when they are expected to become effective in June 2021. At both December 31, 2020 and 2019, 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 October 2020, U.S. regulators issued a final rule to implement the NSFR in the United States, applicable to certain large banking organizations, including HSBC North America and HSBC Bank USA, that will take effect July 1, 2021. Consistent with the Tailoring Rules, an 85 percent NSFR requirement will apply to Category III firms with weighted short-term wholesale funding under \$75 billion, including HSBC North America, and their depository institution subsidiaries, such as HSBC Bank USA, when the final rule becomes effective July 1, 2021. As a result, under the U.S. NSFR rule, 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 85 percent of a Category III firm's required amount of funding for assets and off-balance sheet exposures. At both December 31, 2020 and 2019, HSBC Bank USA's estimated NSFR, based on our interpretation and understanding of the U.S. NSFR rule, exceeded 100 percent.

As a Category III firm, HSBC North America remains subject to liquidity stress testing on a monthly basis and related liquidity buffer and liquidity risk management requirements. HSBC North America and HSBC Bank USA have liquidity profiles to support compliance with these rules. HSBC North America and HSBC Bank USA may need to make changes to their liquidity profiles to support compliance with any future rules and will continue to evaluate the impact of the final U.S. NSFR rule on our operations.

ALCO also maintains a liquidity management and contingency funding plan ("Contingency Funding Plan"), which identifies certain potential early warning 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. At the onset of a crisis, liquidity needs would be satisfied primarily with unsecured wholesale market funding. If the crisis escalates, 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, TRM is a Second LoD oversight function for treasury risk-related activities, including capital, liquidity and funding and interest rate risk, which independently reports into the CRO. TRM's primary mandate is to strengthen our treasury risk management framework through challenge and review of existing processes and recommending areas that need improvement to the RMM. TRM serves as an advisory function to senior management to ensure front line units with direct responsibility for managing treasury risk are operating within their operating guidelines and defined risk appetite parameters. The TRM oversight mandate is carried out through critical evaluation and challenge of existing risk management processes including stress testing and ratio calculations.

Our liquidity and funding 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, regulations require banks to retain a portfolio of HQLA. As such, we are maintaining a large portfolio of high quality sovereign and sovereign guaranteed securities.

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, 2020:

	Moody's	S&P	Fitch
HSBC USA:			
Short-term borrowings.....	P-1	A-2	F1+
Long-term/senior debt.....	A2	A-	A+
HSBC Bank USA:			
Short-term borrowings.....	P-1	A-1	F1+
Long-term/senior debt.....	Aa3	A+	AA-

Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices and legal matters, all of which could lead to adverse ratings actions.

In April 2020, Fitch changed its rating outlook for both HSBC USA and HSBC Bank USA to negative from stable following a similar change in outlook to negative from stable for HSBC. The outlook change reflects the economic disruption driven by the COVID-19 pandemic. While the outlook changed, Fitch affirmed its long-term credit rating for HSBC USA. Concurrently, Fitch upgraded its long-term credit rating for HSBC Bank USA by one notch to AA- following a review of HSBC's resolution plan.

In May 2020, S&P downgraded its long- and short-term issuer credit ratings of HSBC USA and HSBC Bank USA by one notch following a similar rating action for HSBC. The long- and short-term issuer credit ratings of HSBC USA were downgraded to A- and A-2, respectively, from A and A-1, respectively, while the long- and short-term issuer credit ratings of HSBC Bank USA were downgraded to A+ and A-1, respectively, from AA- and A-1+, respectively. These rating downgrades reflect S&P's view that the HSBC Group will not be fully shielded from the global economic downturn resulting from the measures taken against the spread of COVID-19 and that weaker earnings arising from higher credit charges will be exacerbated by low interest rates. S&P also noted HSBC Group's restructuring plan. In conjunction with these downgrades, S&P revised its rating outlooks for HSBC, HSBC USA and HSBC Bank USA to stable from negative.

While these rating actions by Fitch and S&P did not have a material financial impact on our borrowing costs or liquidity, any future actions could have such an impact. 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, 2020, 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 \$4,990 million of the debt securities in these portfolios at December 31, 2020 are expected to mature in 2021. The remaining \$44,665 million of debt securities not expected to mature in 2021 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. In 2020, we did not sell or securitize any residential mortgage loan portfolios other than the normal sales of agency-eligible mortgage loan originations.

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, the remaining availability of our debt issuance programs and our funding strategy.

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. 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 Markets Treasury, 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.

In addition, we have a considerable number of contracts referencing LIBOR. The process of adopting new reference rates may expose us to an increased level of financial risks, such as potential earnings volatility. See "Executive Overview" in this MD&A for a full discussion of our LIBOR transition.

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, value at risk) 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 value at risk 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.

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, 2020 and 2019, our EVE remained within risk appetite for the up 200 and down 200 basis point interest rate shock scenarios.

Repricing gap analysis The following table shows the repricing structure of our assets and liabilities at December 31, 2020. 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. The repricing structure of our assets and liabilities may be impacted by the implementation of our business strategy, which is described under the heading "Executive Overview."

December 31, 2020	Within One Year	After One But Within Five Years	After Five But Within Ten Years	After Ten Years	Total
	(in millions)				
Commercial loans	\$ 40,512	\$ 960	\$ 240	\$ 16	\$ 41,728
Residential mortgages and home equity mortgages	7,986	5,900	3,277	2,149	19,312
Credit card receivables	1,066	—	—	—	1,066
Other consumer loans	297	9	4	9	319
Total loans ⁽¹⁾	49,861	6,869	3,521	2,174	62,425
Securities available-for-sale and securities held-to-maturity	14,478	15,969	12,377	6,829	49,653
Other assets	82,487	1,857	12	—	84,356
Total assets	146,826	24,695	15,910	9,003	196,434
Domestic deposits:					
Savings and demand	90,306	19,817	10,520	—	120,643
Time deposits	19,128	81	3	—	19,212
Long-term debt	15,538	2,750	—	1,691	19,979
Other liabilities/equity	23,954	11,044	1,602	—	36,600
Total liabilities and equity	148,926	33,692	12,125	1,691	196,434
Total balance sheet gap	(2,100)	(8,997)	3,785	7,312	—
Effect of derivative contracts	1,140	156	927	(2,223)	—
Total gap position	\$ (960)	\$ (8,841)	\$ 4,712	\$ 5,089	\$ —

⁽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 100 basis points, as well as scenarios in which rates gradually rise or fall by 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, 2020		December 31, 2019	
	Amount	%	Amount	%
(dollars are in millions)				
Estimated increase (decrease) in projected net interest income (reflects projected rate movements on January 1, 2021 and 2020, respectively):				
Resulting from a gradual 100 basis point increase in the yield curve	\$ 186	7 %	\$ (18)	(1)%
Resulting from a gradual 100 basis point decrease in the yield curve	(213)	(8)	(25)	(1)
Other significant scenarios monitored (reflects projected rate movements on January 1, 2021 and 2020, respectively):				
Resulting from an immediate 100 basis point increase in the yield curve	274	11	(70)	(3)
Resulting from an immediate 100 basis point decrease in the yield curve	(379)	(15)	(57)	(2)

Changes in the sensitivities since December 31, 2019 have been primarily driven by a significant increase in liquidity which was deployed into interest bearing deposits with the Federal Reserve Bank and securities purchased under agreements to resell. In addition, the sensitivities in the 'down-shock' scenarios at December 31, 2020 reflect no floors to the shocked market rates as discussed further below.

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 Markets Treasury or in the businesses to mitigate the effect of interest rate risk. In reality, Markets Treasury 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' scenarios. The sensitivity calculations in the 'down-shock' scenarios reflect no floors to the shocked market rates. However, customer product-specific rate floors are recognized where appropriate. This is a change from the methodology published in our 2019 Form 10-K, where previously market rates would have been floored to zero when applicable. 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 Markets Treasury, in accordance with the rules governing the transfer of interest rate risk from the global businesses to Markets Treasury.

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 and global Asset, Liability and Capital Management, 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 Markets Treasury 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.

Pension risk is a component of treasury risk and represents the risk of increased costs from offering post-employment benefit plans to our employees. Certain employees are eligible to participate in the HSBC North America qualified defined benefit pension plan which has been frozen. While plan assets were higher than projected plan liabilities resulting in an over-funded status of approximately \$305 million at December 31, 2020, changes in market conditions could result in an under-funded status occurring in future periods. Because these obligations relate to the HSBC North America pension plan, only a portion of any 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 any 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 21, "Pension and Other Postretirement Benefits," in the accompanying consolidated financial statements for further information concerning the HSBC North America defined benefit plan.

Market Risk Management 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 Risk Committee of the Board of Directors 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;

- scenario profit and losses are calculated utilizing the market scenarios for all relevant risk factors; and
- 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.

The risks not in VaR ("RNIV") framework aims to capture and capitalize material market risks that are not adequately covered in the VaR model. Risk factors are reviewed on a regular basis and either incorporated directly in the VaR models, where possible, or quantified through the RNIV. RNIV stresses interest rate basis risk exposure and interest rate volatility skewness. RNIV risk-weighted assets make up approximately 10 percent of HUSI market risk risk-weighted assets, though contribution to total HUSI risk-weighted assets remains 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.

Market risk in 2020 The global market environment was dominated by the COVID-19 pandemic and its economic consequences, paired with other geopolitical events.

The outbreak and spread of the COVID-19 pandemic drove volatility in financial markets and impacted both the global and U.S. economy. During the year, economic data deteriorated, showing vulnerabilities in the labor market, business margins, and

corporate debt levels. In response to the global pandemic, governments have increased spending to support the economy with an associated increase in global debt.

United States and China tensions remained elevated due to continued structural trade imbalances between the countries, issues on intellectual property governance, early information and controlling of the COVID-19 spread, and geopolitical actions related to Hong Kong and Taiwan.

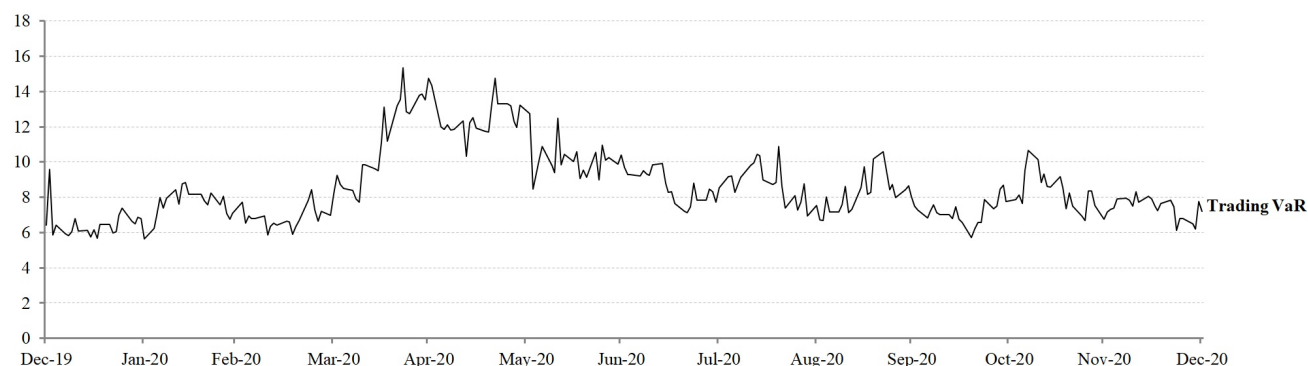
In the fourth quarter of 2020, the United States authorized emergency use of coronavirus vaccines. The FRB closed the year holding rates steady and communicating that they would maintain the current large-scale bond buying. The U.S. election concluded with Democrats gaining the presidency and control of the Senate, while maintaining control of the House of Representatives.

A focus on the pace and strength of the recovery should be the significant theme in 2021. The beginning of the year should remain challenging as infection rates continue to rise across the United States coupled with a slower than anticipated distribution of vaccines which may continue the risk of localized lockdowns.

Trading portfolios Trading VaR generates from the Global Markets unit of the GBM business segment. Portfolios comprise mainly foreign exchange products, interest rate swaps, credit default swaps and precious metals (i.e., gold, silver, platinum) in both North America and emerging markets.

Trading VaR at December 31, 2020 was higher as compared with December 31, 2019 due to an increase in volatility of foreign exchange and commodity prices, interest rates and credit spreads driven by the COVID-19 pandemic.

The following graph summarizes daily VaR for our trading portfolios at a 99 percent confidence level (in millions):



The following table summarizes our trading VaR for 2020 and 2019:

	Foreign exchange and commodity	Interest rate	Credit Spread	Portfolio Diversification ⁽¹⁾	Total ⁽²⁾
	(in millions)				
At December 31, 2020	\$ 3	\$ 7	\$ 2	\$ (5)	\$ 7
Full Year 2020					
Average.....	2	8	2	(3)	9
Maximum.....	5	14	4		15
Minimum.....	1	5	—		6
At December 31, 2019	\$ 1	\$ 6	\$ 1	\$ (2)	\$ 6
Full Year 2019					
Average.....	2	6	1	(3)	6
Maximum.....	5	8	2		8
Minimum.....	—	5	1		5

⁽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 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, under stable market conditions, to see two or three losses in excess of VaR at the 99 percent confidence level over a one-year period. However, in periods of unstable market conditions, we could see an increase in the number of back-testing exceptions.

In 2020, we experienced eight loss back-testing exceptions. One loss exception in January was mainly driven by palladium volatility. Five loss exceptions in March and two loss exceptions in April were primarily due to intensified market volatility as a consequence of the COVID-19 pandemic.

Despite the high number of loss exceptions, performance of the VaR model was in line with expectations when considered in the context of the extraordinary market movements observed in March 2020. During the period, market risk continued to be managed using a complementary set of exposure measures and limits, including stress and scenario analysis.

Non-trading portfolios Non-trading VaR predominantly relates to Markets Treasury 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 comprise mainly 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 and agency spread volatility.

Non-trading VaR was higher at December 31, 2020 as compared with December 31, 2019 due primarily to an increase in volatility of interest rates and U.S. Government agency credit spreads driven by the COVID-19 pandemic.

The following table summarizes our non-trading VaR for 2020 and 2019:

	Interest rate	Credit Spread	Portfolio Diversification ⁽¹⁾	Total ⁽¹⁾
	(in millions)			
At December 31, 2020	\$ 69	\$ 66	\$ (66)	\$ 69
Full Year 2020				
Average.....	73	65	(65)	73
Maximum.....	109	106		108
Minimum.....	29	38		46
At December 31, 2019	\$ 37	\$ 48	\$ (18)	\$ 67
Full Year 2019				
Average.....	32	31	(18)	45
Maximum.....	48	53		70
Minimum.....	20	18		33

⁽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 Markets Treasury which has the mandate to centrally manage and hedge it. Interest rate swaps used by Markets Treasury 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 Markets Treasury they are managed by ALCO in segregated ALCO books. See "Treasury Risk Management" above for a broader discussion on how interest rate risk is managed.

Stressed VaR The following table reflects stressed VaR at December 31, 2020 and 2019:

At December 31,	2020	2019
	(in millions)	
Stressed VaR (1-day equivalent).....	\$ 9	\$ 17

Stressed VaR at December 31, 2020 was lower as compared with December 31, 2019 driven by a reduction of inventory in rates and foreign exchange products as well as the impact of lower market rates during the stressed period.

Resilience Risk Management Resilience risk arises from failures or inadequacies in processes, people, systems or external events. Sustained and significant operational disruptions are events that could affect the stability of the wider financial system,

the viability of the bank and our industry peers, the ability of our customers to access critical services or the underlying trust of our customers and regulators as a result of a poorly managed operational event.

In-line with the increasing expectations from customers, regulators and our Board of Directors, and in response to a continually evolving threat landscape that the wider industry faces, we formed a new Operational & Resilience Risk combined sub-function. This sub-function provides robust risk steward oversight of our businesses, functions, and critical business services, supported by effective and timely independent challenge. In addition, in 2020 we have:

- implemented business and function aligned teams focused on emerging risks as well as material products and services;
- strengthened the effectiveness and outcomes of independent oversight of all non-financial risk stewards;
- implemented central services including governance, reporting and transformation; and
- created a standalone assurance capability providing independent review and evaluation of end-to-end processes, risks and key controls.

We continue to prioritize our efforts on material risks and areas undergoing strategic growth. We deploy risk management oversight to the most material change programs across the organization and we ensure we have specialist risk teams in-place to provide expert oversight and guidance for highly technical areas of risk management.

The Operational & Resilience Risk sub-function provides guidance and stewardship to our businesses and functions about how we can prevent, adapt, and learn from resilience-related threats when something goes wrong. The Operational & Resilience Risk target operating model provides a consistent view across resilience risks, strengthening our risk management oversight while operating effectively as part of a simplified non-financial risk structure. We view resilience risk across seven risk types related to: third parties / supply-chain; information, technology and cyber security; payments and manual processing; physical security; business interruption / contingency risk; buildings unavailability; and workplace safety.

The Operational & Resilience Risk structure simplifies interactions with our key stakeholders by providing specialist skill and a single channel of contact, and actively challenges the business and delivers clear, consistent and credible responses, ensuring controls are being operated and risks are being managed.

A principal senior management meeting for Operational & Resilience Risk governance is the Group Non-Financial Risk Management Board, chaired by the Group Chief Risk Officer, with an escalation path to the Group Risk Management Meeting.

Operational Resilience is our ability to anticipate, prevent, adapt, respond to, recover and learn from internal or external disruption, protecting customers, the markets we operate in and their economic stability. Resilience is measured by assessing whether we are able to continue to provide our most important services, within an agreed tolerance, during a severe but plausible event. We accept that we will not be able to prevent all disruption, but we prioritize investment to continuously improve our response and recovery capability for our most important business services.

Systems and cyber resilience 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 2020, none of which resulted in material financial loss. 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 2020. 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. 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.

Regulatory Compliance Risk Management Regulatory compliance risk 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, employee feedback, customer complaints and through regulatory feedback. Regulatory compliance risks are assessed through detailed assessments and reported to the RMM and the Board of Directors 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 assessment and enhancement of controls is undertaken where required.

The Second LoD 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 of Directors, as appropriate.

The Compliance function oversees the management of regulatory compliance risk for laws, codes, rules, regulations and standards that align under its scope of oversight as the Second LoD risk steward. As a Board of Directors committee, the CCC oversees our compliance risk management program (both Regulatory Compliance and Financial Crime Risk) as well as fiduciary matters as discussed further below.

Fiduciary risk is a component of regulatory compliance risk and represents the risk of breaching fiduciary duties where we act in a fiduciary capacity as trustee, investment manager or as mandated by law or regulation. It is the risk associated with failing to offer services honestly and properly to clients in that capacity. Fiduciary risks reside in our WPB businesses (such as Investment Management, Personal Trust, Security Operation Services) and other business lines outside of WPB (such as Corporate Trust). Fiduciary risk is governed by the CCC. The CCC has delegated day-to-day management and oversight responsibilities to management, whose primary oversight body for management of fiduciary activity is the Fiduciary Risk Management Meeting, chaired by the U.S. Head of Enterprise Compliance. The U.S. Head of Enterprise Compliance reports to the U.S. Chief Compliance Officer.

Financial Crime Risk Management 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.

The Financial Crime function ("FC") is led by the U.S. Head of Financial Crime, who reports to the U.S. Chief Compliance Officer. FC 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 anti-money laundering, sanctions, fraud, tax evasion and anti-bribery and corruption compliance. The U.S. Head of Financial Crime has delegated authority from the CEO over the FCRMC which escalates to the CCC on matters relating to financial crime and fraud risk management. Line of Business Financial Crime Risk Management Committees ("LoB FCRMCs") are established to support the effective management of financial crime risk at the lines of business. The LoB FCRMCs are chaired by the respective line of business CEOs, and may be combined with the LoB risk management and oversight meetings. We use a Financial Crime Risk Management Information Dashboard to monitor risk and performance indicators of financial crime, including trends and potential gaps in the management of financial crime risk that require attention.

Compliance continues to proactively identify, analyze and investigate financial crime risk and ensure proper mitigation of these risks. It embeds policies and procedures, introduces new technology solutions, and supports a culture of compliance needed to effectively manage financial crime risk, including the enterprise wide compliance risk management program.

Strategic Risk Management Strategic 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.

Reputational risk is a component of strategic risk and represents 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. 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. Stakeholder 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 form the basis for operational procedures, as well as consideration of reputational risk in areas 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 and FCRMC provide governance and oversight of reputational risk. 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 comprise senior members from the business, risk, legal, financial crime and compliance departments 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.

Model Risk Management In order to manage the risk of inappropriate or incorrect business decisions (e.g. customer conduct, financial crime, pricing, profit & loss and balance sheet and capital reporting, etc.) arising from models that have been inadequately designed, implemented or used; or that models do not perform in line with expectations and predictions, a comprehensive model risk management framework has been established that provides oversight and challenge to all models across HSBC North America. The framework includes a Model Standards Policy that aligns with model risk management regulations. A model inventory is maintained and updated on a semi-annual basis. In addition, a model risk measurement framework is used to measure, mitigate and monitor model risk. Model risk is managed on an ongoing basis as part of a Model Risk Committee, which is chaired by the CRO with representation from businesses and functions. The Independent Model Review ("IMR") team, which is part of the Model Risk Management function, is responsible for providing effective challenge to models and critical processes implemented for use within HSBC North America. Validations are conducted in-line with supervisory guidance on model risk management issued by the OCC and FRB as well as other applicable internal guidelines. 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. The IMR process assesses model development, implementation, use, validation, and governance. In 2020, we developed new model risk controls that now form the basis for model risk control and assessments which have been implemented for our businesses and functions.

GLOSSARY OF TERMS

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 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 composed predominately of management who are accountable and responsible for their day to day activities, processes and controls. The First LoD owns the risks and is responsible for identifying, recording, reporting and managing risks, and ensuring that the right controls and assessments are in place to mitigate them.

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.

HQLA - High Quality Liquid Assets; cash or assets that can be converted into cash quickly through sales (or by being pledged as collateral) with no significant loss of value.

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.

Markets Treasury - Is responsible for managing our liquidity and funding. Markets Treasury also manages our structural interest rate position within a limit structure.

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.

Nonaccrual Loans – Loans on which we no longer accrue interest because ultimate collection is unlikely.

Nonperforming Ratio - Nonaccrual loans and accruing loans contractually 90 days or more past due expressed as a percentage of total loans at a given date.

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.

Rate of Return on Common Equity – Net income (loss), reduced by preferred dividends, divided by average common equity for a given period.

Rate of Return on Risk-Weighted Assets - Net income (loss) divided by average risk-weighted assets for a given period.

Rate of Return on Tangible Common Equity - Net income (loss), reduced by preferred dividends, divided by average common equity less goodwill and intangible assets (purchased credit card relationships) for a given period.

Rate of Return on Total Assets – Net income (loss) divided by average total assets for a given period.

Rate of Return on Total Equity – Net income (loss) divided by average total equity 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 composed predominately of various functions, such as Finance, Legal, Risk, Compliance and Human Resources, whose role as risk stewards is to set the policy and guidelines for managing specific risk areas, provide advice and guidance in relation to the risk, and challenge the First LoD on effective risk management.

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 composed of 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 governance control process.

Three Lines of Defense Model – This model delineates management accountabilities and responsibilities for risk management and the control environment and underpins our approach to 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. 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, 2020, 2019 and 2018 included fees of \$79 million, \$77 million and \$72 million, respectively.

	2020			2019			2018		
	Average Balance	Interest	Rate	Average Balance	Interest	Rate	Average Balance	Interest	Rate
(dollars are in millions)									
Assets:									
Interest bearing deposits with banks.....	\$ 21,807	\$ 74	.34 %	\$ 13,850	\$ 347	2.51 %	\$ 21,868	\$ 440	2.01 %
Federal funds sold and securities purchased under resale agreements.....	16,046	69	.43	6,372	226	3.55	6,309	205	3.25
Trading securities.....	21,237	288	1.36	21,707	291	1.34	13,369	213	1.59
Securities.....	51,882	897	1.73	49,625	1,188	2.39	45,433	1,131	2.49
Loans:									
Commercial.....	50,463	1,484	2.94	51,296	2,089	4.07	47,826	1,840	3.85
Consumer:									
Residential mortgages.....	18,326	592	3.23	17,563	622	3.54	17,416	604	3.47
Home equity mortgages.....	788	24	3.05	909	45	4.95	1,084	50	4.61
Credit cards.....	1,197	77	6.43	1,172	77	6.57	845	69	8.17
Other consumer.....	281	25	8.90	259	23	8.88	362	26	7.18
Total consumer.....	20,592	718	3.49	19,903	767	3.85	19,707	749	3.80
Total loans.....	71,055	2,202	3.10	71,199	2,856	4.01	67,533	2,589	3.83
Other.....	5,175	42	.81	3,722	82	2.20	3,797	77	2.03
Total interest earning assets.....	\$ 187,202	\$ 3,572	1.91 %	\$ 166,475	\$ 4,990	3.00 %	\$ 158,309	\$ 4,655	2.94 %
Allowance for credit losses.....	(932)			(609)			(573)		
Cash and due from banks.....	1,172			1,251			1,140		
Other assets.....	13,956			11,912			19,167		
Total assets.....	\$ 201,398			\$ 179,029			\$ 178,043		
Liabilities and Equity:									
Domestic deposits:									
Savings deposits.....	\$ 62,218	\$ 266	.43 %	\$ 47,652	\$ 461	.97 %	\$ 48,153	\$ 319	.66 %
Time deposits.....	26,485	377	1.42	26,833	743	2.77	22,372	557	2.49
Other interest bearing deposits.....	19,850	103	.52	11,615	231	1.99	10,248	157	1.53
Foreign deposits:									
Foreign banks deposits.....	5,001	6	.12	4,215	28	.66	4,304	19	.44
Other interest bearing deposits.....	502	3	.60	796	12	1.51	1,434	19	1.32
Deposits held for sale.....	—	—	—	1	—	.59	149	1	.57
Total interest bearing deposits.....	114,056	755	.66	91,112	1,475	1.62	86,660	1,072	1.24
Short-term borrowings.....	8,133	69	.85	7,808	231	2.96	6,292	172	2.73
Long-term debt.....	23,407	558	2.38	30,102	1,137	3.78	31,433	1,123	3.57
Total interest bearing deposits and debt.....	145,596	1,382	.95	129,022	2,843	2.20	124,385	2,367	1.90
Tax liabilities and other.....	678	16	2.36	985	35	3.55	1,347	36	2.67
Total interest bearing liabilities.....	\$ 146,274	\$ 1,398	.96 %	\$ 130,007	\$ 2,878	2.21 %	\$ 125,732	\$ 2,403	1.91 %
Net interest income/Interest rate spread.....		\$ 2,174	.95 %		\$ 2,112	.79 %		\$ 2,252	1.03 %
Noninterest bearing deposits.....	28,881			23,102			25,651		
Other liabilities.....	7,904			7,176			6,695		
Total equity.....	18,339			18,744			19,965		
Total liabilities and equity.....	\$ 201,398			\$ 179,029			\$ 178,043		
Net interest margin on average earning assets.....			1.16 %			1.27 %			1.42 %
Net interest income to average total assets.....			1.08 %			1.18 %			1.26 %

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 caption "Market Risk Management."

Item 8. Financial Statements and Supplementary Data

Our 2020 Financial Statements meet the requirements of Regulation S-X. The 2020 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, 2020 and 2019, and the related consolidated statements of income (loss), of comprehensive income, of changes in equity and of cash flows for each of the three years in the period ended December 31, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 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 credit losses on certain financial instruments in 2020.

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 audits 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Allowance for Credit Losses for Commercial Loans and the Liability for Off-Balance Sheet Credit Exposures

As described in Notes 2 and 7 to the consolidated financial statements, the Company's Allowance for Credit Losses for Commercial Loans and the Liability for Off-Balance Sheet Credit Exposures is recognized based on lifetime expected credit losses and amounted to \$814 million and \$237 million, respectively, as of December 31, 2020. The recognition and measurement of lifetime expected credit losses for commercial loans and off-balance sheet exposures is highly complex and involves the use of significant judgment and estimation by management, including the assignment of credit ratings, the application of forward economic guidance and the determination of a management judgment allowance. In assigning the credit ratings to a particular obligor, among the risk factors considered by management are the obligor's debt capacity and financial position, the level of earnings, the amount and sources of repayment, the level of contingencies, management strength and the industry or geography in which the obligor operates. In addition, multiple forward-looking economic scenarios are formulated and assigned a weighting in the application of forward economic guidance to reflect assumptions about future economic conditions, supplemented by the use of management judgment, which may result in using alternative or additional economic scenarios and/or management adjustments. Lastly, the management judgment allowance reflects management's judgment of risk factors that may not be fully reflected in the lifetime expected credit loss generated by management's models.

The principal considerations for our determination that performing procedures relating to the Allowance for Credit Losses for Commercial Loans and the Liability for Off-Balance Sheet Credit Exposures is a critical audit matter are (i) the significant judgment by management in estimating lifetime expected credit losses, which in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence relating to the credit ratings for obligors, application of forward economic guidance and management judgment allowance, and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Company's process for estimating the Allowance for Credit Losses for Commercial Loans and the Liability for Off-Balance Sheet Credit Exposures, including controls over the credit ratings, application of forward economic guidance and management judgment allowance. These procedures also included, among others, testing management's process for estimating lifetime expected credit losses on commercial loans and off-balance sheet exposures, which included (i) evaluating the appropriateness of management's methodology; (ii) testing certain data utilized in the estimate; and (iii) evaluating the reasonableness of the credit ratings for obligors, application of forward economic guidance and management judgment allowance, which also involved the use of professionals with specialized skill and knowledge to assist in performing these procedures to test management's process.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 23, 2021

We have served as the Company's auditor since 2015.

CONSOLIDATED STATEMENT OF INCOME (LOSS)

Year Ended December 31,	2020	2019	2018
	(in millions)		
Interest income:			
Loans	\$ 2,202	\$ 2,856	\$ 2,589
Securities	897	1,188	1,131
Trading securities	288	291	213
Short-term investments	143	573	645
Other	42	82	77
Total interest income	3,572	4,990	4,655
Interest expense:			
Deposits	755	1,475	1,072
Short-term borrowings	69	231	172
Long-term debt	558	1,137	1,123
Other	16	35	36
Total interest expense	1,398	2,878	2,403
Net interest income	2,174	2,112	2,252
Provision for credit losses	810	195	(73)
Net interest income after provision for credit losses	1,364	1,917	2,325
Other revenues:			
Credit card fees, net	38	67	50
Trust and investment management fees	132	132	135
Other fees and commissions	567	619	684
Trading revenue	273	591	625
Other securities gains, net	137	88	24
Servicing and other fees from HSBC affiliates	347	354	356
Gain (loss) on instruments designated at fair value and related derivatives	34	(13)	19
Other income	7	16	6
Total other revenues	1,535	1,854	1,899
Operating expenses:			
Salaries and employee benefits	767	822	830
Support services from HSBC affiliates	1,551	1,638	1,603
Occupancy expense, net	281	197	185
Goodwill impairment (Note 10)	784	365	—
Other expenses	498	479	1,020
Total operating expenses	3,881	3,501	3,638
Income (loss) before income tax	(982)	270	586
Income tax expense (benefit)	(42)	157	266
Net income (loss)	\$ (940)	\$ 113	\$ 320

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year Ended December 31,	2020	2019	2018
	(in millions)		
<i>Net income (loss)</i>	\$ (940)	\$ 113	\$ 320
Net change in unrealized gains (losses), net of tax:			
Investment securities.....	864	403	(220)
Fair value option liabilities attributable to our own credit spread.....	24	(310)	324
Derivatives designated as cash flow hedges.....	72	8	40
Pension and post-retirement benefit plans.....	(4)	(14)	8
<i>Total other comprehensive income</i>	956	87	152
<i>Comprehensive income</i>	\$ 16	\$ 200	\$ 472

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

CONSOLIDATED BALANCE SHEET

At December 31,	2020	2019
	(in millions, except share data)	
Assets⁽¹⁾		
Cash and due from banks	\$ 1,302	\$ 1,744
Interest bearing deposits with banks	14,353	2,038
Federal funds sold and securities purchased under agreements to resell	35,746	17,838
Trading assets (includes \$1.3 billion and \$336 million pledged to creditors at December 31, 2020 and 2019, respectively)	27,284	28,452
Securities available-for-sale (includes amortized cost of \$39.6 billion and \$35.7 billion at December 31, 2020 and 2019, respectively, an allowance for credit losses of \$1 million at December 31, 2020, and \$2.1 billion and nil pledged to creditors at December 31, 2020 and 2019, respectively)	40,672	35,663
Securities held-to-maturity, net of allowance for credit losses of \$2 million at December 31, 2020 (fair value of \$9.4 billion and \$13.4 billion at December 31, 2020 and 2019, respectively)	8,981	13,293
Loans (includes \$32 million designated under fair value option at December 31, 2020)	62,088	68,553
Less – allowance for credit losses	1,015	637
Loans, net	61,073	67,916
Loans held for sale (includes \$36 million and \$178 million designated under fair value option at December 31, 2020 and 2019, respectively)	337	289
Properties and equipment, net	144	177
Goodwill	458	1,242
Other assets, net of allowance for credit losses of \$2 million at December 31, 2020	6,084	6,723
Total assets	\$ 196,434	\$ 175,375
Liabilities⁽¹⁾		
Debt:		
Domestic deposits:		
Noninterest bearing	\$ 32,428	\$ 24,132
Interest bearing (includes \$4.2 billion and \$7.2 billion designated under fair value option at December 31, 2020 and 2019, respectively)	107,427	90,766
Foreign deposits:		
Noninterest bearing	—	137
Interest bearing	5,295	4,658
Total deposits	145,150	119,693
Short-term borrowings (includes nil and \$373 million designated under fair value option at December 31, 2020 and 2019, respectively)	4,952	3,659
Long-term debt (includes \$10.7 billion and \$10.3 billion designated under fair value option at December 31, 2020 and 2019, respectively)	19,979	26,697
Total debt	170,081	150,049
Trading liabilities	5,397	3,235
Interest, taxes and other liabilities	2,665	3,835
Total liabilities	178,143	157,119
Equity		
Preferred stock (no par value; 40,999,000 shares authorized; 1,265 shares issued and outstanding at both December 31, 2020 and 2019)	1,265	1,265
Common equity:		
Common stock (\$5 par; 150,000,000 shares authorized; 714 shares issued and outstanding at both December 31, 2020 and 2019)	—	—
Additional paid-in capital	15,746	15,736
Retained earnings	601	1,534
Accumulated other comprehensive income (loss)	679	(279)
Total common equity	17,026	16,991
Total equity	18,291	18,256
Total liabilities and equity	\$ 196,434	\$ 175,375

⁽¹⁾ The following table summarizes assets and liabilities related to our consolidated variable interest entities ("VIEs") at December 31, 2020 and 2019. Assets and liabilities exclude intercompany balances that eliminate in consolidation. See Note 26, "Variable Interest Entities," for additional information.

At December 31,	2020	2019
	(in millions)	
Assets		
Loans	\$ 10	\$ —
Other assets	79	98
Total assets	<u>\$ 89</u>	<u>\$ 98</u>
Liabilities		
Interest, taxes and other liabilities	\$ 10	\$ 38
Total liabilities	<u>\$ 10</u>	<u>\$ 38</u>

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

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year Ended December 31,	2020	2019	2018
	(in millions, except share data)		
Preferred stock			
Balance at beginning and end of period	\$ 1,265	\$ 1,265	\$ 1,265
Common stock			
Balance at beginning and end of period	—	—	—
Additional paid-in capital			
Balance at beginning of period	15,736	18,136	18,130
Return of capital to parent	—	(2,400)	—
Employee benefit plans	10	—	6
Balance at end of period	15,746	15,736	18,136
Retained earnings			
Balance at beginning of period	1,534	1,471	1,130
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses on financial assets measured at amortized cost, net of tax	84	—	—
Cumulative effect adjustment to initially apply fair value option accounting election, as permitted under new accounting guidance, to certain student loans held for investment, net of tax	2	—	—
Reclassification from accumulated other comprehensive income (loss) of cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses on securities available-for-sale, net of tax	(2)	—	—
Cumulative effect adjustment to initially apply new accounting guidance for leases to recognize the previously deferred gain on the sale and leaseback of property, net of tax	—	27	—
Reclassification from accumulated other comprehensive income (loss) of cumulative effect adjustment to initially apply new accounting guidance for equity investments which were previously classified as available-for-sale, net of tax	—	—	(4)
Cumulative effect adjustment to initially apply new accounting guidance for equity investments which were previously measured at cost, net of tax	—	—	10
Reclassification from accumulated other comprehensive income (loss) of cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from the Tax Cuts and Jobs Act ("Tax Legislation")	—	—	91
Balance at beginning of period, adjusted	1,618	1,498	1,227
Net income (loss)	(940)	113	320
Cash dividends declared on preferred stock	(77)	(77)	(76)
Balance at end of period	601	1,534	1,471
Accumulated other comprehensive income (loss)			
Balance at beginning of period	(279)	(366)	(431)
Reclassification to retained earnings of cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses on securities available-for-sale, net of tax	2	—	—
Reclassification to retained earnings of cumulative effect adjustment to initially apply new accounting guidance for equity investments which were previously classified as available-for-sale, net of tax	—	—	4
Reclassification to retained earnings of cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from Tax Legislation	—	—	(91)
Balance at beginning of period, adjusted	(277)	(366)	(518)
Other comprehensive income, net of tax	956	87	152
Balance at end of period	679	(279)	(366)
Total common equity	17,026	16,991	19,241
Total equity	\$ 18,291	\$ 18,256	\$ 20,506
Shares of preferred stock			
Number of shares at beginning and end of period	1,265	1,265	1,265
Shares of common stock			
Number of shares at beginning and end of period	714	714	714

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

CONSOLIDATED STATEMENT OF CASH FLOWS

Year Ended December 31,	2020	2019	2018
	(in millions)		
<i>Cash flows from operating activities</i>			
Net income (loss)	\$ (940)	\$ 113	\$ 320
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	304	164	(80)
Goodwill impairment	784	365	—
Provision for credit losses	810	195	(73)
Deferred income tax provision	25	109	151
Net realized gains on securities available-for-sale	(137)	(88)	(24)
Net change in other assets and liabilities	(839)	1,846	(1,830)
Net change in loans held for sale:			
Originations and purchases of loans held for sale	(3,044)	(3,364)	(2,399)
Sales and collections of loans held for sale	3,001	3,271	2,850
Net change in trading assets and liabilities	3,330	(6,882)	(7,076)
Lower of amortized cost or fair value adjustments on loans held for sale	22	(1)	(5)
Loss (gain) on instruments designated at fair value and related derivatives	(34)	13	(19)
Net cash provided by (used in) operating activities	<u>3,282</u>	<u>(4,259)</u>	<u>(8,185)</u>
<i>Cash flows from investing activities</i>			
Net change in federal funds sold and securities purchased under agreements to resell	(17,908)	(7,670)	22,450
Securities available-for-sale:			
Purchases of securities available-for-sale	(25,165)	(24,829)	(10,540)
Proceeds from sales of securities available-for-sale	11,857	12,878	5,169
Proceeds from maturities of securities available-for-sale	10,190	9,121	4,224
Securities held-to-maturity:			
Purchases of securities held-to-maturity	(515)	(1,468)	(3,007)
Proceeds from sales of securities held-to-maturity	340	—	—
Proceeds from maturities of securities held-to-maturity	4,415	2,803	2,276
Change in loans:			
Collections, net of originations	5,312	(532)	2,527
Loans sold to third parties	916	1,209	758
Net cash provided by (used in) sales (acquisitions) of properties and equipment	1	(61)	(17)
Net inflow (outflow) related to the sale of certain private banking client relationships	—	1	(515)
Other, net	(248)	119	50
Net cash provided by (used in) investing activities	<u>(10,805)</u>	<u>(8,429)</u>	<u>23,375</u>
<i>Cash flows from financing activities</i>			
Net change in deposits	20,110	8,287	(6,928)
Debt:			
Net change in short-term borrowings	1,293	(535)	(469)
Issuance of long-term debt	8,487	4,686	11,923
Repayment of long-term debt	(10,427)	(10,705)	(14,704)
Return of capital to parent	—	(2,400)	—
Other increases in capital surplus	10	—	6
Dividends paid	(77)	(77)	(76)
Net cash provided by (used in) financing activities	<u>19,396</u>	<u>(744)</u>	<u>(10,248)</u>
Net change in cash and due from banks and interest bearing deposits with banks	<u>11,873</u>	<u>(13,432)</u>	<u>4,942</u>
Cash and due from banks and interest bearing deposits with banks at beginning of period	<u>3,782</u>	<u>17,214</u>	<u>12,272</u>
<i>Cash and due from banks and interest bearing deposits with banks at end of period</i>	<u><u>\$ 15,655</u></u>	<u><u>\$ 3,782</u></u>	<u><u>\$ 17,214</u></u>

CONSOLIDATED STATEMENT OF CASH FLOWS (Continued)

Year Ended December 31,	2020	2019	2018
	(in millions)		
<i>Supplemental disclosure of cash flow information</i>			
Interest paid during the period.....	\$ 1,518	\$ 2,921	\$ 2,350
Net income taxes paid during the period.....	50	159	348
<i>Supplemental disclosure of non-cash investing activities</i>			
Transfer of loans to held for sale, net.....	1,030	1,209	1,042
Fair value of properties added to real estate owned upon foreclosure.....	2	16	11
<i>Supplemental disclosure of non-cash financing activities</i>			
Recharacterization of long-term debt to time deposits.....	5,000	—	—

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note	Page	Note	Page
1 Organization	117	16 Fair Value Option	164
2 Summary of Significant Accounting Policies and New Accounting Pronouncements	117	17 Income Taxes	167
3 Strategic Initiatives	130	18 Preferred Stock	169
4 Trading Assets and Liabilities	131	19 Accumulated Other Comprehensive Income (Loss)	170
5 Securities	132	20 Share-Based Plans	171
6 Loans	137	21 Pension and Other Postretirement Benefits	171
7 Allowance for Credit Losses	147	22 Fee Income from Contracts with Customers	173
8 Loans Held for Sale	150	23 Related Party Transactions	175
9 Properties and Equipment, Net	151	24 Business Segments	178
10 Goodwill and Other Long-Lived Assets	151	25 Retained Earnings and Regulatory Capital Requirements	184
11 Leases	152	26 Variable Interest Entities	185
12 Deposits	154	27 Guarantee Arrangements, Pledged Assets and Repurchase Agreements	188
13 Short-Term Borrowings	155	28 Fair Value Measurements	193
14 Long-Term Debt	156	29 Litigation and Regulatory Matters	207
15 Derivative Financial Instruments	157	30 Financial Statements of HSBC USA Inc. (Parent)	214

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 commercial and consumer banking products and related financial services. HSBC Bank USA, National Association (together with its subsidiaries, "HSBC Bank USA"), our principal U.S. banking subsidiary, is a national banking association with branch offices and representative offices across the United States. In addition to our domestic offices, we maintain foreign branch offices, subsidiaries and/or representative offices in Europe, Asia and Latin America. 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.

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 both cash and due from banks and interest bearing deposits with banks, which are inclusive of any restricted cash. Restricted cash represents required reserve balances maintained with the Federal Reserve Bank as discussed further in Note 25, "Retained Earnings and Regulatory Capital Requirements." In March 2020, the Federal Reserve Board ("FRB") announced it had eliminated its reserve requirement.

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 16, "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. 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 an internal Independent Model Review ("IMR") team. Realized and unrealized gains and losses are recognized in trading revenues.

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.

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. Beginning January 1, 2019, premiums for non-contingently callable debt securities are amortized to the earliest call date, rather than the contractual maturity date.

All other debt 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 income (loss).

Accrued interest receivables for securities available-for-sale and securities held-to-maturity are reported net of any related allowance for credit losses in other assets on the consolidated balance sheet. Realized gains and losses on sales of securities available-for-sale are computed on a specific identified cost basis and are reported in other securities gains, net. As permitted under new accounting guidance that we elected to adopt in 2020, during the second quarter of 2020, we made a one-time election to sell all of our London Interbank Offered Rate ("LIBOR") linked variable rate held-to-maturity securities maturing beyond 2021. These sales did not affect the held-to-maturity accounting treatment based on our intent and ability to hold our remaining held-to-maturity portfolio until maturity.

Beginning January 1, 2020, an allowance for credit losses is recognized for debt securities, with changes in the allowance recorded in earnings. Prior to January 1, 2020, debt securities were assessed for other-than-temporary impairment. Other-than-temporary impairments were recorded as a direct write-down of the security's amortized cost basis. During 2019 and 2018, none of our debt securities were determined to be other-than-temporarily impaired. See under the heading "Allowance for credit losses" below for further discussion of our policies for establishing an allowance for credit losses on debt securities.

Equity securities that are not classified as trading are reported in other assets and measured at fair value with changes in fair value recognized in other income. Equity securities that are not considered to have readily determinable fair values are carried at amortized cost, less impairment, adjusted for observable price changes.

Investments in Federal Home Loan Bank stock and Federal Reserve Bank stock are recorded at cost less impairment.

Loans Loans are carried at amortized cost, with the exception of certain student loans for which the fair value option has been elected beginning January 1, 2020 and are further discussed in Note 16, "Fair Value Option." Amortized cost 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. See under the heading "Allowance for credit losses" below for further discussion of our policies for establishing an allowance for credit losses on loans.

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. Accrued interest receivables for loans are reported net of any related allowance for credit losses in other assets on the consolidated balance sheet. For credit card receivables, accrued interest is recognized in the loan balance as it is billed, with the related allowance recorded in the allowance for credit losses on loans.

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 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 in other revenues over the period in which the related service is provided. This includes fees associated with loan commitments, revolving credit facilities, standby letters of credit, loan syndication and other transaction based fees. Loan syndication fees received for managing a syndication and other transaction based fees are recognized at the point in time the transaction occurs. Fees associated with loan commitments, revolving credit facilities and standby letters of credit are recognized on a straight-line basis over the period the service is performed. In the event a loan commitment or standby letter of credit is exercised, the remaining unamortized fee is recognized as an adjustment to yield over the loan term. For additional information, as well as a full discussion of how revenue associated with all of our various fee-based activities is recognized, see Note 22, "Fee Income from Contracts with Customers."

Troubled debt restructurings ("TDR Loans") represent 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. For reserving purposes, beginning in 2020, we also identify loans that we reasonably expect to become TDR Loans. See under the heading "Allowance for credit losses" below for further discussion.

Coronavirus ("COVID-19") Loan Forbearance Initiatives We have implemented various loan modification programs to provide borrowers relief from the economic impacts of the COVID-19 pandemic. In March 2020, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") was signed into law, which provides financial institutions with the option to temporarily suspend certain requirements under U.S. GAAP related to TDR Loans beginning March 1, 2020. In December 2020, this TDR Loan guidance was extended and can now be applied until the earlier of January 1, 2022 or 60 days following the termination of the presidentially declared national emergency. During the third quarter of 2020, we elected to adopt the TDR Loan guidance in the CARES Act and are not applying TDR Loan classification to COVID-19 related loan modifications in the form of a long-term payment deferral (for commercial loans all payment modifications, including all payment deferrals) granted to borrowers that were current (less than 30 days past due) as of December 31, 2019 which otherwise may have been reported as TDR Loans.

In April 2020, federal banking regulators issued a revised interagency statement on loan modifications and the reporting for financial institutions working with customers affected by the COVID-19 pandemic ("Interagency Statement"). The Interagency Statement confirmed that COVID-19 related short-term loan modifications (e.g., payment deferrals of six months or less) provided to borrowers that were current (less than 30 days past due) at the time the relief was granted are not TDR Loans. Borrowers that do not meet the criteria in the CARES Act or the Interagency Statement are assessed for TDR Loan classification in accordance with our accounting policies.

In addition, under the Interagency Statement, for COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period and, if the loan was accruing at the time the relief was granted, the loan will generally not be placed on nonaccrual status as long as the borrower utilizes a payment deferral of six months or less. For consumer mortgage loans, when a borrower utilizes a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and, if the loan does not meet the criteria in the CARES Act, assessed for TDR Loan classification. Any accrued interest recorded on these loans is generally not reversed against income and will remain recorded as accrued interest receivable. We have not modified our commercial loan nonaccrual policies as a result of this guidance.

Allowance for Credit Losses Beginning January 1, 2020, an allowance for credit losses is recognized based on lifetime expected credit losses ("lifetime ECL") for loans, securities held-to-maturity and certain other financial assets measured at amortized cost, and an allowance for credit losses is also recognized for securities available-for-sale. Prior to January 1, 2020, an allowance for credit losses was recognized based on probable incurred losses for loans only while debt securities were assessed for other-than-temporary impairment. In addition, beginning January 1, 2020, the liability for off-balance sheet credit exposures is recognized based on lifetime ECL while, prior to January 1, 2020, it was recognized based on probable incurred losses. Expected recoveries of amounts previously written off, limited to the cumulative amount of prior write-offs, are also considered when estimating the allowance for credit losses for in scope financial assets (including collateral-dependent assets). Prior to January 1, 2020, these expected recoveries were not recognized.

We maintain an allowance for credit losses that is, in the judgment of management, adequate to absorb estimated lifetime ECL for loans and other financial assets measured at amortized cost. 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;
- specific adverse situations; and
- general and forecasted economic conditions.

Allowance for credit loss estimates are reviewed periodically and adjustments are recognized in the provision for credit losses during the period they become known. Because our estimates of the allowance for credit losses involve management judgment and are influenced by factors outside of our control, there is uncertainty inherent in these estimates.

Measurement of ECL Estimates The recognition and measurement of lifetime ECL is highly complex and involves the use of significant judgment and estimation. Multiple forward-looking economic forecasts are formulated and incorporated into the lifetime ECL calculations when estimating the allowance for credit losses for in scope financial assets and the liability for off-balance sheet credit exposures as discussed below under *Calculation of Lifetime ECL*. We utilize a standard framework to form economic scenarios to reflect assumptions about future economic conditions supplemented by the use of management judgment, which may result in using alternative or additional economic scenarios and/or management adjustments.

Methodology HUSI has adopted the use of a minimum of three forward-looking economic scenarios, representative of management's view of forecasted economic conditions, sufficient to calculate unbiased expected loss in most economic environments. They represent a 'most likely outcome' (the "Central scenario") and two less likely 'outer' scenarios, referred to as the "Upside scenario" and the "Downside scenario". Each scenario is assigned a weighting with the significant majority of the weighting placed on the Central scenario and lower equal weights placed on the Upside and Downside scenarios. This weighting is deemed appropriate for the estimation of lifetime ECL in most economic environments, unless determined otherwise. At management's discretion, changes may be made to the weighting assigned to the three scenarios or additional scenarios may be included in order to consider current economic conditions. See Note 7, "Allowance for Credit Losses," for further discussion. Key Central scenario assumptions as further discussed below are set using the average of forecasts of external economists, helping to ensure the scenarios are unbiased and maximize the use of independent information, except when in management's judgment these scenarios may not adequately reflect the impact of recent events and it is believed not to be representative of the current economic environment. The Central, Upside and Downside scenarios selected with reference to external forecast distributions using the above approach are termed the "Consensus Economic Scenarios". We have determined that two years is a reasonable and supportable forecast period for the Consensus Economic Scenarios. At the end of the two

year reasonable and supportable forecast period, assumption variables start to revert to their 20-year average of historical values over a reversion period. The reversion period for most assumption variables is generally three years, but is longer in some specific cases. The reversion path for this period is linear for all variables.

For the Central scenario, we set key assumptions such as Gross Domestic Product ("GDP") growth, inflation, unemployment, house price growth, U.S. Treasury yields, equity price growth, short-term interest rates and oil price using either the average of external forecasts (commonly referred to as consensus forecasts) or market implied rates. An external provider's model, conditioned to follow the consensus forecasts for the above key assumption variables, projects the remaining variable paths required as inputs to credit models. This external provider is subject to our risk governance framework, including oversight by an internal IMR team.

The Upside and Downside scenarios are constructed following a standard process supported by a scenario narrative reflecting our top and emerging risks and by consulting external and internal subject matter experts. They are designed to be cyclical in that GDP growth, inflation and unemployment usually revert back to the Central scenario after the first two years. We determine the maximum divergence of GDP growth from the Central scenario using the 10th and the 90th percentile of the entire distribution of consensus forecast outcomes. Using externally available forecast distributions ensures independence in scenario construction. Key economic variables are set with reference to external distributional forecasts and we project additional variable paths using the external provider's model.

Generally, the Upside and Downside scenarios are generated at year-end and are only updated during the year if economic conditions change significantly. The Central scenario is generated every quarter. In quarters where only the Central scenario is updated, the Upside and Downside scenarios used for commercial loans are adjusted such that the relationship between the key assumptions used in the Central scenario and the Upside and Downside scenarios in the quarter is consistent with that observed at the last full scenario generation. For consumer loans, in quarters where only the Central scenario is updated, the relationship between the Central scenario and the Upside and Downside scenarios is held constant with that observed at the last full scenario generation.

See Note 7, "Allowance for Credit Losses," for further discussion summarizing the key macroeconomic variable forecasts used in our economic scenarios as well as a discussion of updates to the economic scenarios and other changes during 2020.

We exclude from our lifetime ECL calculation financial assets for which we expect that non-payment of the amortized cost basis will be zero ("Zero Expected Credit Loss Exception"). As a result, no allowance for credit losses is recorded for these financial assets. We have identified the following types of financial assets which we believe qualify for this exclusion:

- U.S. Treasury securities;
- U.S. Government agency issued or guaranteed securities;
- U.S. Government sponsored enterprises securities;
- G10 sovereign foreign debt securities;
- Interest bearing deposits held with the Federal Reserve Bank; and
- Loans guaranteed by a U.S. Government agency or U.S. Government sponsored enterprise, including Paycheck Protection Program ("PPP") loans.

We also exclude from our lifetime ECL calculation financial assets which are secured by collateral maintenance provisions (e.g., the borrower is contractually required to adjust the amount of financial collateral securing the financial asset) if such collateral meets liquidity requirements. In most circumstances subject to such requirements, collateral exceeds our amortized cost basis and no allowance for credit losses is recorded for these financial assets, consisting of the substantial majority of our securities purchased under agreements to resell as well as substantially all of our margin loans provided to our private banking customers.

In addition, loans to other HSBC affiliated entities are exempt from ECL measurement.

Calculation of Lifetime ECL

Commercial loans Commercial loans are monitored on a continuous basis with a formal assessment completed, at a minimum, annually. As part of this process, a credit rating is assigned and a loss given default ("LGD") is estimated and serve as the basis for establishing an allowance for these loans' expected balance at default ("EAD") based on a probability of default ("PD") estimate associated with each credit rating under our credit risk policies. In assigning the credit 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. We utilize a consistent methodology for the application of forward economic guidance ("FEG") into the calculation of lifetime ECL by incorporating FEG into the estimation of the term structure of PD and LGD. For PDs, we consider the correlation of FEG to default rates for a particular industry. For LGDs, we consider the correlation of FEG to collateral values and realization rates for a particular industry and if applicable, country which is adjusted for recoveries. Our PD 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 S&P ratings and default rates. PDs and LGDs are estimated for the entire term structure of the loan. Credit Review, a function independent of the business, provides an on-going assessment of lending activities that includes independently assessing credit ratings and LGD estimates for sampled credits across various portfolios.

Loans with similar risk characteristics are pooled for determining lifetime ECL. 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, in general the loan is no longer considered part of the collective pool of homogeneous loans against which lifetime ECL are established. Instead, an allowance for credit losses is established on an individual basis ("individually assessed") primarily based on the present value of expected future cash flows, discounted at the loan's original effective interest rate, or the fair value of the collateral if the loan is collateral dependent. Individually assessed loans are evaluated quarterly. Generally, loans that are placed on non-accrual must be removed from a collective pool and individually assessed.

In addition, the allowance for credit losses reflects management judgment of risk factors that may not be fully reflected in the lifetime ECL generated by our models. In making this determination, we consider the characteristics of our portfolio and any other significant factors that are relevant. Factors that are relevant to determining the expected collectability of our loan portfolio include, but are not limited to, the volume and severity of past due loans, the volume and severity of adversely classified or rated loans, the underlying collateral on loans that are not collateral dependent, lending policies and procedures including changes in lending strategies, underwriting standards or collection and recovery practices as well as the obligor's operations, environmental factors of an obligor and the areas in which our credit exposure is concentrated, the non-homogeneous nature of the portfolio, changes and expected changes in the general market condition of either a geographical area or an industry, and changes in international, national, regional, and local economic and business conditions.

For loans which have been identified as TDR Loans, including beginning in 2020 loans which we reasonably expect to become TDR Loans, judgment will be used as to whether or not we expect full repayment of principal and interest. If full repayment is expected, the loan will remain in a collective pool of homogeneous loans for determining lifetime ECL. When full repayment of principal and interest is not expected or, beginning in 2020, when we anticipate offering payment concessions, the loan will be removed from the pool and individually assessed. If a commercial TDR Loan subsequently performs in accordance with the new terms and the loan is upgraded, it is possible the loan will no longer be reported as a TDR Loan at the earliest one year after the restructure had been anticipated.

Consumer loans For pools of homogeneous consumer loans and certain small business loans, we estimate lifetime ECL using a component based framework based on PD, LGD and EAD that estimates the likelihood that a loan will progress through the various stages of delinquency and ultimately charge-off based upon a forward-looking view of macro-economic expectations that impact a lifetime ECL and historical experience. The impact of FEG on PD is modeled at the loan or segment level depending on the portfolio. Historic relationships between observed default rates and macroeconomic variables are integrated into lifetime ECL estimates by leveraging economic response models. The impact of FEG on PD is modeled over a period equal to the remaining maturity of the underlying loans. The impact on LGD is modeled for mortgage portfolios by forecasting future loan-to-value ("LTV") profiles for the remaining maturity of the loans by leveraging national forecasts of the House Price Index ("HPI") and applying the corresponding LGD expectation. The models consider delinquency status, loss experience and severity, and take into account where borrowers have historically filed for bankruptcy or have been subject to account management actions, such as the re-age or modification of accounts. Expected loss severity is based on the underlying collateral, if any, for the loan in the event of default based on historical and recent trends which are updated periodically 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.

The lifetime ECL recognized for consumer loans considers the effect on lifetime ECL over a range of potential outcomes, calculated on a probability-weighted basis, based on the economic scenarios described above, including management judgment where required. Management judgment reflects consideration of risk factors that may not be fully reflected in the lifetime ECL generated by our models. In making this determination, we consider the characteristics of our portfolio and any other significant factors that are relevant. Factors that are relevant to determining the expected collectability of our consumer loan portfolio include, but are not limited to, changes in risk selection or underwriting standards, changes in collection, account management, charge-off and recovery practices and changes in loan concentrations affecting either the frequency or severity of losses.

For loans which have been identified as TDR Loans, including beginning in 2020, loans which we reasonably expect to become TDR Loans, an allowance for credit losses is maintained primarily based on the present value of expected future cash flows, discounted at the loan's original effective interest rate, or the fair value of the collateral if the loan is collateral dependent. Once a loan is classified as a TDR Loan, it continues to be reported as such until it is paid off or charged-off.

Off-balance sheet credit exposures A separate liability for off-balance sheet credit exposures is also maintained, which is recorded in interest, taxes and other liabilities on the consolidated balance sheet and includes estimated lifetime ECL arising from off-balance sheet exposures such as letters of credit, guarantees and unused commitments to extend credit. The process for

measuring lifetime ECL on these exposures is consistent with that for commercial or consumer loans discussed above as applicable, but is subject to an additional parameter reflecting the likelihood that funding will occur. No lifetime ECL is recognized for off-balance sheet credit exposures that are unconditionally cancellable by us such as unused credit card lines.

Securities held-to-maturity Due to the composition of our portfolio of securities held-to-maturity, substantially all of our portfolio qualifies for the Zero Expected Credit Loss Exception and has been excluded from our lifetime ECL calculation. Our methodology for calculating lifetime ECL for our securities held-to-maturity which do not qualify for the Zero Expected Credit Loss Exception is consistent with our methodology for calculating lifetime ECL for loans discussed above, including the use of probability-weighted scenarios, forward economic guidance and key model inputs. We calculate lifetime ECL for securities held-for-maturity based on the present value of expected future cash flows, discounted using the contractual interest rate which approximates the effective interest rate.

Securities available-for-sale On a quarterly basis, we perform an assessment to determine whether there have been any events or economic circumstances to indicate that a debt security available-for-sale in an unrealized loss position has suffered impairment due to credit factors. A debt security available-for-sale is considered impaired if its fair value is less than its amortized cost basis at the reporting date. If impaired, we assess whether the impairment is due to credit factors.

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 recognized and the unrealized loss is recorded as a direct write-down of the security's amortized cost basis with an offsetting entry to earnings. If we do not intend to sell the debt security or believe we will not be required to sell the debt security before the recovery of its amortized cost basis, the impairment is assessed to determine if a credit loss component exists. We use a discounted cash flow method to determine the credit loss component. In the event a credit loss exists, an allowance for credit losses is recorded in earnings for the credit loss component of the impairment while the remaining portion of the impairment attributable to factors other than credit loss is recognized, net of tax, in other comprehensive income. The amount of impairment recognized due to credit factors is limited to the excess of the amortized cost basis over the fair value of the security available-for-sale.

Allowance for credit losses prior to 2020 Prior to January 1, 2020, we maintained an allowance for credit losses that was, in the judgment of management, adequate to absorb estimated probable incurred losses in our commercial and consumer loan portfolios.

Formula-based reserves were established against commercial loans when, based upon an analysis of relevant data, it was probable that a loss had been incurred and the amount of that loss could be reasonably estimated, even though an actual loss had yet to be identified. This methodology used the PD from the credit 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 LGD rating assigned to each transaction or facility was based on the collateral securing the transaction and the measure of exposure based on the transaction. When it was deemed probable based upon known facts and circumstances that full interest and principal on an individual loan would not be collected in accordance with its contractual terms, the loan was considered impaired and an impairment reserve was established primarily 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 fair value of the collateral if the loan was collateral dependent or the loan's observable market price if the loan was traded in the market.

For pools of homogeneous consumer loans and certain small business loans which did not qualify as TDR Loans, we estimated probable losses using a roll rate migration analysis that estimated the likelihood that a loan would progress through the various stages of delinquency and ultimately charge-off. This migration analysis incorporated estimates of the period of time between a loss occurring and the confirming event of its charge-off.

In addition, loss reserves on consumer and commercial loans were maintained to reflect our judgment of portfolio risk factors which may not have been fully reflected in the statistical calculations or when historical trends were not reflective of current inherent losses in the portfolio.

For loans which had been identified as TDR Loans, provisions for credit losses were maintained primarily 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 fair value of the collateral if the loan was collateral dependent or, for commercial loans, the observable market price if the loan was traded in the market.

A separate reserve was also maintained for probable incurred credit losses associated with off-balance sheet credit exposures. This reserve was determined by reference to continuously monitored and updated historical loss rates or factors, derived from a migration analysis which considered net charge-off experience by loan and industry type in relation to internal credit rating.

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. For loans secured with collateral, loan balances are generally written down to the estimated fair value of the collateral less costs to sell.	Loans are generally categorized as nonaccruing when contractually delinquent for more than three months or 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. ⁽²⁾
Credit Cards	Loan balances are generally charged off by the end of the month in which the account becomes six months contractually delinquent. ⁽³⁾	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.

⁽²⁾ As discussed further under the heading "Loans" above, for COVID-19 related loan modifications, when a borrower utilizes a payment deferral of more than six months, the loan will generally be placed on nonaccrual status. Any accrued interest recorded on these loans is generally not reversed against income and will remain recorded as accrued interest receivable.

⁽³⁾ 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.

Due to the composition of our debt securities portfolio, a substantial majority of which comprises U.S. Government securities, we typically do not charge them off or place them on nonaccrual status.

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. For COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period.

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 16, "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. The fair value estimates of consumer loans are determined primarily using either observed market prices of instruments with similar characteristics or 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 pricing obtained from independent sources, relevant broker quotes or observed market prices of instruments with similar characteristics. Periodic adjustments to fair value are recognized in other income in the consolidated statement of income (loss). 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.

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 part of evaluating whether the transfer results in a sale.

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.

Leases Beginning January 1, 2019, lease right-of-use ("ROU") assets and lease liabilities for operating leases are recognized at commencement date based on the present value of lease payments over the lease term, discounted using our incremental borrowing rate at the effective commencement date of each lease. Operating lease ROU assets are recorded in other assets while operating lease liabilities are recorded in interest, taxes and other liabilities. We are not currently a lessee under any finance leases.

Options to renew or terminate the lease are recognized as part of our ROU assets and liabilities when it is reasonably certain the options will be exercised. We have lease agreements that contain both lease and non-lease components, such as maintenance costs, which are accounted for separately. Operating lease expense for fixed lease payments is recognized on a straight-line basis over the lease term. Variable lease payments for real estate taxes, insurance, maintenance and utilities, which are generally based on our pro rata share of the total property, are not included in the measurement of the ROU assets or lease liabilities and are expensed as incurred. In addition, we do not recognize ROU assets or lease liabilities with a term of 12 months or less, which are also expensed as incurred. Prior to January 1, 2019, operating leases were not recognized on balance sheet.

Goodwill and Other Long-Lived Assets 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 targets assigned and monitored through our capital management monitoring 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. 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. We consider significant and long-term changes in industry and economic conditions to be examples of primary indicators of potential impairment.

In addition, we generally conduct impairment tests of capitalized software and other long-lived assets at the reporting unit level when events or circumstances indicate their carrying amount may not be recoverable. If impairment testing is required, long-lived assets are grouped at the lowest level for which there are identifiable cash flows. If the estimated undiscounted cash flows of the long-lived asset group exceed its carrying amount, an impairment is not recognized. However, if the estimated undiscounted cash flows are less than the carrying amount of the long-lived asset group, a second step is performed to determine fair value and an impairment loss is required if the carrying amount of the long-lived asset group exceeds fair value. Impairment losses are not reversible. Fair value calculations when required are consistent with the methodology used to determine fair value for goodwill impairment.

Reposessed 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. 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 reposessed 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 are recorded in accumulated other comprehensive income (loss), net of income taxes, and reclassified into earnings in the period during which the hedged item affects 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. 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. 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 income (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 accumulated 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 as a component of other income 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 awards 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 conditions, these performance conditions 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.

All excess tax benefits and tax deficiencies for share-based payment awards are recorded within income tax expense (benefit) in the consolidated statement of income (loss).

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 Federal 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.

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 during 2020:

- **Financial Instruments - Credit Losses** In June 2016, the Financial Accounting Standards Board ("FASB") issued an Accounting Standards Update ("ASU") that significantly changes measurement of credit losses. The ASU requires recognition of lifetime ECL for loans, securities held-to-maturity, off-balance sheet credit exposures and certain other financial assets reported at amortized cost. In addition, the new guidance requires inclusion of expected recoveries of amounts previously written off, limited to the cumulative amount of prior write-offs, when estimating the allowance for credit losses for in scope financial assets (including collateral-dependent assets). For available-for-sale debt securities where fair value is less than cost, the ASU requires that credit-related impairment, if any, be recognized through an allowance for credit losses and adjusted each period for changes in credit risk. Modeling and economic forecasting requirements of the ASU are new and extensive, and the ASU's requirements differ significantly from the IFRS credit loss reporting that we implemented in 2018 for reporting to HSBC. The ASU also requires expanded disclosures. See Note 5, "Securities," Note 6, "Loans," and Note 7, "Allowance for Credit Losses," for the new disclosures required by this standard. The adoption of this guidance required a cumulative effect adjustment to retained earnings as of January 1, 2020, which resulted in the following impacts:
 - a decrease in our allowance for credit losses on funded loans of \$170 million;
 - an increase in our liability for off-balance sheet credit exposures of \$54 million; and
 - including but not limited to the items above, an increase in retained earnings of \$82 million, net of tax.

The decrease in our allowance for credit losses on loans was driven by a decrease of approximately \$126 million for commercial loans reflecting the impact of their short contractual maturities and the benign credit environment at the time as well as a decrease of approximately \$44 million for consumer loans as the impact of their lifetime losses was more than offset by expected recoveries of previous charge-offs of collateral-dependent residential mortgages. The liability for off-balance sheet credit exposures increased reflecting the inclusion of lifetime losses for expected funding over the remaining life of the exposures. The allowance for credit losses established on other financial assets was not material. In accordance with the new guidance, we elected the practical expedients to present accrued interest receivables, net of the related allowance for credit losses, in other assets on the consolidated balance sheet and to exclude accrued interest balances from the amortized cost basis for disclosure purposes. For credit card receivables, accrued interest is recognized in the loan balance as it is billed, with the related allowance recorded in the allowance for credit losses on loans.

In conjunction with our adoption of this guidance, we also elected fair value option on certain student loans held for investment and recorded a separate cumulative effect adjustment to write-up these loans to fair value which resulted in an increase in retained earnings of \$2 million, after tax, as of January 1, 2020.

- **Reference Rate Reform** In March 2020, the FASB issued an ASU that provides optional expedients and exceptions to the U.S. GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens associated with transitioning away from LIBOR and other interbank offered rates to acceptable alternative rates. Under the new guidance, an entity is permitted to account for the modification of a contract affected by reference rate reform as a continuation of the existing contract, if certain conditions are met. In addition, the new guidance allows an entity to elect on a hedge-by-hedge basis to continue to apply hedge accounting for hedging relationships in which the critical terms change due to reference rate reform, if certain conditions are met. These optional elections generally will cease to apply after December 31, 2022. In January 2021, the FASB issued an ASU further clarifying that hedge accounting relief also applies for derivative instruments affected by changes in interest rates used for discounting, margining or contract price alignment, even if LIBOR is not involved, which is principally relevant to centrally cleared derivatives. We elected to adopt this guidance during the second quarter of 2020, which did not have a material impact on our consolidated financial statements. As permitted under the ASU, we elected to sell all of our LIBOR-linked variable rate held-to-maturity securities maturing beyond 2021 during the second quarter of 2020. See Note 5, "Securities," for further discussion.

There have been no additional accounting pronouncements issued that are expected to have or could have a material impact on our consolidated financial statements.

3. Strategic Initiatives

In February 2020, our Board of Directors approved a strategic plan to restructure our operations ("Restructuring Plan") in alignment with HSBC's global strategy to refocus our wholesale operations to better serve our international corporate clients and restructure our retail operations to better meet the needs of globally mobile and affluent clients. Our Restructuring Plan also includes streamlining our functional and operations support model by removing duplication and reducing the size of our balance sheet to better align with the scope and scale of the U.S. opportunity. We previously disclosed that we expect to incur pre-tax charges in connection with this Restructuring Plan largely over a two year period of approximately \$350-\$400 million (\$265-\$305 million after-tax). In addition, during 2020, we determined we would incur additional pre-tax charges of approximately \$170-\$190 million (\$125-\$145 million after-tax) as we continued to progress our Restructuring Plan. The following table presents a summary of the total pre-tax charges we expect to incur by reportable segment:

	Expected Charges in Connection with Restructuring Plan	
	Minimum	Maximum
	(in millions)	
Wealth and Personal Banking	\$ 50	\$ 56
Commercial Banking	10	14
Global Banking and Markets	115	135
Corporate Center ⁽¹⁾	345	385
Total	<u>\$ 520</u>	<u>\$ 590</u>

⁽¹⁾ Includes restructuring charges primarily related to lease impairment and other related costs, support service project costs and severance costs associated with certain centralized activities and functions.

Our Restructuring Plan is moving forward, including consolidation of our wholesale and retail middle and back office functions, each under a single operations structure, simplification of our support service functions and the exit or transfer of certain derivative contracts. In 2020, we also completed the consolidation of our retail branch network and the creation of our Wealth and Personal Banking business. During 2020, we recorded pre-tax charges in connection with our Restructuring Plan totaling \$280 million. We remain committed to our multi-year strategic plan to re-profile our business, and continue to explore strategic options with respect to our retail operations to focus on our high net worth client base and wealth management products.

The following table summarizes the changes in the liability associated with our Restructuring Plan during 2020:

	Severance and Other Employee Costs ⁽¹⁾	Lease Termination and Associated Costs ⁽²⁾	Total
	(in millions)		
Year Ended December 31, 2020			
Restructuring liability at beginning of period	\$ —	\$ —	\$ —
Restructuring costs accrued during the period	28	29	57
Restructuring costs paid during the period	(18)	(6)	(24)
Restructuring liability at end of period	<u>\$ 10</u>	<u>\$ 23</u>	<u>\$ 33</u>

⁽¹⁾ Severance and other employee costs are included in salaries and employee benefits in the consolidated statement of income (loss). The majority of these costs were reported in the Wealth and Personal Banking and the Global Banking and Markets business segments. Not included in these costs are allocated severance costs from HSBC Technology & Services ("HTSU") discussed further below.

⁽²⁾ Primarily includes real estate taxes, service charges and decommissioning costs. Lease termination and associated costs are included in occupancy expense, net in the consolidated statement of income (loss) and were reported in the Corporate Center business segment.

In connection with the restructuring costs reflected above, during the first quarter of 2020, we determined that we would exit approximately 60 branches (in addition to the approximately 20 branches for which we disclosed plans to exit in 2019). As a result, we recorded impairment charges during 2020 to write down the lease right-of-use ("ROU") assets, net of estimated sublease income, by \$67 million and to write down the leasehold improvement assets associated with these branches by \$16 million based on their estimated remaining useful lives. The branches targeted for exit were closed by the end of the second quarter of 2020. During 2020, we also recorded impairment charges of \$9 million to write-down the lease ROU assets associated with certain office space that we determined we would exit. These impairment charges are reflected in occupancy expense, net in the consolidated statement of income (loss) and were reported in the Corporate Center business segment.

In addition, during 2020, we recorded \$67 million of trading losses associated with the exit of certain derivative contracts as part of our Restructuring Plan. These losses are included in trading revenue in the consolidated statement of income (loss) and were reported in the Global Banking and Markets business segment. During 2020, as part of our Restructuring Plan, we also began to transfer interest rate derivative contracts associated with Fixed Income activities to HSBC Bank plc. These activities are being consolidated in and operated from HSBC Bank plc to better utilize HSBC Group's global scale, which allows us to record revenue as a business introducer and hold fewer assets on our balance sheet. Transfers of interest rate derivative contracts with a notional value of \$64.6 billion were completed during 2020 with the remainder of these contracts with a current notional value of up to \$92.1 billion expected to be completed during 2021. The transferred derivatives were substantially fully collateralized which resulted in an immaterial impact on our consolidated balance sheet.

Our Restructuring Plan also resulted in costs being allocated to us from HTSU which are reflected in support services from HSBC affiliates in the consolidated statement of income (loss). During 2020, we recorded \$64 million of allocated costs from HTSU, primarily severance costs as well as contract cancellation, equipment removal and other costs associated with the office space consolidation and branch exits discussed above. These costs were reported in the Corporate Center business segment.

HSBC Group Restructuring Separate from the charges related to our Restructuring Plan as detailed above, during 2020, we also recorded \$16 million of allocated costs from other HSBC affiliates related to the HSBC Group's restructuring activities, primarily support service project costs and severance costs. These costs are reflected in support services from HSBC affiliates in the consolidated statement of income (loss) and were reported in the Corporate Center business segment.

4. Trading Assets and Liabilities

Trading assets and liabilities consisted of the following:

At December 31,	2020	2019
	(in millions)	
Trading assets:		
U.S. Treasury	\$ 5,145	\$ 6,763
U.S. Government agency issued or guaranteed	—	18
U.S. Government sponsored enterprises	192	20
Asset-backed securities	143	168
Corporate and foreign bonds	7,971	10,826
Equity securities	6,043	5,693
Precious metals	4,989	1,909
Derivatives, net	2,801	3,055
Total trading assets	<u>\$ 27,284</u>	<u>\$ 28,452</u>
Trading liabilities:		
Securities sold, not yet purchased	\$ 727	\$ 1,182
Payables for precious metals	2,312	124
Derivatives, net	2,358	1,929
Total trading liabilities	<u>\$ 5,397</u>	<u>\$ 3,235</u>

At December 31, 2020 and 2019, the fair value of derivatives included in trading assets is net of \$2,763 million and \$2,538 million, respectively, relating to amounts recognized for the obligation to return cash collateral received under master netting agreements with derivative counterparties.

At December 31, 2020 and 2019, the fair value of derivatives included in trading liabilities is net of \$3,377 million and \$4,351 million, respectively, relating to amounts recognized for the right to reclaim cash collateral paid under master netting agreements with derivative counterparties.

See Note 15, "Derivative Financial Instruments," for further information on our trading derivatives and related collateral.

Dividend income on equity securities held for trading, which is recorded in interest income in the consolidated statement of income (loss), totaled \$78 million, \$37 million and \$1 million in 2020, 2019 and 2018, respectively. Trading security positions are held as economic hedges of derivative products issued to our clients.

5. Securities

Our securities available-for-sale and securities held-to-maturity portfolios consisted of the following:

December 31, 2020	Amortized Cost	Allowance for Credit Losses ⁽¹⁾	Unrealized Gains	Unrealized Losses	Fair Value
	(in millions)				
Securities available-for-sale:					
U.S. Treasury.....	\$ 16,087	\$ —	\$ 608	\$ (47)	\$ 16,648
U.S. Government sponsored enterprises:					
Mortgage-backed securities	5,986	—	280	(2)	6,264
Collateralized mortgage obligations	1,676	—	19	(2)	1,693
Direct agency obligations	1,236	—	17	—	1,253
U.S. Government agency issued or guaranteed:					
Mortgage-backed securities	6,993	—	152	—	7,145
Collateralized mortgage obligations	2,093	—	22	(11)	2,104
Direct agency obligations	296	—	5	—	301
Asset-backed securities collateralized by:					
Home equity	28	(1)	—	—	27
Other	114	—	—	(10)	104
Foreign debt securities ⁽²⁾	5,127	—	6	—	5,133
Total available-for-sale securities	<u>\$ 39,636</u>	<u>\$ (1)</u>	<u>\$ 1,109</u>	<u>\$ (72)</u>	<u>\$ 40,672</u>
Securities held-to-maturity:					
U.S. Government sponsored enterprises:					
Mortgage-backed securities	\$ 1,137	\$ —	\$ 44	\$ —	\$ 1,181
Collateralized mortgage obligations	780	—	53	—	833
U.S. Government agency issued or guaranteed:					
Mortgage-backed securities	1,947	—	76	—	2,023
Collateralized mortgage obligations	5,107	—	212	—	5,319
Obligations of U.S. states and political subdivisions	10	—	1	—	11
Asset-backed securities collateralized by residential mortgages	2	(2)	2	—	2
Total held-to-maturity securities	<u>\$ 8,983</u>	<u>\$ (2)</u>	<u>\$ 388</u>	<u>\$ —</u>	<u>\$ 9,369</u>

December 31, 2019	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in millions)			
Securities available-for-sale:				
U.S. Treasury	\$ 16,219	\$ 128	\$ (269)	\$ 16,078
U.S. Government sponsored enterprises:				
Mortgage-backed securities	3,358	57	(13)	3,402
Collateralized mortgage obligations	345	3	(1)	347
Direct agency obligations	1,382	21	—	1,403
U.S. Government agency issued or guaranteed:				
Mortgage-backed securities	10,009	29	(41)	9,997
Collateralized mortgage obligations	741	10	(4)	747
Direct agency obligations	254	6	—	260
Asset-backed securities collateralized by:				
Home equity	34	—	(2)	32
Other	108	3	—	111
Foreign debt securities ⁽²⁾	3,282	4	—	3,286
Total available-for-sale securities	<u>\$ 35,732</u>	<u>\$ 261</u>	<u>\$ (330)</u>	<u>\$ 35,663</u>
Securities held-to-maturity:				
U.S. Government sponsored enterprises:				
Mortgage-backed securities	\$ 1,632	\$ 22	\$ (1)	\$ 1,653
Collateralized mortgage obligations	1,418	40	(4)	1,454
U.S. Government agency issued or guaranteed:				
Mortgage-backed securities	3,004	17	—	3,021
Collateralized mortgage obligations	7,227	85	(22)	7,290
Obligations of U.S. states and political subdivisions	10	1	—	11
Asset-backed securities collateralized by residential mortgages	2	—	—	2
Total held-to-maturity securities	<u>\$ 13,293</u>	<u>\$ 165</u>	<u>\$ (27)</u>	<u>\$ 13,431</u>

⁽¹⁾ As discussed in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," beginning January 1, 2020, an allowance for credit losses is recognized for debt securities while, prior to January 1, 2020, debt securities were assessed for other-than-temporary impairment. At December 31, 2019, we did not consider any of our debt securities to be other-than-temporarily impaired.

⁽²⁾ Foreign debt securities represent public sector entity, bank or corporate debt.

Securities Available-for-Sale The following provides additional information about our portfolio of securities available-for-sale:

Allowance for credit losses On a quarterly basis, we perform an assessment to determine whether there have been any events or economic circumstances to indicate that a debt security available-for-sale in an unrealized loss position has suffered impairment due to credit factors. A debt security available-for-sale is considered impaired if its fair value is less than its amortized cost basis at the reporting date. If impaired, we assess whether the impairment is due to credit factors.

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 recognized and the unrealized loss is recorded as a direct write-down of the security's amortized cost basis with an offsetting entry to earnings. If we do not intend to sell the debt security or believe we will not be required to sell the debt security before the recovery of its amortized cost basis, the impairment is assessed to determine if a credit loss component exists. We use a discounted cash flow method to determine the credit loss component. In the event a credit loss exists, an allowance for credit losses is recorded in earnings for the credit loss component of the impairment while the remaining portion of the impairment attributable to factors other than credit loss is recognized, net of tax, in other comprehensive income. The amount of impairment recognized due to credit factors is limited to the excess of the amortized cost basis over the fair value of the security available-for-sale.

In determining whether a credit loss component exists, we consider a series of factors which include:

- The extent to which the fair value is 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 external rating agencies or changes to internal ratings.

At December 31, 2020 and January 1, 2020, the allowance for credit losses on securities available-for-sale was \$1 million and \$3 million, respectively.

Securities in an unrealized loss position for which no allowance for credit losses has been recognized The following table summarizes gross unrealized losses and related fair values for securities available-for-sale by major security type at December 31, 2020 classified as to the length of time the losses have existed:

December 31, 2020	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.....	5	\$ (5)	\$ 751	13	\$ (42)	\$ 1,271
U.S. Government sponsored enterprises.....	15	(3)	715	8	(1)	46
U.S. Government agency issued or guaranteed.....	13	(11)	1,482	3	—	8
Asset-backed securities.....	3	(10)	104	2	—	—
Foreign debt securities.....	6	—	766	5	—	241
Securities available-for-sale.....	<u>42</u>	<u>\$ (29)</u>	<u>\$ 3,818</u>	<u>31</u>	<u>\$ (43)</u>	<u>\$ 1,566</u>

Gross unrealized losses improved as compared with December 31, 2019 due primarily to decreasing yields on U.S. Treasury and U.S. Government agency mortgage-backed securities.

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 allowance for credit losses. The decline in fair value may be caused by, among other things, the illiquidity of the market. We have reviewed the securities in an unrealized loss position for which no allowance for credit losses has been recognized in accordance with our accounting policies, discussed further above. At December 31, 2020, we do not consider any of these securities to be impaired due to credit factors 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 them until their individual maturities. However, impairments due to credit factors may occur in future periods if the credit quality of the securities deteriorates.

For the comparative period prior to the adoption of the new accounting guidance on January 1, 2020, we have retained the following disclosure as previously reported, which included both securities available-for-sale and securities held-to-maturity. The following table summarizes gross unrealized losses and related fair values at December 31, 2019 classified as to the length of time the losses have existed:

December 31, 2019	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.....	22	\$ (61)	\$ 4,034	28	\$ (208)	\$ 4,962
U.S. Government sponsored enterprises.....	18	(8)	772	83	(6)	672
U.S. Government agency issued or guaranteed.....	27	(4)	1,961	50	(41)	2,508
Asset-backed securities.....	—	—	—	5	(2)	33
Foreign debt securities.....	11	—	1,238	5	—	292
Securities available-for-sale.....	<u>78</u>	<u>\$ (73)</u>	<u>\$ 8,005</u>	<u>171</u>	<u>\$ (257)</u>	<u>\$ 8,467</u>
Securities held-to-maturity:						
U.S. Government sponsored enterprises.....	15	\$ —	\$ 63	76	\$ (5)	\$ 522
U.S. Government agency issued or guaranteed.....	46	(3)	887	274	(19)	1,705
Obligations of U.S. states and political subdivisions.....	1	—	—	1	—	—
Securities held-to-maturity.....	<u>62</u>	<u>\$ (3)</u>	<u>\$ 950</u>	<u>351</u>	<u>\$ (24)</u>	<u>\$ 2,227</u>

Securities Held-to-Maturity The following provides additional information about our portfolio of securities held-to-maturity:

Allowance for credit losses Due to the composition of our portfolio of securities held-to-maturity, substantially all of our portfolio qualifies for the Zero Expected Credit Loss Exception and has been excluded from our lifetime ECL calculation. See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for further discussion. At both December 31, 2020 and January 1, 2020, the allowance for credit losses on securities held-to-maturity was \$2 million.

At December 31, 2020, none of our securities held-to-maturity were past due or in nonaccrual status.

Credit risk profile Securities are assigned a credit rating based on the estimated probability of default. The credit ratings are used as a credit quality indicator to monitor our securities held-to-maturity portfolio. We utilize Standard and Poor's ("S&P") as the primary source of our credit ratings. If S&P ratings are not available, ratings by Moody's and Fitch are used in that order. Investment grade includes securities with credit ratings of at least BBB- or above. The following table shows the credit risk profile of our securities held-to-maturity portfolio:

At December 31, 2020	Investment Grade	Non-Investment Grade	Total
(in millions)			
U.S. Government sponsored enterprises.....	\$ 1,917	\$ —	\$ 1,917
U.S. Government agency issued or guaranteed.....	7,054	—	7,054
Obligations of U.S. states and political subdivisions.....	10	—	10
Asset-backed securities collateralized by residential mortgages.....	2	—	2
Total securities held-to-maturity.....	<u>\$ 8,983</u>	<u>\$ —</u>	<u>\$ 8,983</u>

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,	2020	2019	2018
(in millions)			
Gross realized gains.....	\$ 174	\$ 148	\$ 54
Gross realized losses.....	(37)	(60)	(30)
Net realized gains.....	<u>\$ 137</u>	<u>\$ 88</u>	<u>\$ 24</u>

As discussed in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," we adopted new accounting guidance during the second quarter of 2020 that allows entities to make a one-time election to sell and/or transfer held-to-maturity debt securities that reference a rate affected by reference rate reform (e.g., LIBOR). During the second quarter of 2020, we elected to sell all of our LIBOR-linked variable rate held-to-maturity securities maturing beyond 2021, consisting of U.S. Government agency and U.S. Government sponsored securities with a total carrying value of \$340 million, and recognized a gain of less than \$1 million. These sales did not affect the held-to-maturity accounting treatment based on our intent and ability to hold our remaining held-to-maturity portfolio until maturity.

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, 2020 by contractual maturity. Expected maturities differ from contractual maturities because borrowers have the right to prepay obligations without prepayment penalties in certain cases. The table below also reflects the distribution of maturities of debt securities held at December 31, 2020, together with the approximate 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, 2020.

	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	\$ 1,026	3.27 %	\$ 4,777	1.00 %	\$ 6,090	1.39 %	\$ 4,194	2.00 %
U.S. Government sponsored enterprises	30	2.78	803	2.12	3,098	2.43	4,967	1.78
U.S. Government agency issued or guaranteed	—	—	97	1.81	1	7.87	9,284	2.02
Asset-backed securities	—	—	—	—	61	4.90	81	3.14
Foreign debt securities	3,796	.24	1,331	.93	—	—	—	—
Total amortized cost	<u>\$ 4,852</u>	.90 %	<u>\$ 7,008</u>	1.12 %	<u>\$ 9,250</u>	1.76 %	<u>\$ 18,526</u>	1.96 %
Total fair value	<u>\$ 4,879</u>		<u>\$ 7,161</u>		<u>\$ 9,709</u>		<u>\$ 18,923</u>	
Held-to-maturity:								
U.S. Government sponsored enterprises	\$ 110	2.49 %	\$ 258	2.72 %	\$ 436	2.25 %	\$ 1,113	3.25 %
U.S. Government agency issued or guaranteed	—	—	9	3.79	13	4.51	7,032	2.57
Obligations of U.S. states and political subdivisions	1	2.69	6	3.20	3	4.93	—	—
Asset-backed securities	—	—	—	—	—	—	2	5.95
Total amortized cost	<u>\$ 111</u>	2.49 %	<u>\$ 273</u>	2.76 %	<u>\$ 452</u>	2.34 %	<u>\$ 8,147</u>	2.67 %
Total fair value	<u>\$ 111</u>		<u>\$ 283</u>		<u>\$ 467</u>		<u>\$ 8,508</u>	

Equity Securities Equity securities that are not classified as trading and are included in other assets consisted of the following:

At December 31,	2020	2019
	(in millions)	
Equity securities carried at fair value	\$ 284	\$ 283
Equity securities without readily determinable fair values	14	12

On a quarterly basis, we perform an assessment to determine whether any equity securities without readily determinable fair values are impaired. In the event an equity security is deemed impaired, the security is written down to fair value with impairment recorded in earnings. During 2020, we determined that certain equity securities without readily determinable fair values were impaired and, as a result, we recorded an impairment loss of \$2 million as a component of other income in the consolidated statement of income (loss). During 2019 and 2018, none of our equity securities without readily determinable fair values were determined to be impaired.

Also included in other assets were investments in Federal Home Loan Bank ("FHLB") stock and Federal Reserve Bank stock of \$259 million and \$559 million, respectively, at December 31, 2020 and \$110 million and \$559 million, respectively, at December 31, 2019.

6. Loans

Loans consisted of the following:

At December 31,	2020	2019
	(in millions)	
Commercial loans:		
Real estate, including construction	\$ 10,464	\$ 11,501
Business and corporate banking ⁽¹⁾	13,479	13,479
Global banking ⁽²⁾	13,519	17,915
Other commercial:		
Affiliates ⁽³⁾	1,100	2,343
Other	3,037	2,973
Total other commercial	4,137	5,316
Total commercial	41,599	48,211
Consumer loans:		
Residential mortgages	18,377	17,801
Home equity mortgages	727	853
Credit cards	1,066	1,405
Other consumer ⁽⁴⁾	319	283
Total consumer	20,489	20,342
Total loans	\$ 62,088	\$ 68,553

⁽¹⁾ Includes loans funded under the PPP which totaled \$1,043 million at December 31, 2020. PPP loans are fully guaranteed by the Small Business Administration, if certain conditions are met.

⁽²⁾ 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.

⁽³⁾ See Note 23, "Related Party Transactions," for additional information regarding loans to HSBC affiliates.

⁽⁴⁾ Includes certain student loans that we have elected to designate under the fair value option and are therefore carried at fair value, which totaled \$32 million at December 31, 2020. See Note 16, "Fair Value Option," for further details.

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, 2020 or 2019.

Net deferred origination costs totaled \$57 million and \$79 million at December 31, 2020 and 2019, respectively. At December 31, 2020 and 2019, we had a net unamortized premium on our loans of \$9 million and \$3 million, respectively.

COVID-19 Loan Forbearance Initiatives We have implemented various loan modification payment deferral programs to provide borrowers relief from the economic impacts of the COVID-19 pandemic. Substantially all of the loans under these programs are not classified as TDR Loans at December 31, 2020 due to our election to suspend TDR Loan classification under the CARES Act or their short-term nature as discussed under the Interagency Statement. In addition, under the Interagency Statement, for COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period and, if the loan was accruing at the time the relief was granted, the loan will generally not be placed on nonaccrual status as long as the borrower utilizes a payment deferral of six months or less. For consumer mortgage loans, when a borrower utilizes a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and, if the loan does not meet the criteria in the CARES Act, assessed for TDR Loan classification. We have not modified our commercial loan nonaccrual policies as a result of this guidance. See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for further discussion.

Aging Analysis of Past Due Loans The following table summarizes the past due status of our loans at December 31, 2020 and 2019. 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. For COVID-19 related loan modifications in the form of a payment deferral, the borrower's past due status will not be affected during the deferral period.

	Past Due		Total Past Due	Current ⁽¹⁾	Total Loans
	30 - 89 Days	90+ Days	30 Days or More		
(in millions)					
At December 31, 2020					
Commercial loans:					
Real estate, including construction.....	\$ 78	\$ —	\$ 78	\$ 10,386	\$ 10,464
Business and corporate banking.....	126	19	145	13,334	13,479
Global banking.....	—	60	60	13,459	13,519
Other commercial.....	24	—	24	4,113	4,137
Total commercial.....	228	79	307	41,292	41,599
Consumer loans:					
Residential mortgages.....	435	311	746	17,631	18,377
Home equity mortgages.....	11	22	33	694	727
Credit cards.....	23	19	42	1,024	1,066
Other consumer.....	7	6	13	306	319
Total consumer.....	476	358	834	19,655	20,489
Total loans.....	\$ 704	\$ 437	\$ 1,141	\$ 60,947	\$ 62,088
At December 31, 2019					
Commercial loans:					
Real estate, including construction.....	\$ 7	\$ 1	\$ 8	\$ 11,493	\$ 11,501
Business and corporate banking.....	60	35	95	13,384	13,479
Global banking.....	—	—	—	17,915	17,915
Other commercial.....	22	—	22	5,294	5,316
Total commercial.....	89	36	125	48,086	48,211
Consumer loans:					
Residential mortgages.....	342	272	614	17,187	17,801
Home equity mortgages.....	10	24	34	819	853
Credit cards.....	24	24	48	1,357	1,405
Other consumer.....	5	5	10	273	283
Total consumer.....	381	325	706	19,636	20,342
Total loans.....	\$ 470	\$ 361	\$ 831	\$ 67,722	\$ 68,553

⁽¹⁾ Loans less than 30 days past due are presented as current.

Contractual Maturities Contractual maturities of loans outstanding at December 31, 2020 were as follows:

	2021	2022	2023	2024	2025	Thereafter	Total
	(in millions)						
Commercial loans:							
Real estate, including construction	\$ 5,791	\$ 2,452	\$ 1,256	\$ 584	\$ 167	\$ 214	\$ 10,464
Business and corporate banking	7,460	3,158	1,617	753	215	276	13,479
Global banking	7,482	3,167	1,622	755	215	278	13,519
Other commercial	2,290	969	496	231	66	85	4,137
Consumer loans:							
Residential mortgages	563	468	486	501	500	15,859	18,377
Home equity mortgages ⁽¹⁾	322	154	93	57	37	64	727
Credit cards ⁽²⁾	—	1,066	—	—	—	—	1,066
Other consumer	252	59	1	3	2	2	319
Total	<u>\$ 24,160</u>	<u>\$ 11,493</u>	<u>\$ 5,571</u>	<u>\$ 2,884</u>	<u>\$ 1,202</u>	<u>\$ 16,778</u>	<u>\$ 62,088</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 an average estimate 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, 2020 due after one year by repricing characteristic:

December 31, 2020	After One But Within Five Years	After Five Years
	(in millions)	
Receivables at predetermined interest rates	\$ 1,802	\$ 5,233
Receivables at floating or adjustable rates	19,348	11,545
Total	<u>\$ 21,150</u>	<u>\$ 16,778</u>

Nonperforming Loans Nonperforming loans, including nonaccrual loans and accruing loans contractually 90 days or more past due, consisted of the following:

	Nonaccrual Loans	Accruing Loans Contractually Past Due 90 Days or More	Nonaccrual Loans With No Allowance For Credit Losses
	(in millions)		
At December 31, 2020			
Commercial:			
Real estate, including construction.....	\$ 44	\$ —	\$ 31
Business and corporate banking.....	163	—	1
Global banking.....	337	—	93
Total commercial.....	544	—	125
Consumer:			
Residential mortgages ⁽¹⁾⁽²⁾⁽³⁾	1,079	—	241
Home equity mortgages ⁽¹⁾⁽²⁾	63	—	34
Credit cards.....	—	19	—
Other consumer.....	—	2	—
Total consumer.....	1,142	21	275
Total nonperforming loans.....	\$ 1,686	\$ 21	\$ 400
At December 31, 2019			
Commercial:			
Real estate, including construction.....	\$ 6	\$ —	\$ 3
Business and corporate banking.....	82	1	19
Global banking.....	149	—	117
Total commercial.....	237	1	139
Consumer:			
Residential mortgages ⁽¹⁾⁽²⁾⁽³⁾	381	—	257
Home equity mortgages ⁽¹⁾⁽²⁾	46	—	32
Credit cards.....	—	24	—
Other consumer.....	—	5	—
Total consumer.....	427	29	289
Total nonperforming loans.....	\$ 664	\$ 30	\$ 428

⁽¹⁾ At December 31, 2020 and 2019, nonaccrual consumer mortgage loans include \$375 million and \$289 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell. The decrease in nonaccrual consumer mortgage loans with no allowance for credit losses at December 31, 2020 reflects the impact of adopting new accounting guidance which requires expected recoveries related to subsequent increases in the fair value of collateral for collateral-dependent loans to be recognized in the allowance for credit losses beginning January 1, 2020. See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for additional discussion.

⁽²⁾ Nonaccrual consumer mortgage loans 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. At December 31, 2020, nonaccrual consumer mortgage loans also include \$590 million of loans under COVID-19 related payment deferral programs where the borrowers utilized a payment deferral of more than six months and, as a result, have been placed on nonaccrual status.

⁽³⁾ Nonaccrual consumer mortgage loans for all periods does not include guaranteed loans purchased from the Government National Mortgage Association. Repayment of these loans is 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,	2020	2019	2018
	(in millions)		
Interest income that would have been recorded if the nonaccrual loans had been current in accordance with contractual terms during the period	\$ 43	\$ 35	\$ 46
Interest income that was recorded on nonaccrual loans and included in interest income during the period	12	15	31

Collateral-Dependent Loans Loans for which the repayment is expected to be provided substantially through the operation or sale of the collateral and the borrower is experiencing financial difficulty are considered to be collateral-dependent loans. Collateral can have a significant financial effect in mitigating our exposure to credit risk.

Collateral-dependent residential mortgage loans are carried at the lower of amortized cost or fair value of the collateral less costs to sell, with any excess in the carrying amount of the loan 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. Collateral values are based on 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 incorporated as necessary. At December 31, 2020 and 2019, we had collateral-dependent residential mortgage loans totaling \$817 million and \$803 million, respectively.

For collateral-dependent commercial loans, the allowance for expected credit losses is individually assessed based on the fair value of the collateral. Various types of collateral are used, including real estate, inventory, equipment, accounts receivable, securities and cash, among others. For commercial real estate loans, collateral values are generally based on appraisals which are updated based on management judgment under the specific circumstances on a case-by-case basis. In situations where an appraisal is not used, borrower-specific factors such as operating results, cash flows and debt service ratios are reviewed along with relevant market data of comparable properties in order to create a 10-year cash flow model to be discounted at appropriate rates to present value. The collateral value for securities is based on their quoted market prices or broker quotes. The collateral value for other financial assets is generally based on appraisals or is estimated using a discounted cash flow analysis. Commercial loan balances are charged off at the time all or a portion of the balance is deemed uncollectible. At December 31, 2020 and 2019, we had collateral-dependent commercial loans totaling \$456 million and \$227 million, respectively.

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. 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 the loan is upgraded, it is possible the loan will no longer be reported as a TDR Loan at the earliest one year after the restructuring. During 2020 and 2018, there were no commercial loans removed from TDR Loan classification. During 2019, a \$12 million commercial loan met this criteria and was removed from TDR Loan classification.

As previously discussed, we have implemented various loan modification payment deferral programs to provide borrowers relief from the economic impacts of COVID-19. Substantially all of the loans under these programs are not classified as TDR Loans at December 31, 2020 due to our election to suspend TDR Loan classification under the CARES Act or their short-term nature as discussed under the Interagency Statement.

The following table summarizes our TDR Loans at December 31, 2020 and 2019:

At December 31,	2020	2019
	(in millions)	
Commercial loans:		
Business and corporate banking	\$ 94	\$ 36
Global banking	74	68
Total commercial ⁽¹⁾⁽²⁾	168	104
Consumer loans:		
Residential mortgages ⁽³⁾⁽⁴⁾	582	580
Home equity mortgages ⁽³⁾⁽⁴⁾	31	32
Credit cards	5	4
Total consumer	618	616
Total TDR Loans ⁽⁵⁾	\$ 786	\$ 720

⁽¹⁾ Additional commitments to lend to commercial borrowers whose loans have been modified in TDR Loans totaled \$107 million and \$222 million at December 31, 2020 and 2019, respectively.

⁽²⁾ Not included in the table at December 31, 2020 are \$924 million of commercial loans that were exempted from TDR assessment due to our CARES Act election.

⁽³⁾ At December 31, 2020 and 2019, the carrying value of consumer mortgage TDR Loans includes \$487 million and \$557 million, respectively, of loans that are recorded at the lower of amortized cost or fair value of the collateral less cost to sell.

⁽⁴⁾ Not included in the table at December 31, 2020 are \$736 million of consumer mortgage loans under COVID-19 related payment deferral programs where the borrowers were provided with extended payment deferral relief of more than six months that were exempted from TDR assessment due to our CARES Act election.

⁽⁵⁾ At December 31, 2020 and 2019, the carrying value of TDR Loans includes \$463 million and \$230 million, respectively, of loans which are classified as nonaccrual.

The following table presents information about loans which were modified during 2020, 2019 and 2018 and as a result of this action became classified as TDR Loans:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Commercial loans:			
Business and corporate banking	\$ 95	\$ —	\$ 6
Global banking	44	—	—
Total commercial	139	—	6
Consumer loans:			
Residential mortgages	78	8	26
Home equity mortgages	3	1	5
Credit cards	4	3	4
Total consumer	85	12	35
Total	\$ 224	\$ 12	\$ 41

The weighted-average contractual rate reduction for consumer loans which became classified as TDR Loans during 2020, 2019 and 2018 was 1.75 percent, 2.18 percent and 1.93 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 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, 2020, 2019 and 2018:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Consumer loans:			
Residential mortgages	\$ 5	\$ 3	\$ 8
Home equity mortgages	—	—	2
Total consumer	\$ 5	\$ 3	\$ 10

During the years ended December 31, 2020, 2019 and 2018, 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.

Commercial Loan Credit Quality Indicators The following credit quality indicators are utilized to monitor 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 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 nonaccrual status.

The following table summarizes our criticized commercial loans, including a disaggregation of the loans by year of origination as of December 31, 2020 and in total as of December 31, 2019:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total at Dec. 31, 2020	Total at Dec. 31, 2019
	(in millions)									
Real estate, including construction:										
Special mention	\$ —	\$ 306	\$ 115	\$ 171	\$ 85	\$ 437	\$ —	\$ —	\$ 1,114	\$ 516
Substandard	—	186	—	169	—	86	—	—	441	203
Doubtful	—	—	—	—	—	—	—	—	—	—
Total real estate, including construction	—	492	115	340	85	523	—	—	1,555	719
Business and corporate banking:										
Special mention	17	71	43	32	10	390	600	48	1,211	467
Substandard	1	44	25	23	31	181	435	1	741	386
Doubtful	—	—	—	—	—	41	57	—	98	23
Total business and corporate banking	18	115	68	55	41	612	1,092	49	2,050	876
Global banking:										
Special mention	—	—	—	—	—	142	98	—	240	184
Substandard	—	—	48	—	—	131	477	—	656	196
Doubtful	—	—	—	—	—	82	160	—	242	15
Total global banking	—	—	48	—	—	355	735	—	1,138	395
Other commercial:										
Special mention	—	—	—	—	—	44	40	—	84	11
Substandard	—	—	—	—	—	70	—	—	70	—
Doubtful	—	—	—	—	—	—	—	—	—	—
Total other commercial	—	—	—	—	—	114	40	—	154	11
Total commercial:										
Special mention	17	377	158	203	95	1,013	738	48	2,649	1,178
Substandard	1	230	73	192	31	468	912	1	1,908	785
Doubtful	—	—	—	—	—	123	217	—	340	38
Total commercial	<u>\$ 18</u>	<u>\$ 607</u>	<u>\$ 231</u>	<u>\$ 395</u>	<u>\$ 126</u>	<u>\$ 1,604</u>	<u>\$ 1,867</u>	<u>\$ 49</u>	<u>\$ 4,897</u>	<u>\$ 2,001</u>

Nonperforming The following table summarizes the nonperforming status of our commercial loan portfolio, including a disaggregation of the loans by year of origination as of December 31, 2020 and in total as of December 31, 2019:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total at Dec. 31, 2020	Total at Dec. 31, 2019
	(in millions)									
Real estate, including construction:										
Performing loans.....	\$ 545	\$ 3,775	\$ 2,775	\$ 1,368	\$ 264	\$ 1,594	\$ 79	\$ 20	\$ 10,420	\$ 11,495
Nonaccrual loans.....	—	—	24	—	—	20	—	—	44	6
Accruing loans contractually past due 90 days or more.....	—	—	—	—	—	—	—	—	—	—
Total real estate, including construction.....	545	3,775	2,799	1,368	264	1,614	79	20	10,464	11,501
Business and corporate banking:										
Performing loans.....	1,079	606	253	275	151	3,485	7,145	322	13,316	13,396
Nonaccrual loans.....	1	15	12	60	1	3	71	—	163	82
Accruing loans contractually past due 90 days or more.....	—	—	—	—	—	—	—	—	—	1
Total business and corporate banking.....	1,080	621	265	335	152	3,488	7,216	322	13,479	13,479
Global banking:										
Performing loans.....	507	495	190	231	104	6,023	5,632	—	13,182	17,766
Nonaccrual loans.....	—	—	—	—	—	127	210	—	337	149
Accruing loans contractually past due 90 days or more.....	—	—	—	—	—	—	—	—	—	—
Total global banking.....	507	495	190	231	104	6,150	5,842	—	13,519	17,915
Other commercial:										
Performing loans.....	378	431	215	105	119	630	2,259	—	4,137	5,316
Nonaccrual loans.....	—	—	—	—	—	—	—	—	—	—
Accruing loans contractually past due 90 days or more.....	—	—	—	—	—	—	—	—	—	—
Total other commercial.....	378	431	215	105	119	630	2,259	—	4,137	5,316
Total commercial:										
Performing loans.....	2,509	5,307	3,433	1,979	638	11,732	15,115	342	41,055	47,973
Nonaccrual loans.....	1	15	36	60	1	150	281	—	544	237
Accruing loans contractually past due 90 days or more.....	—	—	—	—	—	—	—	—	—	1
Total commercial.....	<u>\$ 2,510</u>	<u>\$ 5,322</u>	<u>\$ 3,469</u>	<u>\$ 2,039</u>	<u>\$ 639</u>	<u>\$ 11,882</u>	<u>\$ 15,396</u>	<u>\$ 342</u>	<u>\$ 41,599</u>	<u>\$ 48,211</u>

Credit risk profile Commercial loans are assigned a credit rating based on the estimated probability of default. Investment grade includes loans with credit ratings of at least BBB- or above or the equivalent based on our internal credit rating system. The following table shows the credit risk profile of our commercial loan portfolio, including a disaggregation of the loans by year of origination as of December 31, 2020 and in total as of December 31, 2019:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total at Dec. 31, 2020	Total at Dec. 31, 2019
	(in millions)									
Real estate, including construction:										
Investment grade.....	\$ 339	\$ 1,123	\$ 817	\$ 318	\$ 179	\$ 640	\$ 6	\$ —	\$ 3,422	\$ 6,332
Non-investment grade.....	206	2,652	1,982	1,050	85	974	73	20	7,042	5,169
Total real estate, including construction.....	545	3,775	2,799	1,368	264	1,614	79	20	10,464	11,501
Business and corporate banking:										
Investment grade.....	342	147	37	34	23	1,486	2,499	47	4,615	6,029
Non-investment grade.....	738	474	228	301	129	2,002	4,717	275	8,864	7,450
Total business and corporate banking.....	1,080	621	265	335	152	3,488	7,216	322	13,479	13,479
Global banking:										
Investment grade.....	464	477	46	231	30	4,618	4,281	—	10,147	12,981
Non-investment grade.....	43	18	144	—	74	1,532	1,561	—	3,372	4,934
Total global banking.....	507	495	190	231	104	6,150	5,842	—	13,519	17,915
Other commercial:										
Investment grade.....	372	163	117	105	116	525	1,932	—	3,330	4,649
Non-investment grade.....	6	268	98	—	3	105	327	—	807	667
Total other commercial.....	378	431	215	105	119	630	2,259	—	4,137	5,316
Total commercial:										
Investment grade.....	1,517	1,910	1,017	688	348	7,269	8,718	47	21,514	29,991
Non-investment grade.....	993	3,412	2,452	1,351	291	4,613	6,678	295	20,085	18,220
Total commercial.....	<u>\$ 2,510</u>	<u>\$ 5,322</u>	<u>\$ 3,469</u>	<u>\$ 2,039</u>	<u>\$ 639</u>	<u>\$ 11,882</u>	<u>\$ 15,396</u>	<u>\$ 342</u>	<u>\$ 41,599</u>	<u>\$ 48,211</u>

Consumer Loan Credit Quality Indicators The following credit quality indicators are utilized to monitor our consumer loan portfolio:

Delinquency The following table summarizes dollars of two-months-and-over contractual delinquency for our consumer loan portfolio, including a disaggregation of the loans by year of origination as of December 31, 2020 and in total as of December 31, 2019:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Total at Dec. 31, 2020	Total at Dec. 31, 2019
	(in millions)								
Residential mortgages ⁽¹⁾⁽²⁾	\$ 3	\$ 15	\$ 13	\$ 25	\$ 19	\$ 329	\$ —	\$ 404	\$ 350
Home equity mortgages ⁽¹⁾⁽²⁾	—	—	—	—	—	25	—	25	25
Credit cards							28	28	34
Other consumer	1	1	—	—	—	4	2	8	7
Total consumer	<u>\$ 4</u>	<u>\$ 16</u>	<u>\$ 13</u>	<u>\$ 25</u>	<u>\$ 19</u>	<u>\$ 358</u>	<u>\$ 30</u>	<u>\$ 465</u>	<u>\$ 416</u>

⁽¹⁾ At December 31, 2020 and 2019, consumer mortgage loan delinquency includes \$281 million and \$256 million, respectively, of loans that are carried at the lower of amortized cost or fair value of the collateral less cost to sell.

⁽²⁾ At December 31, 2020 and 2019, consumer mortgage loans include \$109 million and \$142 million, respectively, of loans that were in the process of foreclosure.

Nonperforming The following table summarizes the nonperforming status of our consumer loan portfolio, including a disaggregation of the loans by year of origination as of December 31, 2020 and in total as of December 31, 2019:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Total at Dec. 31, 2020	Total at Dec. 31, 2019
(in millions)									
Residential mortgages:									
Performing loans	\$ 4,491	\$ 2,369	\$ 1,338	\$ 1,572	\$ 1,852	\$ 5,676	\$ —	\$ 17,298	\$ 17,420
Nonaccrual loans	38	107	93	86	78	677	—	1,079	381
Total residential mortgages	4,529	2,476	1,431	1,658	1,930	6,353	—	18,377	17,801
Home equity mortgages:									
Performing loans	50	51	33	34	45	451	—	664	807
Nonaccrual loans	—	—	1	1	2	59	—	63	46
Total home equity mortgages	50	51	34	35	47	510	—	727	853
Credit cards:									
Performing loans	—	—	—	—	—	—	1,047	1,047	1,381
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	19	19	24
Total credit cards	—	—	—	—	—	—	1,066	1,066	1,405
Other consumer:									
Performing loans	87	39	—	1	8	128	54	317	278
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	2	2	5
Total other consumer	87	39	—	1	8	128	56	319	283
Total consumer:									
Performing loans	4,628	2,459	1,371	1,607	1,905	6,255	1,101	19,326	19,886
Nonaccrual loans	38	107	94	87	80	736	—	1,142	427
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	21	21	29
Total consumer	\$ 4,666	\$ 2,566	\$ 1,465	\$ 1,694	\$ 1,985	\$ 6,991	\$ 1,122	\$ 20,489	\$ 20,342

Troubled debt restructurings The following table summarizes TDR Loans in our consumer loan portfolio, including a disaggregation of the loans by year of origination as of December 31, 2020 and in total as of December 31, 2019:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Total at Dec. 31, 2020	Total at Dec. 31, 2019
(in millions)									
Residential mortgages	\$ 3	\$ 5	\$ 6	\$ 3	\$ 2	\$ 563	\$ —	\$ 582	\$ 580
Home equity mortgages	—	—	—	—	—	31	—	31	32
Credit cards	—	—	—	—	—	—	5	5	4
Total consumer	\$ 3	\$ 5	\$ 6	\$ 3	\$ 2	\$ 594	\$ 5	\$ 618	\$ 616

Concentration of Credit Risk At December 31, 2020 and 2019, our loan portfolios included interest-only residential mortgage and home equity mortgage loans totaling \$3,597 million and \$3,362 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.

7. Allowance for Credit Losses

As discussed further in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," beginning January 1, 2020, an allowance for credit losses is recognized based on lifetime ECL for loans, securities held-to-maturity and certain other financial assets measured at amortized cost, and an allowance for credit losses is also recognized for securities available-for-sale. Prior to January 1, 2020, an allowance for credit losses was recognized based on probable incurred losses for loans only while debt securities were assessed for other-than-temporary impairment. In addition, beginning January 1, 2020, the liability for off-balance sheet credit exposures is recognized based on lifetime ECL while, prior to January 1, 2020, it was recognized based on probable incurred losses. The new guidance also requires inclusion of expected recoveries of amounts previously written off, limited to the cumulative amount of prior write-offs, when estimating the allowance for credit losses for in scope financial assets (including collateral-dependent assets). Prior to January 1, 2020, these expected recoveries were not recognized.

Comparative information at January 1, 2020, reflecting the adoption of the new accounting guidance has been included in the tables below where applicable. Credit information at December 31, 2019 and 2018, which is not comparable to 2020 as it does not reflect the adoption of the new accounting guidance, has been retained as previously reported.

Description of Consensus Economic Scenarios Adopted on January 1, 2020 The following discussion summarizes the Central, Upside and Downside scenarios at January 1, 2020. The economic assumptions described in this section have been formed specifically for the purpose of calculating ECL. While macroeconomic assumptions have changed significantly during 2020, the following scenarios are being provided to explain the impact of adopting the Consensus Economic Scenarios on January 1, 2020.

The Central scenario at January 1, 2020 - In the Central scenario, growth was expected to slow down in the United States as the benefits from tax reform waned in 2020. Inflation was forecast to remain around the target of 2 percent, while the unemployment rate was expected to stay at a low level in 2020 before gradually rising towards its long-term trend. The expected paths for FRB policy rates implied three rate cuts in 2020.

The Upside scenario at January 1, 2020 - In the Upside scenario, the economic forecast distribution of risks (as captured by consensus probability distribution of GDP growth) showed a marginal increase in upside risk for the United States in the reasonable and supportable period. Increased confidence, positive resolution of trade disputes and expansionary fiscal policy supported the Upside scenario. In this scenario, GDP growth rose to 4.0 percent in 2020, which drove inflation higher and unemployment to fall further than in the Central scenario. Stronger GDP growth and domestic demand supported stronger equity and housing prices in this scenario.

The Downside scenario at January 1, 2020 - In the Downside scenario, the economic forecast distribution of risks (as captured by consensus probability distribution of GDP growth) showed a marginal increase in the downside risks for the United States in the reasonable and supportable period. In this scenario, the U.S. economy was expected to contract in 2020 before slowly reverting back to the long-run trend. The slowdown in growth was consistent with an escalation of trade tensions with China and other trading partners in this scenario. Additional tariffs and non-tariff barriers on trade were expected to lead to the benefits from corporate tax cuts being offset by a sharp rise in costs for businesses and consumers and a loss of confidence in this scenario, while lower business investment and confidence were expected to affect hiring, with an impact on the unemployment rate and earnings expectations. In the downside scenario, policy interest rates were expected to be cut back below 0.5 percent in order to support growth and inflation.

In conjunction with adopting the new accounting guidance, we performed a review of the methodology used to estimate lifetime ECL and determined that risk associated with the non-homogeneous nature of our commercial loan portfolio and the potential impact of large loan defaults was not fully captured in the models. As a result, we recorded a management judgment allowance for risk factors associated with large loan exposure in our commercial loan portfolio at January 1, 2020.

Description of Economic Scenarios at December 31, 2020 and Other Changes During the Year Ended December 31, 2020

During 2020, economic conditions deteriorated caused by the COVID-19 pandemic and resulted in significant economic uncertainty. As a result, in addition to our three Consensus Economic Scenarios, beginning in the second quarter of 2020 we developed and utilized a fourth scenario for estimating lifetime ECL, referred to as the "Alternative Downside scenario", to reflect the possibility that the adverse impact associated with the deterioration in economic conditions could manifest itself over a far longer period of time. At December 31, 2020, each of the four scenarios were assigned weightings with the majority of the weighting placed on the Central scenario, the second most weighting placed on the Downside scenario and lower equal weights placed on the Upside and Alternative Downside scenarios. This weighting was deemed appropriate for the estimation of lifetime ECL under current conditions. The following discussion summarizes the Central, Upside, Downside and Alternative Downside scenarios at December 31, 2020. The economic assumptions described in this section have been formed specifically for the purpose of calculating ECL.

In the Central scenario, GDP restarts the expansion in 2021 under the assumption that new COVID-19 infections slow down as more people are vaccinated. With the economic recovery, the unemployment rate continues on its downward trend, while low interest rates and demand from people who need more space drives the residential housing market to carry its growth momentum into 2021. In the financial markets, the federal funds rate remains at the lowest level for an extended period of time and the 10-year U.S. Treasury yield slowly climbs.

In the Upside scenario, the economy is expected to grow at a faster pace than in the Central scenario. As a result, the unemployment rate falls faster than in the Central scenario and, with people returning to their normal way of life, the commercial real estate index starts to recover in the second half of 2021. In this scenario, the equity price index climbs with strong momentum, but the 10-year U.S. Treasury yield stays at a low level during the next two years.

In the Downside scenario, the re-opening of the economy is delayed due to a slow vaccine rollout and the economic recovery is quite anemic, with the unemployment rate reversing its downward trend and remaining at a high level. In this scenario, the residential housing market slowly loses its momentum due to weakness in the labor market and the commercial real estate market suffers a heavier blow than the residential housing market. The equity price index in this scenario loses about half of its value by the end of 2022, driven by disappointing corporate earnings, and the FRB keeps its policy rate at the lowest level for the next two years.

In the Alternative Downside scenario, the U.S. economy stays in recession in both 2021 and 2022 under the assumption that the world does not recover from the pandemic in the next two years. An extended period of economic contraction and stagnation keeps the unemployment rate at a very high level, which pressures residential housing prices to fall further, while at the same time, contracting corporate activities pushes the commercial real estate market into a severe downturn. In this scenario, volatility in the financial markets remains extremely high in 2021, widening corporate credit spreads substantially, and flight to safe haven assets pushes the 10-year U.S. Treasury yield to negative territory in 2022.

The following table presents the forecasted key macroeconomic variables in our Central scenarios used for estimating lifetime ECL at December 31, 2020 and January 1, 2020:

	For the Quarter Ended	
	June 30, 2021	December 31, 2021
Unemployment rate (quarterly average):		
Forecast at December 31, 2020	6.8 %	6.2 %
Forecast at January 1, 2020	3.9	4.0
GDP growth rate (year-over-year):		
Forecast at December 31, 2020	9.2 ⁽¹⁾	5.3
Forecast at January 1, 2020	1.9	2.0

⁽¹⁾ Represents the change in forecasted GDP for the quarter ended June 30, 2021 relative to the GDP for the quarter ended June 30, 2020. The GDP year-over-year growth rate for the quarter ended June 30, 2020 was a decline of 9.0 percent.

In addition to the updates to the economic scenarios, we increased the management judgment allowance on our commercial loan portfolio for risk factors associated with higher risk client and industry exposures, large loan exposures and economic uncertainty relating to the impact of COVID-19 that are not fully captured in the models. We also increased the management judgment allowance on our consumer loan portfolio for risk factors associated with economic uncertainty relating to the impact of COVID-19 and forbearance accounts that are not fully captured in the models.

While we believe that the assumptions used in our credit loss models are reasonable within the parameters for which the models have been built and calibrated to operate, the severe projections of macro-economic variables during the current COVID-19 pandemic represent events outside the parameters for which the models have been built. As a result, adjustments to model outputs to reflect consideration of management judgment are used with stringent governance in place to ensure an appropriate lifetime ECL estimate.

The circumstances around the COVID-19 pandemic are evolving and will continue to impact our business and our allowance for credit losses in future periods. The details of how various U.S. Government actions will impact our customers and therefore the impact on our allowance for credit losses remains highly uncertain. We will continue to monitor the COVID-19 situation closely and will continue to adapt our Consensus Economic Scenarios approach as necessary to reflect management's current view of forecasted economic conditions.

Allowance for Credit Losses / Liability for Off-Balance Sheet Credit Exposures The following table summarizes our allowance for credit losses and the liability for off-balance sheet credit exposures:

	December 31, 2020	January 1, 2020	December 31, 2019
	(in millions)		
Allowance for credit losses:			
Loans	\$ 1,015	\$ 467	\$ 637
Securities held-to-maturity ⁽¹⁾	2	2	—
Other financial assets measured at amortized cost ⁽²⁾	2	3	—
Securities available-for-sale ⁽¹⁾	1	3	—
Total allowance for credit losses	<u>\$ 1,020</u>	<u>\$ 475</u>	<u>\$ 637</u>
Liability for off-balance sheet credit exposures	\$ 237	\$ 158	\$ 104

⁽¹⁾ See Note 5, "Securities," for additional information regarding the allowance for credit losses associated with our security portfolios.

⁽²⁾ Primarily includes accrued interest receivables and customer acceptances.

The following table summarizes the changes in the allowance for credit losses on loans by product or line of business during the years ended December 31, 2020, 2019 and 2018:

	Commercial Loans				Consumer Loans				
	Real Estate, including Construction	Business and Corporate Banking	Global Banking	Other Comm'l	Residential Mortgages	Home Equity Mortgages	Credit Cards	Other Consumer	Total Loans
	(in millions)								
Year Ended December 31, 2020									
Allowance for credit losses – beginning of period	\$ 153	\$ 239	\$ 106	\$ 9	\$ 12	\$ 6	\$ 105	\$ 7	\$ 637
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses	(112)	(60)	51	(5)	(86)	7	32	3	(170)
Allowance for credit losses – beginning of period, adjusted	41	179	157	4	(74)	13	137	10	467
Provision charged (credited) to income	116	274	149	2	55	6	107	27	736
Charge-offs	(12)	(90)	(20)	—	(2)	(3)	(90)	(11)	(228)
Recoveries	—	12	1	1	12	6	7	1	40
Net (charge-offs) recoveries	(12)	(78)	(19)	1	10	3	(83)	(10)	(188)
Allowance for credit losses – end of period	<u>\$ 145</u>	<u>\$ 375</u>	<u>\$ 287</u>	<u>\$ 7</u>	<u>\$ (9)</u>	<u>\$ 22</u>	<u>\$ 161</u>	<u>\$ 27</u>	<u>\$ 1,015</u>
Year Ended December 31, 2019									
Allowance for credit losses – beginning of period	\$ 116	\$ 219	\$ 108	\$ 15	\$ 13	\$ 7	\$ 58	\$ 5	\$ 541
Provision charged (credited) to income	37	62	1	(6)	(3)	(2)	101	5	195
Charge-offs	—	(45)	(3)	—	(8)	(4)	(60)	(5)	(125)
Recoveries	—	3	—	—	10	5	6	2	26
Net (charge-offs) recoveries	—	(42)	(3)	—	2	1	(54)	(3)	(99)
Allowance for credit losses – end of period	<u>\$ 153</u>	<u>\$ 239</u>	<u>\$ 106</u>	<u>\$ 9</u>	<u>\$ 12</u>	<u>\$ 6</u>	<u>\$ 105</u>	<u>\$ 7</u>	<u>\$ 637</u>
Year Ended December 31, 2018									
Allowance for credit losses – beginning of period	\$ 82	\$ 244	\$ 264	\$ 18	\$ 25	\$ 11	\$ 32	\$ 5	\$ 681
Provision charged (credited) to income	34	(31)	(109)	(3)	(18)	(3)	55	2	(73)
Charge-offs	—	(41)	(48)	—	(7)	(7)	(35)	(4)	(142)
Recoveries	—	47	1	—	13	6	6	2	75
Net (charge-offs) recoveries	—	6	(47)	—	6	(1)	(29)	(2)	(67)
Allowance for credit losses – end of period	<u>\$ 116</u>	<u>\$ 219</u>	<u>\$ 108</u>	<u>\$ 15</u>	<u>\$ 13</u>	<u>\$ 7</u>	<u>\$ 58</u>	<u>\$ 5</u>	<u>\$ 541</u>

The following table summarizes the changes in the liability for off-balance sheet credit exposures during the years ended December 31, 2020, 2019 and 2018:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Balance at beginning of period	\$ 104	\$ 96	\$ 106
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses	54	—	—
Balance at beginning of period, adjusted	158	96	106
Provision charged (credited) to income	79	8	(10)
Balance at end of period	<u>\$ 237</u>	<u>\$ 104</u>	<u>\$ 96</u>

Accrued Interest Receivables The following table summarizes accrued interest receivables associated with financial assets carried at amortized cost and securities available-for-sale along with the related allowance for credit losses, which are reported net in other assets on the consolidated balance sheet. These accrued interest receivables are excluded from the amortized cost basis disclosures presented elsewhere in these financial statements, including Note 5, "Securities," and Note 6, "Loans."

	December 31, 2020
	(in millions)
Accrued interest receivables:	
Loans	\$ 140
Securities held-to-maturity	23
Other financial assets measured at amortized cost	1
Securities available-for-sale	100
Total accrued interest receivables	264
Allowance for credit losses	2
Accrued interest receivables, net	<u>\$ 262</u>

During 2020, we charged-off accrued interest receivables by reversing interest income for loans of \$7 million.

8. Loans Held for Sale

Loans held for sale consisted of the following:

At December 31,	2020	2019
	(in millions)	
Commercial loans:		
Real estate, including construction	\$ 10	\$ 83
Business and corporate banking	—	35
Global banking	119	94
Total commercial	<u>129</u>	<u>212</u>
Consumer loans:		
Residential mortgages	208	77
Total consumer	<u>208</u>	<u>77</u>
Total loans held for sale	<u>\$ 337</u>	<u>\$ 289</u>

Commercial Loans Included in commercial loans held for sale are certain loans that we have elected to designate under the fair value option which consists of 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 \$36 million and \$178 million at December 31, 2020 and 2019, respectively. See Note 16, "Fair Value Option," for additional information.

Commercial loans held for sale also includes certain loans that we no longer intend to hold for investment and were transferred to held for sale which totaled \$93 million and \$34 million at December 31, 2020 and 2019, respectively. During 2020, we recorded \$23 million of lower of amortized cost or fair value adjustments associated with the write-down of commercial loans held for sale as a component of other income in the consolidated statement of income (loss) compared with recording no lower

of amortized cost or fair value adjustments on commercial loans held for sale during 2019 and reversing \$5 million of the lower of amortized cost or fair value adjustments previously recorded on commercial loans held for sale during 2018 as a result of an increase in fair value due to improved pricing.

Consumer Loans Included in residential mortgage loans held for sale are agency-eligible residential mortgage loans which are originated and held for sale to third parties, currently on a servicing retained basis. Gains and losses from the sale of these residential mortgage loans are reflected as a component of other income in the consolidated statement of income (loss).

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. Interest rate risk for agency-eligible residential mortgage loans held for sale is partially mitigated through an economic hedging program to offset changes in the fair value of these mortgage loans held for sale, from the time of commitment to sale, attributable to changes in market interest rates. Revenue associated with this economic hedging program, which is reflected as a component of other income in the consolidated statement of income (loss), was a loss of \$6 million during 2020 compared with losses of \$1 million during both 2019 and 2018, respectively.

Valuation Allowances Excluding the commercial loans designated under the 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 nil and \$2 million at December 31, 2020 and 2019, respectively. The valuation allowance on commercial loans held for sale was \$1 million and nil at December 31, 2020 and 2019, respectively.

9. Properties and Equipment, Net

Properties and equipment, net is summarized in the following table:

At December 31,	2020	2019
	(in millions)	
Land.....	\$ 5	\$ 8
Buildings and improvements ⁽¹⁾	543	642
Furniture and equipment ⁽¹⁾	129	151
Total.....	677	801
Accumulated depreciation and amortization ⁽¹⁾	(533)	(624)
Properties and equipment, net.....	<u>\$ 144</u>	<u>\$ 177</u>

⁽¹⁾ Decreases since December 31, 2019 are due primarily to the retirement of assets associated with certain branches and office space which we exited in 2020 as part of our Restructuring Plan. See Note 3, "Strategic Initiatives," for further discussion. During 2020, we also recognized \$18 million of gains on sales of certain owned retail branch properties. These gains are reflected in other income in the consolidated statement of income (loss) and were reported in the Corporate Center business segment.

Depreciation and amortization expense totaled \$34 million, \$43 million and \$44 million in 2020, 2019 and 2018, respectively.

10. Goodwill and Other Long-Lived Assets

Goodwill was \$458 million and \$1,242 million at December 31, 2020 and 2019, respectively. Goodwill for these periods reflects accumulated impairment losses of \$1,819 million and \$1,035 million, respectively.

During the first quarter of 2020, as a result of the deterioration in economic conditions caused by the spread of the COVID-19 pandemic across the globe, including into the United States, and its impact on our businesses including changes to the interest rate environment as a result of FRB actions to combat the economic effects of the virus and the amount of headroom calculated in our previous annual impairment test for certain reporting units, we determined that it was more likely than not that the fair value of one or more of our reporting units was lower than their carrying amounts, including goodwill. Based on this analysis, we determined that an interim goodwill impairment test should be performed for all of our reporting units as of March 31, 2020 and prepared updated cash flow projections for each reporting unit, resulting in a reduction in the long-term forecasts of profitability for both our Retail Banking and Wealth Management and our Private Banking reporting units as compared to the prior year forecasts. These projections were reviewed by senior management in connection with the preparation of our first quarter financial statements and it was determined that these forecasts represent our current best estimate of future profitability and would be used to conduct our interim impairment test. We completed our interim impairment test of goodwill utilizing cash flow projections based on these forecasts under a present value approach and, in conjunction with valuation estimates

determined under a market approach, concluded that the fair value of our Commercial Banking reporting unit exceeded its carrying value, including goodwill. However, the cash flow projections for our Retail Banking and Wealth Management and our Private Banking reporting units were significantly lower which, in conjunction with valuation estimates under a market approach and in consideration of a challenging macroeconomic outlook, resulted in a fair value that was significantly lower than their book values, including goodwill. As a result, we recorded a non-cash impairment charge of \$784 million in the first quarter of 2020, representing the entire amount of goodwill previously allocated to these reporting units. Beginning in the second quarter of 2020, our Retail Banking and Wealth Management and our Private Banking reporting units are being reported together within a newly created Wealth and Personal Banking segment for segment reporting purposes.

During the third quarter of 2020, we completed our annual impairment test of goodwill and determined that the fair value of our Commercial Banking reporting unit exceeded its carrying value, including goodwill.

We have historically established July 1 of each year as the date for conducting our annual goodwill impairment assessment. During the fourth quarter of 2020, we changed our annual impairment assessment to be as of October 1. The change in testing date is an immaterial change in accounting principle, which management believes is preferable as the new date better aligns with our annual internal planning and budgeting process. This change did not delay, accelerate or avoid any potential impairment charge and is applied prospectively. As a result of this change, we performed a goodwill impairment assessment of our Commercial Banking reporting unit under a qualitative analysis and determined that a quantitative test was not necessary as there were no events or changes in circumstances to indicate that it is more likely than not the fair value of our Commercial Banking reporting unit has reduced below its carrying amount.

During 2019, we completed our annual impairment test of goodwill and determined that the fair value of our Commercial Banking and Private Banking reporting units exceeded or approximated their carrying values, including goodwill. However, the cash flow projections for our Retail Banking and Wealth Management reporting unit were significantly lower than previous estimates due to changes in circumstances at that time, in particular changes to the interest rate environment as a result of slowing economic growth along with various revenue headwinds such as increased competition for deposits and a shift in demand to lower fee wealth products, as well as higher levels of allocated capital which, in conjunction with valuation estimates determined under a market approach, resulted in a fair value that was significantly lower than its book value, including goodwill. As a result, we recorded a non-cash impairment charge of \$365 million, representing a portion of the \$737 million of goodwill previously allocated to this reporting unit.

Other Long-Lived Assets Separate from the costs incurred in connection with our Restructuring Plan, in September 2020, in connection with the development of our 2021 five-year operating plan, we prepared updated cash flow projections for our Wealth and Personal Banking, Commercial Banking and Global Banking and Markets business segments. These updated cash flows reflected a continued decline in forecasted profitability driven by an expected longer-term adverse impact to the business climate as a result of the COVID-19 pandemic. As a result, we tested long-lived assets comprising capitalized software, property, plant and equipment and operating lease right of use assets for impairment at September 30, 2020. The recoverability test was performed at the business segment level which is the lowest level for which cash flows are available. We concluded that the undiscounted cash flow projections based on these business forecasts exceeded the carrying value in all cases.

11. Leases

We have entered into operating leases for premises and equipment. As discussed more fully in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," beginning January 1, 2019, lease ROU assets and lease liabilities for operating leases are recognized at effective commencement date based on the present value of lease payments over the lease term.

The following table summarizes the components of total operating lease costs, net and provides supplemental cash flow information related to leases:

Year Ended December 31,	2020	2019
	(in millions)	
Operating lease cost.....	\$ 127	\$ 136
Variable lease cost.....	59	63
Short-term lease cost.....	—	4
Sublease income ⁽¹⁾	(54)	(60)
Total operating lease costs, net.....	<u>\$ 132</u>	<u>\$ 143</u>
Supplemental disclosure of cash flow information:		
Cash paid for amounts included in the measurement of operating lease liabilities.....	\$ 135	\$ 126
ROU assets recognized for new operating lease liabilities.....	24	132

⁽¹⁾ We have entered into agreements to sublease certain office space, including agreements to receive rental income from our affiliates for rent. As owner or lessee of the properties, we have entered into agreements with these affiliates to charge them rent based on the office space utilized by their employees during the period. See Note 23, "Related Party Transactions," for further disclosure.

In addition to the operating lease costs reflected in the table above, during 2020, we recorded lease impairment charges of \$76 million to write down the lease ROU assets associated with approximately 60 branches and certain office space that we determined we would exit as part of our Restructuring Plan. See Note 3, "Strategic Initiatives," for further discussion. During 2019, we determined that we would exit approximately 20 branches and, as a result, we recorded lease impairment charges of \$13 million to write down the lease ROU assets associated with these branches based on their estimated remaining useful lives. These impairment charges are reflected in occupancy expense, net in the consolidated statement of income (loss) and were reported in the Corporate Center business segment.

The following table presents information about our operating lease ROU assets and liabilities:

At December 31,	2020	2019
	(dollars are in millions)	
Operating lease ROU assets ⁽¹⁾	\$ 527	\$ 719
Operating lease liabilities.....	625	783
Weighted-average remaining lease term.....	6.8 years	7.2 years
Weighted-average discount rate.....	3.0 %	3.1 %

⁽¹⁾ Reported net of level lease adjustments and accumulated impairment losses.

The following table presents a maturity analysis of our operating lease liabilities at December 31, 2020:

Year Ending December 31,	(in millions)
2021.....	\$ 121
2022.....	122
2023.....	115
2024.....	111
2025.....	74
Thereafter.....	167
Total future operating lease payments.....	<u>710</u>
Less - imputed interest.....	(85)
Total operating lease liabilities.....	<u>\$ 625</u>

At December 31, 2020, we had \$6 million of additional operating leases for premises that have not yet commenced and are not reflected in the table above.

Prior to the adoption of the new accounting guidance on January 1, 2019, net rental expense under operating leases, which did not include certain variable lease costs, was \$103 million in 2018.

12. Deposits

Total deposits was \$145,150 million and \$119,693 million at December 31, 2020 and 2019, respectively, of which \$4,155 million and \$7,209 million, respectively, were carried at fair value.

The following table presents the aggregate amount of time deposit accounts exceeding \$250,000 at December 31, 2020 and 2019:

At December 31,	2020	2019
	(in millions)	
Domestic deposits.....	\$ 14,270	\$ 19,645
Foreign deposits.....	232	545
Total.....	<u>\$ 14,502</u>	<u>\$ 20,190</u>

The scheduled maturities of all time deposits at December 31, 2020 are summarized in the following table:

	Domestic Deposits	Foreign Deposits	Total
	(in millions)		
2021:			
0-90 days.....	\$ 8,899	\$ 112	\$ 9,011
91-180 days.....	4,310	120	4,430
181-365 days.....	873	—	873
	14,082	232	14,314
2022.....	1,073	—	1,073
2023.....	605	—	605
2024.....	428	—	428
2025.....	395	—	395
Thereafter.....	2,629	—	2,629
	<u>\$ 19,212</u>	<u>\$ 232</u>	<u>\$ 19,444</u>

During 2020, \$5.0 billion of long-term debt borrowings from HSBC North America were recharacterized as time deposits. See Note 23, "Related Party Transactions" for additional information. During 2020, we also recorded a \$12 million gain on extinguishment of time deposits reflecting early client withdrawals.

Overdraft deposits, which are classified as loans, were approximately \$392 million and \$222 million at December 31, 2020 and 2019, 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 \$71 million, \$24 million and \$135 million in 2020, 2019 and 2018, respectively.

13. Short-Term Borrowings

Short-term borrowings consisted of the following:

	December 31,					
	2020	Rate	2019	Rate	2018	Rate
(dollars are in millions)						
Securities sold under repurchase agreements ⁽¹⁾	\$ 1,765	.22 %	\$ 1,072	1.75 %	\$ 1,466	4.16 %
Average during year	\$ 4,768	.70	\$ 4,130	3.28	\$ 4,189	2.86
Maximum month-end balance	12,497		8,569		5,829	
Commercial paper	2,998	.52	2,476	2.21	2,532	2.70
Other	189		111		182	
Total short-term borrowings	<u>\$ 4,952</u>		<u>\$ 3,659</u>		<u>\$ 4,180</u>	

⁽¹⁾ The following table presents the quarter end and average quarterly balances of securities sold under repurchase agreements:

	2020				2019				2018			
	Fourth	Third	Second	First	Fourth	Third	Second	First	Fourth	Third	Second	First
(in millions)												
Quarter end balance	\$ 1,765	\$ 2,185	\$ 2,218	\$12,497	\$ 1,072	\$ 5,568	\$ 3,553	\$ 3,714	\$ 1,466	\$ 2,471	\$ 2,743	\$ 2,792
Average quarterly balance	2,140	2,534	7,210	7,240	1,483	8,432	3,433	3,142	3,045	3,550	5,008	5,182

During 2019, we recorded a loss of \$14 million on extinguishment of certain repurchase agreements.

14. 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, 2020 are shown in the below table.

				At December 31,	
	Maturity Date Range	Interest Rate Range	Interest Rate Weighted Average	2020	2019
				(in millions)	
Issued or acquired by HSBC USA:					
Senior debt:					
Fixed-rate notes.....	2024-2025	3.50% - 4.20%	4.01%	\$ 2,990	\$ 6,231
Structured notes.....	2021-2045	.15% - 2.54%	.76%	7,938	7,995
Total senior debt.....				10,928	14,226
Subordinated debt:					
Fixed-rate notes.....	2021-2097	7.20% - 9.30%	8.09%	422	1,172
Floating-rate notes.....	2025	2.43%	2.43%	850	850
Total subordinated debt.....				1,272	2,022
Mark-to-market adjustment on fair value option debt....				1,344	1,195
Total issued or acquired by HSBC USA.....				13,544	17,443
Issued or acquired by HSBC Bank USA and its subsidiaries:					
Senior debt:					
Fixed-rate notes.....				—	5,124
Floating-rate notes.....	2024-2040	.03% - .94%	.39%	42	29
Structured notes.....	2021-2027	(.55)% - 3.04%	1.14%	394	192
FHLB advances - fixed-rate.....	2021	.80% - 1.12%	.92%	3,250	—
FHLB advances - floating-rate.....	2036	.30%	.30%	1,000	1,000
Total senior debt.....				4,686	6,345
Subordinated fixed-rate notes.....	2034-2039	5.63% - 7.00%	6.36%	1,441	2,685
Mark-to-market adjustment on fair value option debt....				308	224
Total issued or acquired by HSBC Bank USA and its subsidiaries.....				6,435	9,254
Total long-term debt.....				\$ 19,979	\$ 26,697

During 2020, \$5.0 billion of long-term debt borrowings from HSBC North America were recharacterized as time deposits. See Note 23, "Related Party Transactions," for additional information.

At December 31, 2020 and 2019, we had structured notes totaling \$9,695 million and \$9,388 million, respectively, and subordinated debt totaling \$1,030 million and \$959 million, respectively, for which we have elected fair value option accounting and are therefore carried at fair value. See Note 16, "Fair Value Option," for further details. During 2019, HSBC Bank USA repurchased \$1,269 million of its outstanding subordinated debt that was designated under fair value option and recorded a net pre-tax gain on extinguishment of \$84 million.

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, 2020 and 2019, borrowings from the FHLB facility totaled \$4,250 million and \$1,000 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 \$12,458 million at December 31, 2020.

Maturities of long-term debt at December 31, 2020 were as follows:

	(in millions)
2021.....	\$ 6,480
2022.....	2,886
2023.....	1,521
2024.....	1,457
2025.....	3,854
Thereafter.....	3,781
Total.....	<u>\$ 19,979</u>

15. Derivative Financial Instruments

In the normal course of business, the derivative instruments we enter 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 also 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 following table. 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 following table.

	December 31, 2020		December 31, 2019	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
(in millions)				
Derivatives accounted for as fair value hedges⁽¹⁾				
OTC-cleared ⁽²⁾	\$ —	\$ —	\$ —	\$ 1
Bilateral OTC ⁽²⁾	—	2	—	164
Interest rate contracts	—	2	—	165
Derivatives accounted for as cash flow hedges⁽¹⁾				
Foreign exchange contracts - bilateral OTC ⁽²⁾	—	53	16	20
Interest rate contracts - bilateral OTC ⁽²⁾	—	—	—	1
Total derivatives accounted for as hedges	—	55	16	186
Trading derivatives not accounted for as hedges⁽³⁾				
Exchange-traded ⁽²⁾	14	9	110	3
OTC-cleared ⁽²⁾	—	58	167	29
Bilateral OTC ⁽²⁾	6,584	6,555	11,990	13,324
Interest rate contracts⁽⁴⁾	6,598	6,622	12,267	13,356
Exchange-traded ⁽²⁾	—	—	80	—
OTC-cleared ⁽²⁾	168	—	—	—
Bilateral OTC ⁽²⁾	18,299	18,549	16,440	15,786
Foreign exchange contracts	18,467	18,549	16,520	15,786
Equity contracts - Bilateral OTC⁽²⁾	4,009	4,200	3,753	3,993
Exchange-traded ⁽²⁾	—	28	71	80
Bilateral OTC ⁽²⁾	1,323	1,550	1,087	1,309
Precious metals contracts	1,323	1,578	1,158	1,389
OTC-cleared ⁽²⁾	—	—	1	—
Bilateral OTC ⁽²⁾	367	233	1,138	1,024
Credit contracts	367	233	1,139	1,024
Other non-qualifying derivatives not accounted for as hedges⁽¹⁾				
Interest rate contracts - bilateral OTC ⁽²⁾	89	1	128	51
Foreign exchange contracts - bilateral OTC ⁽²⁾	—	1	—	—
Equity contracts - bilateral OTC ⁽²⁾	1,607	91	1,354	75
OTC-cleared ⁽²⁾	—	14	—	—
Bilateral OTC ⁽²⁾	—	50	—	44
Credit contracts	—	64	—	44
Other contracts - bilateral OTC⁽²⁾⁽⁵⁾	8	67	10	85
Total derivatives	32,468	31,461	36,345	35,989
Less: Gross amounts of receivable / payable subject to enforceable master netting agreements⁽⁶⁾⁽⁸⁾	25,537	25,537	29,510	29,510
Less: Gross amounts of cash collateral received / posted subject to enforceable master netting agreements⁽⁷⁾⁽⁸⁾	4,079	3,377	3,683	4,390
Net amounts of derivative assets / liabilities presented in the balance sheet	2,852	2,547	3,152	2,089
Less: Gross amounts of financial instrument collateral received / posted subject to enforceable master netting agreements but not offset in the consolidated balance sheet	817	691	891	553
Net amounts of derivative assets / liabilities	<u>\$ 2,035</u>	<u>\$ 1,856</u>	<u>\$ 2,261</u>	<u>\$ 1,536</u>

⁽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 obtaining collateral and enforceable master netting agreements. 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 each of the original counterparties. Exchange traded derivatives are executed directly on an organized exchange. Credit risk is minimized for OTC-cleared derivatives and exchange traded derivatives through daily margining requirements. In addition, OTC-cleared interest rate and credit derivatives with certain central clearing counterparties are settled daily.

⁽³⁾ Trading related derivative assets / liabilities are recorded in trading assets / trading liabilities on the consolidated balance sheet.

⁽⁴⁾ The decreases in interest rate derivative assets and liabilities at December 31, 2020 primarily reflects reduced positions driven by the exit or transfer of certain contracts as part of our Restructuring Plan. See Note 3, "Strategic Initiatives," for additional information.

- (5) Consists of swap agreements entered into in conjunction with the sales of Visa Inc. ("Visa") Class B common shares ("Class B Shares").
- (6) Represents the netting of derivative receivable and payable balances for the same counterparty under enforceable netting agreements.
- (7) Represents the netting of cash collateral posted and received by counterparty under enforceable netting agreements.
- (8) 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 allocated netting to the different types of derivative instruments shown in the table above.

See Note 27, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," for further information on offsetting related to resale and repurchase agreements.

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 deposits and senior and subordinated debt obligations. The fair value of fixed-rate assets and liabilities fluctuates in response to changes in interest rates. We utilize interest rate swaps, forward and futures contracts to minimize our exposure to changes in fair value caused by interest rate 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 discontinued and the hedged item continues to exist, the basis adjustment is amortized over the remaining life of the hedged item.

The following table presents the carrying amount of hedged items in fair value hedges recognized in the consolidated balance sheet at December 31, 2020 and 2019, along with the cumulative amount of fair value hedging adjustments included in the carrying amount of those hedged items:

	Carrying Amount of Hedged Items ⁽¹⁾	Cumulative Amount of Fair Value Hedging Adjustments Increasing (Decreasing) the Carrying Amount of Hedged Items			
		Active	Discontinued	Total	
		(in millions)			
At December 31, 2020					
Securities available-for-sale ("AFS").....	\$ 7,966	\$ 681	\$ 738	\$ 1,419	
Deposits ⁽²⁾	5,214	214	—	214	
Long-term debt.....	2,227	242	(15)	227	
At December 31, 2019					
Securities AFS.....	7,277	554	428	982	
Long-term debt.....	10,975	285	(32)	253	

⁽¹⁾ The carrying amount of securities AFS represents the amortized cost basis.

⁽²⁾ During 2020, \$5.0 billion of fixed-rate senior debt obligations issued to HSBC North America were recharacterized as time deposits. The cumulative amount of fair value hedging adjustments associated with this debt was reclassified to deposits. See Note 23, "Related Party Transactions," for additional information.

The following table presents information on gains and losses on derivative instruments designated and qualifying as hedging instruments and the hedged items in fair value hedges and their locations on the consolidated statement of income (loss):

	Gain (Loss) on Derivatives ⁽¹⁾		Gain (Loss) on Hedged Items ⁽¹⁾		Net Ineffective Gain (Loss) Recognized ⁽¹⁾
	Net Interest Income	Other Income	Net Interest Income	Other Income	Other Income
(in millions)					
Year Ended December 31, 2020					
Interest rate contracts / Securities AFS.....	\$ (731)	\$ —	\$ 900	\$ —	\$ —
Interest rate contracts / Deposits.....	148	—	(261)	—	—
Interest rate contracts / Long-term debt.....	165	—	(261)	—	—
Total.....	<u>\$ (418)</u>	<u>\$ —</u>	<u>\$ 378</u>	<u>\$ —</u>	<u>\$ —</u>
Year Ended December 31, 2019					
Interest rate contracts / Securities AFS.....	\$ (776)	\$ —	\$ 1,086	\$ —	\$ —
Interest rate contracts / Long-term debt.....	235	—	(703)	—	—
Total.....	<u>\$ (541)</u>	<u>\$ —</u>	<u>\$ 383</u>	<u>\$ —</u>	<u>\$ —</u>
Year Ended December 31, 2018					
Interest rate contracts / Securities AFS.....	\$ (41)	\$ 322	\$ 362	\$ (309)	\$ 13
Interest rate contracts / Long-term debt.....	(58)	74	(233)	(74)	—
Total.....	<u>\$ (99)</u>	<u>\$ 396</u>	<u>\$ 129</u>	<u>\$ (383)</u>	<u>\$ 13</u>

⁽¹⁾ As a result of adopting new accounting guidance in 2019, beginning January 1, 2019, we report gains and losses on the derivatives and the hedged items in fair value hedges in net interest income. Prior to January 1, 2019, fair value hedge ineffectiveness was separately measured and reported in other income.

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 a qualifying cash flow hedge are recognized in other comprehensive income. 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 income (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 discontinued 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, 2020, active cash flow hedge relationships extend or mature through March 2023. During 2020, \$11 million of losses related to discontinued cash flow hedge relationships were amortized to earnings from AOCI compared with losses of \$35 million and \$23 million during 2019 and 2018, respectively. During the next twelve months, we expect to amortize \$14 million of remaining losses to earnings resulting from these discontinued cash flow hedges. The interest accrual related to the hedging instruments is recognized in net 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 discontinued cash flow hedges) and their locations on the consolidated statement of income (loss):

	Gain (Loss) Recognized in AOCI on Derivatives ⁽¹⁾			Location of Gain (Loss) Reclassified from AOCI into Income ⁽¹⁾	Gain (Loss) Reclassified From AOCI into Income ⁽¹⁾		
	2020	2019	2018		2020	2019	2018
(in millions)							
Year Ended December 31,							
Foreign exchange contracts.....	\$ —	\$ 3	\$ (2)	Net interest income	\$ —	\$ —	\$ —
Interest rate contracts.....	<u>84</u>	<u>(27)</u>	<u>31</u>	Net interest income	<u>(11)</u>	<u>(35)</u>	<u>(23)</u>
Total.....	<u>\$ 84</u>	<u>\$ (24)</u>	<u>\$ 29</u>		<u>\$ (11)</u>	<u>\$ (35)</u>	<u>\$ (23)</u>

⁽¹⁾ As a result of adopting new accounting guidance in 2019, beginning January 1, 2019, gains and losses on the derivatives in cash flow hedges are initially reported in AOCI and then reclassified into earnings in the same accounting period in which the designated forecasted transaction or hedged item affects earnings. Prior to January 1, 2019, cash flow hedge ineffectiveness was separately measured and reported immediately in other income. Cash flow hedge ineffectiveness was immaterial during 2018.

Trading Derivatives and Non-Qualifying Hedging Activities In addition to risk management, we also enter into derivative contracts, including buy- and sell-protection credit derivatives, for the purposes of trading and market making, or repackaging risks to form structured trades to meet clients' risk taking objectives. Additionally, we buy or sell securities and use derivatives to mitigate the market risks arising from our trading activities with our clients that exceed our risk appetite. We also use buy-protection credit derivatives 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. Counterparty credit risk associated with OTC derivatives, including risk-mitigating buy-protection credit derivatives, 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.
- Swap agreements entered into in conjunction with the sales of 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 27, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," for additional information.
- Forward purchases or sales of to-be-announced ("TBA") securities used to economically hedge changes in the fair value of agency-eligible residential mortgage loans held for sale attributable to changes in market interest rates. Changes in the fair value of TBA positions, which are considered derivatives, are recorded in other income. See Note 8, "Loans Held for Sale," 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 or other income 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		Gain (Loss) Recognized in Income on Derivatives		
		Year Ended December 31,		
		2020	2019	2018
		(in millions)		
Interest rate contracts.....	Trading revenue	\$ 396	\$ (89)	\$ 303
Foreign exchange contracts.....	Trading revenue	(747)	310	105
Equity contracts.....	Trading revenue	57	(496)	100
Precious metals contracts.....	Trading revenue	594	312	376
Credit contracts.....	Trading revenue	(556)	(445)	(52)
Total.....		<u>\$ (256)</u>	<u>\$ (408)</u>	<u>\$ 832</u>

The significant gains and losses recognized in trading revenue on derivatives during 2020 primarily reflects the impact of market volatility driven by the COVID-19 pandemic.

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		Gain (Loss) Recognized in Income on Derivatives		
		Year Ended December 31,		
		2020	2019	2018
		(in millions)		
Interest rate contracts.....	Gain (loss) on instruments designated at fair value and related derivatives	\$ 229	\$ 364	\$ (120)
Interest rate contracts.....	Other income	(6)	(1)	(1)
Foreign exchange contracts.....	Gain (loss) on instruments designated at fair value and related derivatives	(1)	(3)	(11)
Equity contracts.....	Gain (loss) on instruments designated at fair value and related derivatives	592	1,809	(981)
Credit contracts.....	Gain (loss) on instruments designated at fair value and related derivatives	37	—	—
Credit contracts.....	Other income	(18)	(24)	(3)
Other contracts ⁽¹⁾	Other income	(9)	(63)	(15)
Total.....		<u>\$ 824</u>	<u>\$ 2,082</u>	<u>\$ (1,131)</u>

⁽¹⁾ Consists of swap agreements entered into in conjunction with the sales of Visa Class B Shares.

Credit-Risk Related Contingent Features The majority of our derivative contracts 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 net liability position at December 31, 2020 was \$221 million, for which we had posted collateral of \$67 million. The aggregate fair value of all derivative instruments with credit-risk-related contingent features that were in a net liability position at December 31, 2019 was \$611 million, for which we had posted collateral of \$316 million. Substantially all of the collateral posted is in the form of cash or securities available-for-sale. See Note 27, "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.....	\$ —	\$ 121

Notional Value of Derivative Contracts The following table summarizes the notional values of derivative contracts:

At December 31,	2020	2019
(in millions)		
Interest rate:		
Futures and forwards.....	\$ 37,098	\$ 597,980
Swaps.....	406,609	2,130,442
Options written.....	33,269	158,861
Options purchased.....	32,427	164,265
Total interest rate.....	509,403	3,051,548
Foreign exchange:		
Swaps, futures and forwards.....	1,195,449	1,362,959
Options written.....	53,200	44,876
Options purchased.....	53,595	46,085
Spot.....	57,040	67,060
Total foreign exchange.....	1,359,284	1,520,980
Commodities, equities and precious metals:		
Swaps, futures and forwards.....	54,458	55,678
Options written.....	17,078	39,035
Options purchased.....	27,083	49,517
Total commodities, equities and precious metals.....	98,619	144,230
Credit derivatives.....	52,611	90,049
Other contracts ⁽¹⁾	1,216	1,044
Total.....	\$ 2,021,133	\$ 4,807,851

⁽¹⁾ Consists of swap agreements entered into in conjunction with the sales of Visa Class B Shares.

16. 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"). 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 purchased and sold under resale and repurchase agreements, certain fixed-rate long-term debt issuances, all of our hybrid instruments, including structured notes and deposits, and, beginning January 1, 2020, certain student loans held for investment. Excluding the fair value movement on fair value option liabilities attributable to our own credit spread, which is recorded in other comprehensive income, changes in the fair value of fair value option assets and liabilities 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).

Loans and Loans Held For Sale 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. Beginning January 1, 2020, we also elected to apply FVO accounting to certain student loans held for investment. These elections allow 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 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 commercial loans, 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, 2020 and 2019, 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). Excluding the fair value movement attributable to our own credit spread, 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). Excluding the fair value movement attributable to our own credit spread, 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, 2020			
Student loans held for investment.....	\$ 32	\$ 34	\$ (2)
Commercial loans held for sale.....	36	36	—
Fixed rate long-term debt	1,030	741	289
Hybrid instruments:			
Structured deposits	4,155	3,844	311
Structured notes	9,695	8,332	1,363
At December 31, 2019			
Commercial loans held for sale.....	\$ 178	\$ 189	\$ (11)
Securities sold under repurchase agreements.....	373	373	—
Fixed rate long-term debt	959	741	218
Hybrid instruments:			
Structured deposits	7,209	7,491	(282)
Structured notes	9,388	8,187	1,201

Components of Gain (Loss) on Instruments Designated 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, 2020, 2019 and 2018:

	Loans and Loans Held for Sale	Securities Sold Under Repurchase Agreements	Long-Term Debt	Hybrid Instruments	Total
	(in millions)				
Year Ended December 31, 2020					
Interest rate and other components ⁽¹⁾	\$ —	\$ —	\$ (79)	\$ (695)	\$ (774)
Credit risk component ⁽²⁾⁽³⁾	(49)	—	—	—	(49)
Total mark-to-market on financial instruments designated at fair value	(49)	—	(79)	(695)	(823)
Mark-to-market on related derivatives	37	—	88	699	824
Net realized gain on related long-term debt derivatives	—	—	33	—	33
Gain (loss) on instruments designated at fair value and related derivatives	<u>\$ (12)</u>	<u>\$ —</u>	<u>\$ 42</u>	<u>\$ 4</u>	<u>\$ 34</u>
Year Ended December 31, 2019					
Interest rate and other components ⁽¹⁾	\$ —	\$ —	\$ (200)	\$ (1,986)	\$ (2,186)
Credit risk component ⁽²⁾	3	—	—	—	3
Total mark-to-market on financial instruments designated at fair value	3	—	(200)	(1,986)	(2,183)
Mark-to-market on related derivatives	—	—	148	1,983	2,131
Net realized gain on related long-term debt derivatives	—	—	39	—	39
Gain (loss) on instruments designated at fair value and related derivatives	<u>\$ 3</u>	<u>\$ —</u>	<u>\$ (13)</u>	<u>\$ (3)</u>	<u>\$ (13)</u>
Year Ended December 31, 2018					
Interest rate and other components ⁽¹⁾	\$ —	\$ 1	\$ 99	\$ 1,035	\$ 1,135
Credit risk component ⁽²⁾	(4)	—	—	—	(4)
Total mark-to-market on financial instruments designated at fair value	(4)	1	99	1,035	1,131
Mark-to-market on related derivatives	—	—	(95)	(1,062)	(1,157)
Net realized gain on related long-term debt derivatives	—	—	45	—	45
Gain (loss) on instruments designated at fair value and related derivatives	<u>\$ (4)</u>	<u>\$ 1</u>	<u>\$ 49</u>	<u>\$ (27)</u>	<u>\$ 19</u>

⁽¹⁾ As it relates to hybrid instruments, interest rate and other components primarily includes interest rate, foreign exchange and equity contract risks.

⁽²⁾ The fair value movement on fair value option liabilities attributable to our own credit spread is recorded in other comprehensive income.

⁽³⁾ During 2020, the loss in the credit risk component for loans and loans held for sale was attributable to the widening of credit spreads associated with certain commercial loans held for sale which were impacted by the COVID-19 pandemic.

17. Income Taxes

Total income taxes was as follows:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Provision (benefit) for income taxes	\$ (42)	\$ 157	\$ 266
Income tax expense (benefit) included in common equity related to:			
Unrealized gains (losses) on investment securities	274	128	(68)
Unrealized gains (losses) on fair value option liabilities attributable to our own credit spread	8	(98)	103
Unrealized gains (losses) on derivatives designated as cash flow hedges	23	3	12
Employer accounting for post-retirement plans	(1)	(5)	3
Cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from Tax Legislation ⁽¹⁾	—	—	91
Total income taxes	<u>\$ 262</u>	<u>\$ 185</u>	<u>\$ 407</u>

⁽¹⁾ Reflects the adoption of new accounting guidance in 2018 which resulted in a cumulative effect adjustment as of January 1, 2018 to reclassify the stranded tax effects resulting from the change in the Federal corporate income tax rate from accumulated other comprehensive income (loss) to retained earnings.

The components of the provision for income taxes were as follows:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Current:			
Federal	\$ (45)	\$ (3)	\$ 68
State and local	(9)	35	41
Foreign	(13)	16	6
Total current	(67)	48	115
Deferred	25	109	151
Provision (benefit) for income taxes	<u>\$ (42)</u>	<u>\$ 157</u>	<u>\$ 266</u>

The following table provides an analysis of the difference between effective rates based on the provision for income taxes attributable to pretax income (loss) and the statutory U.S. Federal income tax rate:

Year Ended December 31,	2020		2019		2018	
	(dollars are in millions)					
Tax expense (benefit) at the U.S. Federal statutory income tax rate	\$ (206)	(21.0)%	\$ 57	21.0 %	\$ 123	21.0 %
Increase (decrease) in rate resulting from:						
State and local taxes, net of Federal benefit	(2)	(.2)	23	8.5	40	6.8
Adjustment of Federal tax rate used to value deferred taxes ⁽¹⁾	—	—	—	—	(31)	(5.3)
Non-deductible FDIC assessment fees	15	1.5	5	1.9	27	4.6
Non-deductible goodwill impairment ⁽²⁾	165	16.8	77	28.5	—	—
Other non-deductible / non-taxable items ⁽³⁾	9	.9	—	—	107	18.3
Items affecting prior periods ⁽⁴⁾	3	.3	7	2.6	(1)	(.2)
Uncertain tax positions	(8)	(.8)	5	1.9	6	1.1
Low income housing and other tax credit investments	(14)	(1.4)	(13)	(4.8)	(5)	(.9)
Other	(4)	(.4)	(4)	(1.5)	—	—
Provision (benefit) for income taxes	\$ (42)	(4.3)%	\$ 157	58.1 %	\$ 266	45.4 %

⁽¹⁾ The amount primarily relates to tax return adjustments on certain deferred tax assets impacted by the change in the Federal corporate income tax rate.

⁽²⁾ For 2020, the amount represents non-deductible goodwill impairment related to our previously separate Retail Banking and Wealth Management and Private Banking businesses. For 2019, the amount represents non-deductible goodwill impairment related to our previously separate Retail Banking and Wealth Management business.

⁽³⁾ The amounts primarily relate to non-deductible penalties related to legal matters.

⁽⁴⁾ For 2020, the amount primarily relates to prior year State audit settlements, partially offset by changes in estimates as a result of filing the 2019 Federal and State income tax returns. For 2019, the amount primarily relates to changes in estimates as a result of filing the 2018 Federal income tax return and a reduction in a State and local capital loss carryback claim, partially offset by prior year State audit adjustments.

The components of the net deferred tax asset are presented in the following table:

At December 31,	2020	2019
	(in millions)	
Deferred tax assets:		
Allowance for credit losses	\$ 245	\$ 153
Accrued expenses	108	76
Interests in real estate mortgage investment conduits ⁽¹⁾	158	181
Unrealized losses on investment securities	—	36
Capitalized costs ⁽²⁾	501	595
Lease liabilities	152	190
Other	268	285
Total deferred tax assets	<u>1,432</u>	<u>1,516</u>
Valuation allowance	—	(8)
Total deferred tax assets, net of valuation allowance	<u>1,432</u>	<u>1,508</u>
Deferred tax liabilities:		
Lease ROU assets	127	172
Unrealized gains on investment securities	237	—
Other	57	36
Total deferred tax liabilities	<u>421</u>	<u>208</u>
Net deferred tax asset	<u>\$ 1,011</u>	<u>\$ 1,300</u>

⁽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.

⁽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:

	2020	2019	2018
	(in millions)		
Balance at January 1,.....	\$ 30	\$ 24	\$ 17
Additions based on tax positions related to the current year.....	—	—	2
Additions for tax positions of prior years.....	—	7	6
Reductions for tax positions of prior years.....	(1)	(1)	—
Reductions related to settlements with taxing authorities.....	(9)	—	(1)
Balance at December 31,.....	<u>\$ 20</u>	<u>\$ 30</u>	<u>\$ 24</u>

The total amount of unrecognized tax benefits that, if recognized, would affect the effective income tax rate was \$16 million, \$24 million and \$19 million at December 31, 2020, 2019 and 2018, 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 \$5 million, \$10 million and \$7 million at December 31, 2020, 2019 and 2018, respectively. Our accrual for the payment of interest associated with uncertain tax positions decreased by \$5 million during 2020 and increased by \$3 million during 2019.

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 \$1,011 million and \$1,300 million at December 31, 2020 and 2019, 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, 2020, 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. In 2020, we utilized the valuation allowance previously carried against State capital loss carryforwards that have now expired.

Federal income tax returns for 2017 and forward remain open to examination by the Internal Revenue Service.

We remain subject to State and local income tax examinations for years 2010 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, 2020, for State tax purposes, we had apportioned and pre-tax effected net operating loss carryforwards of \$13 million which expire as follows: \$1 million in 2025 - 2029 and \$12 million in 2030 and beyond.

18. Preferred Stock

HSBC USA preferred stock outstanding was \$1,265 million at both December 31, 2020 and 2019 and included 1,265 shares of 6.0 percent Non-Cumulative Series I Preferred Stock issued to HSBC North America. 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 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.

19. Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) includes certain items that are reported directly within a separate component of equity. The following table presents changes in accumulated other comprehensive income (loss) balances:

Year Ended December 31,	2020	2019	2018
	(in millions)		
Unrealized gains (losses) on investment securities:			
Balance at beginning of period	\$ (116)	\$ (519)	\$ (250)
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses on securities available-for-sale, net of tax of \$1 million ⁽¹⁾	2	—	—
Cumulative effect adjustment to initially apply new accounting guidance for equity investments which were previously classified as available-for-sale, net of tax of \$2 million ⁽²⁾	—	—	4
Cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from Tax Legislation ⁽³⁾	—	—	(53)
Balance at beginning of period, adjusted	(114)	(519)	(299)
Other comprehensive income (loss) for period:			
Net unrealized gains (losses) arising during period, net of tax of \$298 million, \$145 million and \$(68) million, respectively	944	459	(215)
Reclassification adjustment for gains realized in net income (loss), net of tax of \$(33) million, \$(21) million and \$(6) million, respectively ⁽⁴⁾	(104)	(67)	(18)
Reversal of provision for credit losses realized in net income (loss), net of tax of less than \$(1) million ⁽⁵⁾	(2)	—	—
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 \$8 million, \$4 million and \$4 million, respectively ⁽⁶⁾	26	11	13
Total other comprehensive income (loss) for period	864	403	(220)
Balance at end of period	750	(116)	(519)
Unrealized gains (losses) on fair value option liabilities attributable to our own credit spread:			
Balance at beginning of period	(9)	301	(19)
Cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from Tax Legislation ⁽³⁾	—	—	(4)
Balance at beginning of period, adjusted	(9)	301	(23)
Other comprehensive income (loss) for period:			
Net unrealized gains (losses) arising during period, net of tax of \$8 million, \$(68) million and \$103 million, respectively	24	(217)	324
Reclassification adjustment for a gain realized in net income (loss), net of tax of \$(30) million ⁽⁷⁾	—	(93)	—
Total other comprehensive income (loss) for period	24	(310)	324
Balance at end of period	15	(9)	301
Unrealized gains (losses) on derivatives designated as cash flow hedges:			
Balance at beginning of period	(151)	(159)	(164)
Cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from Tax Legislation ⁽³⁾	—	—	(35)
Balance at beginning of period, adjusted	(151)	(159)	(199)
Other comprehensive income (loss) for period:			
Net unrealized gains (losses) arising during period, net of tax of \$20 million, \$(5) million and \$7 million, respectively	64	(19)	22
Reclassification adjustment for losses realized in net income (loss), net of tax of \$3 million, \$8 million and \$5 million, respectively ⁽⁸⁾	8	27	18
Total other comprehensive income for period	72	8	40
Balance at end of period	(79)	(151)	(159)
Pension and postretirement benefit liability:			
Balance at beginning of period	(3)	11	2
Cumulative effect adjustment to initially apply new accounting guidance for stranded tax effects resulting from Tax Legislation ⁽³⁾	—	—	1
Balance at beginning of period, adjusted	(3)	11	3
Other comprehensive income (loss) for period:			
Change in unfunded pension and postretirement liability, net of tax of \$(1) million, \$(5) million and \$3 million, respectively	(4)	(14)	8
Total other comprehensive income (loss) for period	(4)	(14)	8
Balance at end of period	(7)	(3)	11
Total accumulated other comprehensive income (loss) at end of period	\$ 679	\$ (279)	\$ (366)

- (1) See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for additional discussion.
- (2) As a result of adopting new accounting guidance in 2018, beginning January 1, 2018, changes in fair value for equity securities are recognized in net income (loss). Prior to January 1, 2018, changes in fair value for equity securities classified as available-for-sale were recognized in other comprehensive income.
- (3) See Note 17, "Income Taxes," for additional discussion.
- (4) Amount reclassified to net income (loss) is included in other securities gains, net in our consolidated statement of income (loss).
- (5) Changes in the allowance for credit losses on securities available-for-sale are included in the provision for credit losses in our consolidated statement of income (loss).
- (6) 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 related to the transferred securities which are being 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.
- (7) In 2019, HSBC Bank USA repurchased long-term debt that was designated under fair value option. As a result, the cumulative gain attributable to our own credit spread associated with the debt was reclassified to other income in our consolidated statement of income (loss).
- (8) Amount reclassified to net income (loss) is included in net interest income in our consolidated statement of income (loss).

20. 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 \$327 in 2020, \$302 in 2019 and \$320 in 2018. 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 2020, 2019 and 2018, 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 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 \$22 million, \$25 million and \$25 million in 2020, 2019 and 2018, respectively. At December 31, 2020, future compensation cost related to grants which have not yet fully vested is approximately \$16 million. This amount is expected to be recognized over a weighted-average period of one year.

21. 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 following table reflects the portion of pension expense and its related components of the combined HSBC North America Pension Plan which has been allocated to us and is recorded in our consolidated statement of income (loss). We have not been allocated any portion of the Plan's net pension asset.

Year Ended December 31,	2020	2019	2018
	(in millions)		
Interest cost on projected benefit obligation	\$ 45	\$ 56	\$ 60
Expected return on plan assets	(68)	(78)	(78)
Amortization of net actuarial loss	4	21	31
Administrative costs	4	4	6
Pension (income) expense	<u>\$ (15)</u>	<u>\$ 3</u>	<u>\$ 19</u>

The assumptions used in determining pension expense of the HSBC North America Pension Plan are as follows:

	2020	2019	2018
Discount rate.....	2.45 %	3.15 %	4.25 %
Expected long-term rate of return on Plan assets ⁽¹⁾	3.50	5.00	5.50

⁽¹⁾ As a result of a significant decrease in yields on fixed income securities driven by the COVID-19 pandemic and subsequent reduction in longer term capital market returns, as well as a shift in investment mix that reduced the Plan's exposure to equity investments, HSBC North America decided to reduce its expected long-term rate of return on Plan assets assumption to 3.50 percent, effective beginning July 1, 2020. The expected long-term rate of return on Plan assets used during the first half of 2020 was 5.00 percent.

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 \$28 million, \$31 million and \$29 million in 2020, 2019 and 2018, 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, \$2 million and \$3 million in 2020, 2019 and 2018, respectively.

Postretirement Plans Other Than Pensions Certain employees also participate in plans which provide medical and life insurance benefits to retirees and eligible dependents. These plans cover all eligible 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,	2020	2019	2018
	(in millions)		
Interest cost on accumulated benefit obligation.....	\$ 1	\$ 2	2
Amortization of net actuarial gain.....	—	(2)	(2)
Net periodic postretirement benefit cost.....	<u>\$ 1</u>	<u>\$ —</u>	<u>\$ —</u>

The assumptions used in determining the net periodic postretirement benefit cost for our postretirement benefit plans are as follows:

	2020	2019	2018
Discount rate.....	3.00 %	4.15 %	3.45 %
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:

	2020	2019
	(in millions)	
Accumulated benefit obligation at beginning of year.....	\$ 45	\$ 42
Interest cost.....	1	2
Actuarial losses.....	2	5
Benefits paid, net.....	(3)	(4)
Accumulated benefit obligation at end of year.....	<u>\$ 45</u>	<u>\$ 45</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 2021. The funded status of our postretirement benefit plans was a liability of \$45 million at December 31, 2020.

Estimated future benefit payments for our postretirement benefit plans are summarized in the following table:

	(in millions)
2021	\$ 4
2022	4
2023	4
2024	3
2025	3
2026-2030	13

The assumptions used in determining the benefit obligation of our postretirement benefit plans at December 31 are as follows:

	2020	2019	2018
Discount rate	2.25 %	3.00 %	4.15 %
Salary increase assumption	3.00	3.00	3.00

For measurement purposes, 6.5 percent (pre-age 65) and, as it relates to the postretirement benefit plans which were not amended to eliminate future health cost increases, 6.8 percent (post-age 65) annual rates of increase in the per capita costs of covered health care benefits were assumed for 2020. These rates are assumed to decrease gradually reaching the ultimate rate of 4.5 percent in 2029, and remain at that level thereafter.

22. Fee Income from Contracts with Customers

The following table summarizes fee income from contracts with customers disaggregated by type of activity, as well as a reconciliation to total other revenues, during the years ended December 31, 2020, 2019 and 2018. Following the table is a description of the various types of fee-based activities and how revenue associated with these activities is recognized.

Year Ended December 31,	2020	2019	2018
	(in millions)		
Credit card fees, net	\$ 38	\$ 67	\$ 50
Trust and investment management fees	132	132	135
Other fees and commissions:			
Account services	251	264	284
Credit facilities	268	302	344
Other fees	48	53	56
Total other fees and commissions	567	619	684
Servicing and other fees from HSBC affiliates	347	354	356
Insurance ⁽¹⁾	7	12	11
Total fee income from contracts with customers	1,091	1,184	1,236
Other non-fee revenues	444	670	663
Total other revenues ⁽²⁾	\$ 1,535	\$ 1,854	\$ 1,899

⁽¹⁾ Included within other income in the consolidated statement of income (loss).

⁽²⁾ See Note 24, "Business Segments," for a reconciliation of total other revenues on a U.S. GAAP basis to other operating income for each business segment under the Group Reporting Basis.

Credit card fees, net Credit card fees, net includes interchange fees earned from merchants who accept our cards in connection with the purchase of their goods and/or services. These fees are recognized when we satisfy the performance obligation by simultaneously approving a card holder's purchase at the point of sale and remitting payment to the merchant. We recognized interchange fees of \$71 million, \$101 million and \$88 million during the years ended December 31, 2020, 2019 and 2018, respectively. Annual fees on credit cards, net of direct lending costs, are billed upfront and recognized on a straight-line basis over one year. Other credit card fees such as cash advance and over-limit fees are transaction based and are recognized and billed at the point in time the transaction occurs which is when the performance obligation is met. Costs related to our credit card rewards program vary based on multiple factors including card holder activity, card holder reward redemption rates and card holder reward selections. These costs are recorded when the rewards are earned by the customer and are presented as a reduction to credit card fees. Credit card rewards program costs totaled \$41 million, \$44 million and \$45 million during the years ended December 31, 2020, 2019 and 2018, respectively.

Trust and investment management fees Trust and investment management fees include investment management and administration fees which are typically billed as a percentage of the average value of a customer's assets during an agreed payment period or for some contracts, the value of a customer's assets at the end of an agreed payment period and therefore represent variable consideration. The fee percentage and payment period are agreed with the customer upfront. Generally, payment periods are monthly or quarterly and coincide with our reporting periods, thereby resolving the uncertainty of the variable consideration by the reporting date. For payment periods that do not coincide with our reporting periods, judgment is required to estimate the fee and determine the amount to include in an accrual. An accrual is only recorded to the extent it is highly probable that a significant reversal of revenue will not occur. In most cases, a significant reversal of revenue is not highly probable. Other trust and investment management fees are transaction based and are recognized and billed at the point in time the transaction occurs which is when the performance obligation is met. From time to time, we may also receive

performance fees from some funds, though these fees are typically only recognized when the performance fee is determinable and the uncertainty of the variable consideration is resolved.

Account services We provide services for commercial and consumer customer accounts that generate fees from various activities including: account statements, ATM transactions, cash withdrawals, wire transfers, remittances, check cashing, debit cards and internet and phone banking. The fees for these services are established in the customer account agreement and are either billed individually at the time the service is performed or on a monthly basis for a package or bundle of services as the services are performed. The performance obligation for these services is met when the services are performed. Customer account agreements typically include a package of services with multiple performance obligations or a bundle of services making up a single performance obligation. In the case of a package of services, the pattern of transfer to the customer is usually the same for all services, and therefore the package of services is treated as a single performance obligation. In some cases, a package or bundle of services is billed upfront as an annual fee and recognized on a straight-line basis over one year as the services are performed and the performance obligation is met.

Credit facilities Credit facilities fees include fees generated from lending activities that are not included in the direct loan origination fees which are recognized in interest income as an adjustment to yield. This includes fees associated with loan commitments, revolving credit facilities, standby letters of credit, loan syndication and other transaction based fees. These fees are either billed as a fixed price or as a percentage of the approved lending limit or transaction value. The fee percentage is agreed with the customer upfront. Although the percentage-based fees represent variable consideration, the uncertainty of the variable consideration is resolved by the time the revenue is recognized as the lending limit or transaction value is known on the contract or transaction date. Loan syndication fees received for managing a syndication and other transaction based fees are recognized and billed at the point in time the transaction occurs, which is when the performance obligation is met. Fees associated with loan commitments, revolving credit facilities and standby letters of credit are billed upfront and recognized on a straight-line basis over the period the service is performed which is when the performance obligation is met (e.g., the commitment period). In the event a loan commitment or standby letter of credit is exercised, the remaining unamortized fee is recognized as an adjustment to yield over the loan term.

Other fees and commissions Other fees and commissions include fees received associated with various other activities such as custody services, imports/exports, clearing and other miscellaneous services. These fees are typically transaction based and are recognized and billed at the point in time the transaction occurs which is when the performance obligation is met. Fees earned from providing customers with custody services are typically recognized and billed on a monthly basis, which is the period over which the service is performed and the performance obligation is met, as a percentage of the value of the customer's assets held in custody (calculated daily or monthly).

Servicing and other fees from HSBC affiliates We receive fees from other HSBC affiliates for providing them with various banking, wealth management 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 and are typically recognized and billed on a monthly basis over the period the service is performed or for some fees that are transaction based, at the point in time the transaction occurs, which is when the performance obligation is met. See Note 23, "Related Party Transactions," for additional information regarding the various services provided and other transactions with HSBC affiliates.

Insurance We earn commissions from the sale of third-party insurance policies which are typically recognized on a weekly or monthly basis, when the policy goes into effect which is when the performance obligation is met.

Deferred Fee Income

Information related to deferred fee income on loan commitments, revolving credit facilities and standby letters of credit is included in Note 27, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," and Note 28, "Fair Value Measurements." Excluding these items, we had deferred fee income related to certain account service fees that are paid upfront and recognized over the service period and annual fees on credit cards which collectively was \$3 million and \$2 million at December 31, 2020 and 2019, respectively. We expect to recognize this revenue over a remaining period of one year or less.

Other than trust and investment management fees, we do not use significant judgments in the determination of the amount and timing of fee income from contracts with customers. Additionally, costs to obtain or fulfill contracts with customers were immaterial.

23. 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, 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,	2020	2019
	(in millions)	
Assets:		
Cash and due from banks	\$ 516	\$ 850
Interest bearing deposits with banks	187	40
Securities purchased under agreements to resell ⁽¹⁾	3,941	4,600
Trading assets	314	79
Loans	1,100	2,343
Other ⁽²⁾	319	456
Total assets	<u>\$ 6,377</u>	<u>\$ 8,368</u>
Liabilities:		
Deposits	\$ 15,163	\$ 9,000
Trading liabilities ⁽³⁾	2,375	293
Short-term borrowings	270	1,166
Long-term debt	2,878	7,848
Other ⁽²⁾	268	931
Total liabilities	<u>\$ 20,954</u>	<u>\$ 19,238</u>

⁽¹⁾ Reflects purchases of securities under 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.

⁽³⁾ The increase in trading liabilities at December 31, 2020 primarily reflects an increase in borrowing of gold inventory from HSBC Bank plc to support client activity levels.

Year Ended December 31,	2020	2019	2018
	(in millions)		
Income (Expense):			
Interest income	\$ 55	\$ 168	\$ 107
Interest expense	(354)	(538)	(367)
Net interest expense	(299)	(370)	(260)
Trading revenue (expense)	(93)	(2,669)	1,370
Servicing and other fees from HSBC affiliates:			
HSBC Bank plc	186	171	176
HSBC Markets (USA) Inc. ("HMUS")	107	111	112
Other HSBC affiliates	54	72	68
Total servicing and other fees from HSBC affiliates	347	354	356
Gain (loss) on instruments designated at fair value and related derivatives	699	1,986	(1,052)
Support services from HSBC affiliates:			
HTSU	(1,066)	(1,153)	(1,198)
HMUS	(89)	(100)	(105)
Other HSBC affiliates	(396)	(385)	(300)
Total support services from HSBC affiliates	(1,551)	(1,638)	(1,603)
Rental income from HSBC affiliates, net ⁽¹⁾	44	55	48
Stock based compensation expense ⁽²⁾	(22)	(25)	(25)

⁽¹⁾ We receive rental income from our affiliates, and in some cases pay rental expense to our affiliates, for rent on certain office space. Net rental income from our affiliates is recorded as a component of occupancy expense, net in our consolidated statement of income (loss).

⁽²⁾ 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 21, "Pension and Other Postretirement Benefits."

Funding Arrangements with HSBC Affiliates:

We use HSBC affiliates to fund a portion of our borrowing and liquidity needs. At December 31, 2020 and 2019, long-term debt with affiliates reflected \$2.9 billion and \$7.8 billion, respectively, of borrowings from HSBC North America. During 2020, \$5.0 billion of these borrowings were recharacterized as time deposits, including \$1.5 billion of fixed-rate senior debt which matures in March 2021, \$2.0 billion of fixed-rate senior debt which matures in May 2021 and \$1.5 billion of fixed-rate senior debt which matures in March 2026. The remaining outstanding balances include \$0.9 billion of floating-rate subordinated debt which matures in May 2025 and \$2.0 billion of fixed-rate senior debt which matures in September 2025.

At December 31, 2019, we had a \$150 million uncommitted line of credit with HSBC North America. During 2020, this credit facility was terminated and replaced by a \$4.0 billion uncommitted line of credit with HSBC North America. The available borrowing capacity under this new facility is fungible between HSBC USA, HSBC Securities (USA) Inc. ("HSI") and HSBC North America, but total borrowings cannot collectively exceed \$4.0 billion at any time. There was no outstanding balance under these credit facilities at either December 31, 2020 or 2019.

We have also incurred short-term borrowings with certain affiliates, largely securities sold under repurchase agreements with HSI. In addition, certain affiliates have also placed deposits with us.

Lending and Derivative Related Arrangements Extended to HSBC Affiliates:

At December 31, 2020 and 2019, we had the following loan balances outstanding with HSBC affiliates:

At December 31,	2020	2019
	(in millions)	
HMUS and subsidiaries	\$ 1,088	\$ 2,296
Other short-term affiliate lending	12	47
Total loans	\$ 1,100	\$ 2,343

HMUS and subsidiaries We have extended loans and lines of credit, some of them uncommitted, to HMUS and its subsidiaries in the amount of \$12.0 billion at both December 31, 2020 and 2019, of which \$1.1 billion and \$2.3 billion, respectively, was

outstanding. The maturities of the 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.

We have extended lines of credit to various other HSBC affiliates totaling \$4.7 billion which did not have any outstanding balances at either December 31, 2020 or 2019.

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, 2020 and 2019, there were \$12 million and \$47 million, respectively, of these loans outstanding.

Derivative contracts 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 Bank plc and other HSBC affiliates. The notional value of derivative contracts related to these transactions was approximately \$923.6 billion and \$1,111.5 billion at December 31, 2020 and 2019, 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 \$66 million and \$90 million at December 31, 2020 and 2019, 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.

As discussed further in Note 3, "Strategic Initiatives," during 2020, we began to transfer certain interest rate derivative contracts to HSBC Bank plc as part of our Restructuring Plan.

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:

- HSBC North America's technology and support services, including risk management, compliance, operations, finance, tax, legal, human resources, corporate affairs and other shared services, 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 other subsidiaries of HSBC, including HSBC Global Services Limited an HSBC subsidiary located outside of the United States, to provide various support services to our operations, including among other areas, information technology, software development, customer service, collection, risk management and accounting. 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 also receive fees from HSI for providing certain wealth management services to them. The fees we receive from HSI are included in servicing and other fees from HSBC affiliates.
- We receive fees from other subsidiaries of HSBC, including HSBC Bank plc, 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:

At both December 31, 2020 and 2019, we had \$1,265 million of non-cumulative preferred stock issued and outstanding to HSBC North America. See Note 18, "Preferred Stock," for additional details.

During 2019, we paid a distribution on our common stock of \$2.4 billion from surplus capital to HSBC North America. See Note 25, "Retained Earnings and Regulatory Capital Requirements," for additional details.

24. Business Segments

We have four distinct business segments that we utilize for management reporting and analysis purposes, which are aligned with HSBC's global business strategy: Wealth and Personal Banking ("WPB") which was created in 2020 and is discussed further below, Commercial Banking ("CMB"), Global Banking and Markets ("GBM") and a Corporate Center ("CC").

We previously announced as part of our Restructuring Plan that we would combine our Retail Banking and Wealth Management ("RBWM") and Private Banking ("PB") businesses to create a single WPB business. During 2020, we implemented a change to our internal management reporting to report what was historically RBWM and PB together within a newly created WPB segment and, as a result, we have aligned our segment reporting to reflect this change for all periods presented.

During 2020, we also decided to implement a change to our internal management reporting to allocate Balance Sheet Management, which was historically reported within the CC segment, to the WPB, CMB and GBM businesses to better align the revenue and expense to the businesses generating or utilizing this activity. As a result, we have aligned our segment reporting to reflect this change for all periods presented. During the fourth quarter of 2020, Balance Sheet Management was renamed Markets Treasury.

The following tables summarize the impact of these changes on reported segment profit (loss) before tax, total assets and total deposits for the periods below:

	Year Ended December 31, 2019		Year Ended December 31, 2018	
	As Previously Reported	After Reporting Changes	As Previously Reported	After Reporting Changes
(in millions)				
Segment profit (loss) before tax:				
RBWM.....	\$ (465)	NR	\$ (138)	NR
WPB.....	NR	\$ (412)	NR	\$ (47)
CMB.....	410	432	477	502
GBM.....	472	571	721	834
PB.....	(9)	NR	13	NR
CC.....	(52)	(235)	(344)	(560)

NR Not Reported

	At December 31, 2019		At December 31, 2018	
	As Previously Reported	After Reporting Changes	As Previously Reported	After Reporting Changes
(in millions)				
Segment total assets:				
RBWM ⁽¹⁾	\$ 19,429	NR	\$ 19,000	NR
WPB.....	NR	\$ 50,851	NR	\$ 53,298
CMB.....	25,737	34,241	25,047	34,214
GBM.....	88,440	126,710	73,187	112,911
PB ⁽¹⁾	7,326	NR	6,797	NR
CC.....	73,291	2,421	79,344	2,952
Segment total deposits:				
RBWM.....	\$ 37,009	NR	\$ 32,612	NR
WPB.....	NR	\$ 44,553	NR	\$ 41,806
CMB.....	29,632	29,986	23,604	23,938
GBM.....	27,605	29,050	30,181	31,627
PB.....	6,539	NR	8,193	NR
CC.....	2,804	—	2,781	—

⁽¹⁾ Segment total assets included goodwill that was previously allocated to RBWM and PB of \$372 million and \$321 million, respectively, at December 31, 2019 and \$581 million and \$321 million, respectively, at December 31, 2018.

NR Not Reported

There have been no additional changes in the basis of our segmentation as compared with the presentation in our Annual Report on Form 10-K for the year ended December 31, 2019 ("2019 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 that includes both interest rate and liquidity components. 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 that incorporate both repricing (interest rate risk) and tenor (liquidity) characteristics. The objective of these charges/credits is to transfer interest rate risk to one centralized unit in Markets Treasury. Markets Treasury income statement and balance sheet results are allocated to each of the global businesses based upon tangible equity levels and levels of any surplus liabilities.

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 have not been eliminated, and we generally account for them 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. 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.

There have been no changes in the measurement of segment profit as compared with the presentation in our 2019 Form 10-K.

A summary of significant differences between U.S. GAAP and the Group Reporting Basis as they impact our results is presented below:

Net Interest Income

Loan origination - The scope of loan origination costs deferred is more stringent under the Group Reporting Basis and generally results in lower costs being deferred than permitted under U.S. GAAP. In addition, deferred loan origination fees, costs and loan premiums are generally amortized to earnings 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 are generally amortized to earnings based on either a contractual or expected life basis. In the case of credit cards, while under the Group Reporting Basis deferred costs are amortized over the expected life of the credit card relationship, they are amortized over a shorter period of one year under U.S. GAAP.

Leases - In 2019, new accounting guidance was adopted for leases under both the Group Reporting Basis and U.S. GAAP. Under the Group Reporting Basis, all leases are recognized as financing arrangements with interest expense on the lease liability recognized separately from depreciation of the ROU asset, which generally results in a front-loaded pattern of total lease expense. Under U.S. GAAP, expense on operating leases is generally recognized on a straight-line basis in operating expenses.

Deposit incentives - Under the Group Reporting Basis, costs associated with cash back incentives offered on customer deposits are deferred and amortized to interest expense over the incentive period, while under U.S. GAAP, such costs are recognized immediately in operating expenses.

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 credit losses continue to be measured in accordance with IFRS 9, "Financial Instruments" ("IFRS 9"), 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 provision for credit losses while the component related to interest rates and liquidity factors is recorded in other revenues. Changes in the lower of amortized cost or fair value after the initial transfer to held for sale are recorded in other revenues to the extent permissible.

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 gains and losses 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 to the extent permissible.

Renewable energy tax credit investments - Under the Group Reporting Basis, renewable energy tax credit investments are measured at fair value, with changes in fair value recognized in earnings. Under U.S. GAAP, certain of 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 (benefit).

Low income housing tax credit investments - Under the Group Reporting Basis, the amortization of our investment balance and associated tax benefits are presented net in other operating income. Under U.S. GAAP, amortization of our investment balance and associated tax benefits are presented net in income tax expense (benefit).

Debt extinguishment - During 2019, extinguishment of long-term debt resulted in a gain under U.S. GAAP compared with a loss under the Group Reporting Basis. As we previously elected to apply fair value option accounting to this debt, under U.S. GAAP, the extinguishment resulted in the realization of a gain associated with our own credit spread that was previously recorded in AOCI which more than offset the premium paid to extinguish the debt. Under the Group Reporting Basis, the gain associated with our own credit spread remains in equity and does not get recognized in earnings.

Expected Credit Losses (Provision for Credit Losses)

Expected credit losses - As discussed further in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," on January 1, 2020, we adopted new accounting guidance under U.S. GAAP which requires entities to recognize an allowance for credit losses based on lifetime ECL. However, under the Group Reporting Basis only financial assets which are considered to have experienced a significant increase in credit risk ("stage 2") or for which there is objective evidence of impairment ("stage 3") require an allowance based on lifetime ECL. Under the Group Reporting Basis, financial assets at initial recognition and which have not experienced a significant increase in credit risk since initial recognition are considered to be in "stage 1" and only require an allowance based on expected credit losses resulting from default events that are possible within the next 12 months ("12-month ECL"). Under the Group Reporting Basis, a majority of our loans are considered to be in stage 1 and only a 12-month ECL is recorded. Primarily as a result of this difference, the allowance for credit losses is higher under U.S. GAAP than under the Group Reporting Basis in 2020.

Prior to 2020, we maintained an allowance for credit losses under U.S. GAAP that reflected our estimate of probable incurred losses in the existing loan portfolio, while under the Group Reporting Basis, we used the ECL approach as discussed above. For commercial loans collectively evaluated for impairment, we utilized a loss emergence period greater than 12 months for calculating the allowance for credit losses under U.S. GAAP, while under the Group Reporting Basis, a loss emergence period is not applicable. Under the Group Reporting Basis, a majority of our commercial loans were considered to be in stage 1 and only a 12-month ECL was recorded. Primarily as a result of the different approaches, the allowance for credit losses for commercial loans was higher under U.S. GAAP than under the Group Reporting Basis in 2019 and 2018.

In addition to the differences discussed above, under the Group Reporting Basis, the allowance for credit losses includes estimated ECL arising from expected future draws on unused credit card lines, while under U.S. GAAP, unused credit card lines are considered unconditionally cancellable and expected future draws are not reserved for. Also, the new accounting guidance adopted under U.S. GAAP in 2020 requires inclusion of expected recoveries, limited to the cumulative amount of prior write-offs, when estimating the allowance for credit losses for in scope financial assets (including collateral-dependent assets), which results in an impact to earnings substantially consistent with the Group Reporting Basis. Prior to 2020, these expected recoveries were not recognized under U.S. GAAP.

Operating Expenses

Other long-lived assets impairment - A long-lived asset group is tested for impairment when events or changes in circumstances indicate that the carrying amount of a long-lived asset group might not be recoverable. Under U.S. GAAP, if the estimated undiscounted cash flows of the long-lived asset group exceed its carrying amount, an impairment is not recognized. However, if the estimated undiscounted cash flows are less than the carrying amount of the long-lived asset group, a second step is performed to determine fair value and an impairment loss is required if the carrying amount of the long-lived asset group exceeds fair value. Under the Group Reporting Basis, there is no separate undiscounted cash flow test and an impairment loss is recognized if the carrying amount of the cash generating unit exceeds the higher of its value in use or fair value less costs to sell. In 2020, we recorded an impairment charge under the Group Reporting Basis related to the write-off of all the capitalized software and a portion of the leasehold improvements associated with our WPB business segment. Under U.S. GAAP, the estimated undiscounted cash flows of the long-lived asset group exceeded its carrying amount and no impairment charge was required. Consequently, the carrying amounts of capitalized software and leasehold improvements are higher under U.S. GAAP than under the Group Reporting Basis and, as a result, corresponding amortization expense is higher under U.S. GAAP.

Goodwill impairment - 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 and, therefore, lower impairment charges under the Group Reporting Basis.

Deposit incentives - As discussed more fully above under "Net Interest Income," incentive costs on customer deposits are deferred and amortized to interest expense under the Group Reporting Basis, while under U.S. GAAP, such costs are recognized immediately in operating expenses.

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.

Pension and other postretirement benefit costs - Under U.S. GAAP, pension expense includes 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). However, 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 2020 and 2019, pension expense was lower under U.S. GAAP due primarily to the benefit of higher expected returns on plan assets. In 2018, pension expense was higher under U.S. GAAP due primarily to the impact of an immaterial out of period adjustment which increased pension expense under U.S. GAAP by \$10 million in connection with pension valuation changes related to prior years. Under the Group Reporting Basis, this expense was recorded directly to retained earnings.

Leases - As discussed more fully above under "Net Interest Income," beginning in 2019, all leases are recognized as financing arrangements under the Group Reporting Basis with interest expense on the lease liability recognized separately from depreciation of the ROU asset. Under U.S. GAAP, expense on operating leases is generally recognized on a straight-line basis in operating expenses.

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 may create 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.

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.

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 interest is accrued, 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 allowance - As discussed more fully above under "Expected Credit Losses (Provision for Credit Losses)," beginning in 2020, under U.S. GAAP, the allowance for credit losses is recognized based on lifetime ECL. Prior to 2020, we used an incurred loss approach for estimating credit losses under U.S. GAAP which, for commercial loans collectively evaluated for impairment, included the utilization of a loss emergence period greater than 12 months. Under the Group Reporting Basis, the allowance for credit losses in all periods is recognized based on expected credit losses, however, financial assets which have not experienced a significant increase in credit risk since initial recognition only require an allowance based on a 12-month ECL.

Other long-lived assets - As discussed more fully above under "Operating Expenses," in 2020, we recorded an impairment charge under the Group Reporting Basis related to the write-off of all the capitalized software and a portion of the leasehold improvements associated with our WPB business segment. Consequently, the carrying amounts of capitalized software and leasehold improvements are higher 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. Methods, assumptions and reporting groups used to calculate impairment under the Group Reporting Basis may differ locally from that utilized by HSBC.

Securities transferred to held-to-maturity - During 2014, we transferred securities from available-for-sale to held-to-maturity. Under the Group Reporting Basis, the remaining unamortized net pretax unrealized losses related to the transferred securities were adjusted against the carrying value of the securities held-to-maturity, while under U.S. GAAP, such unrealized losses are included in AOCI and are being amortized over the remaining contractual life of each security as an adjustment to yield.

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							
	WPB	CMB	GBM	CC	Total	Group Reporting Basis Adjustments ⁽¹⁾	Group Reporting Basis Reclassifications ⁽²⁾	U.S. GAAP Consolidated Totals
	(in millions)							
Year Ended December 31, 2020								
Net interest income (expense).....	\$ 837	\$ 821	\$ 398	\$ (30)	\$ 2,026	\$ 9	\$ 139	\$ 2,174
Other operating income.....	368	234	970	129	1,701	(46)	(120)	1,535
Total operating income.....	1,205	1,055	1,368	99	3,727	(37)	19	3,709
Expected credit losses / provision for credit losses.....	189	293	140	—	622	188	—	810
	1,016	762	1,228	99	3,105	(225)	19	2,899
Operating expenses.....	2,203	587	841	403	4,034	(172)	19	3,881
Profit (loss) before income tax.....	\$ (1,187)	\$ 175	\$ 387	\$ (304)	\$ (929)	\$ (53)	\$ —	\$ (982)
Balances at end of period:								
Total assets.....	\$ 59,200	\$ 36,354	\$ 132,363	\$ 1,760	\$ 229,677	\$ (33,243)	\$ —	\$ 196,434
Total loans, net.....	24,048	23,377	12,064	—	59,489	(2,307)	3,891	61,073
Goodwill.....	—	358	—	—	358	100	—	458
Total deposits.....	50,000	42,369	44,668	—	137,037	(4,253)	12,366	145,150
Year Ended December 31, 2019								
Net interest income (expense).....	\$ 1,018	\$ 829	\$ 521	\$ (65)	\$ 2,303	\$ 13	\$ (204)	\$ 2,112
Other operating income.....	330	239	900	68	1,537	102	215	1,854
Total operating income.....	1,348	1,068	1,421	3	3,840	115	11	3,966
Expected credit losses / provision for credit losses.....	115	55	1	—	171	32	(8)	195
	1,233	1,013	1,420	3	3,669	83	19	3,771
Operating expenses.....	1,645	581	849	238	3,313	169	19	3,501
Profit (loss) before income tax.....	\$ (412)	\$ 432	\$ 571	\$ (235)	\$ 356	\$ (86)	\$ —	\$ 270
Balances at end of period:								
Total assets.....	\$ 50,851	\$ 34,241	\$ 126,710	\$ 2,421	\$ 214,223	\$ (38,848)	\$ —	\$ 175,375
Total loans, net.....	24,243	24,647	17,559	—	66,449	(2,965)	4,432	67,916
Goodwill.....	693	358	—	—	1,051	191	—	1,242
Total deposits.....	44,553	29,986	29,050	—	103,589	(4,747)	20,851	119,693
Year Ended December 31, 2018								
Net interest income (expense).....	\$ 1,132	\$ 821	\$ 712	\$ (106)	\$ 2,559	\$ (16)	\$ (291)	\$ 2,252
Other operating income.....	394	234	788	188	1,604	(9)	304	1,899
Total operating income.....	1,526	1,055	1,500	82	4,163	(25)	13	4,151
Expected credit losses / provision for credit losses.....	35	(42)	(192)	—	(199)	115	11	(73)
	1,491	1,097	1,692	82	4,362	(140)	2	4,224
Operating expenses.....	1,538	595	858	642	3,633	3	2	3,638
Profit (loss) before income tax.....	\$ (47)	\$ 502	\$ 834	\$ (560)	\$ 729	\$ (143)	\$ —	\$ 586
Balances at end of period:								
Total assets.....	\$ 53,298	\$ 34,214	\$ 112,911	\$ 2,952	\$ 203,375	\$ (30,927)	\$ —	\$ 172,448
Total loans, net.....	23,209	24,105	19,726	—	67,040	(2,428)	3,825	68,437
Goodwill.....	902	358	—	—	1,260	347	—	1,607
Total deposits.....	41,806	23,938	31,627	—	97,371	(2,017)	15,601	110,955

- ⁽¹⁾ 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, 2020						
Deposit incentives	\$ 14	\$ —	\$ —	\$ 21	\$ (7)	\$ (28)
Derivatives	—	—	—	—	—	(33,163)
Expected credit losses	(4)	—	200	—	(204)	(357)
Goodwill impairment	—	—	—	91	(91)	100
Leases	23	—	—	14	9	33
Loan origination	(24)	(2)	—	(20)	(6)	18
Loans held for sale	—	(25)	(12)	—	(13)	—
Other long-lived assets impairment	—	—	—	(264)	264	201
Pension and other postretirement benefit costs	—	—	—	(15)	15	—
Renewable energy tax credit investments	—	(11)	—	—	(11)	2
Securities transferred to held-to-maturity	—	—	—	—	—	(38)
Other	—	(8)	—	1	(9)	(11)
Total adjustments	\$ 9	\$ (46)	\$ 188	\$ (172)	\$ (53)	\$ (33,243)
December 31, 2019						
Debt extinguishment	\$ —	\$ 123	\$ —	\$ —	\$ 123	\$ —
Deposit incentives	15	—	—	32	(17)	(23)
Derivatives	—	—	—	—	—	(38,651)
Expected credit losses	(3)	(1)	32	—	(36)	(357)
Goodwill impairment	—	—	—	156	(156)	191
Leases	25	—	—	8	17	15
Loan origination	(27)	—	—	(19)	(8)	38
Loans held for sale	2	(1)	—	—	1	(5)
Pension and other postretirement benefit costs	—	—	—	(12)	12	—
Renewable energy tax credit investments	—	(7)	—	—	(7)	3
Securities transferred to held-to-maturity	—	—	—	—	—	(65)
Other	1	(12)	—	4	(15)	6
Total adjustments	\$ 13	\$ 102	\$ 32	\$ 169	\$ (86)	\$ (38,848)
December 31, 2018						
Deposit incentives	\$ 9	\$ —	\$ —	\$ 20	\$ (11)	\$ (10)
Derivatives	—	—	—	—	—	(30,866)
Expected credit losses	(6)	—	118	—	(124)	(386)
Goodwill	—	—	—	—	—	347
Loan origination	(29)	(3)	—	(14)	(18)	45
Loans held for sale	9	6	(3)	—	18	45
Pension and other postretirement benefit costs	—	—	—	8	(8)	(44)
Renewable energy tax credit investments	—	(10)	—	—	(10)	3
Securities transferred to held-to-maturity	—	—	—	—	—	(76)
Other	1	(2)	—	(11)	10	15
Total adjustments	\$ (16)	\$ (9)	\$ 115	\$ 3	\$ (143)	\$ (30,927)

- ⁽²⁾ Represents differences in financial statement presentation between U.S. GAAP and the Group Reporting Basis.

25. 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 from the Office of the Comptroller of the Currency ("OCC") 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. OCC approval also is required for a reduction of permanent capital of HSBC Bank USA. 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.

In March 2020, the FRB announced it had eliminated its reserve requirement. Prior to the announcement, HSBC Bank USA was 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, 2019, HSBC Bank USA was required to maintain \$2,475 million of reserve balances with the Federal Reserve Bank which were reported within interest bearing deposits with banks on the consolidated balance sheet.

We are subject to regulatory capital rules issued by U.S. banking regulators including Basel III (the "Basel III rule"). 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. The following table summarizes the capital amounts and ratios of HSBC USA and HSBC Bank USA, calculated in accordance with the Basel III rule at December 31, 2020 and 2019:

	December 31, 2020			December 31, 2019		
	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	\$ 15,891	4.5 % ⁽²⁾	14.7 %	\$ 15,876	4.5 % ⁽²⁾	13.1 %
HSBC Bank USA	18,180	6.5	17.2	18,043	6.5	15.2
Tier 1 capital ratio:						
HSBC USA	17,156	6.0	15.9	17,141	6.0	14.1
HSBC Bank USA	20,680	8.0	19.6	20,543	8.0	17.3
Total capital ratio:						
HSBC USA	20,680	10.0	19.2	19,743	10.0	16.3
HSBC Bank USA	23,303	10.0	22.0	22,724	10.0	19.2
Tier 1 leverage ratio:						
HSBC USA	17,156	4.0 ⁽²⁾	8.6	17,141	4.0 ⁽²⁾	9.9
HSBC Bank USA	20,680	5.0	10.3	20,543	5.0	12.0
Supplementary leverage ratio ("SLR"):						
HSBC USA	17,156	3.0 ⁽³⁾	7.8	17,141	3.0 ⁽³⁾	6.9
HSBC Bank USA	20,680	3.0 ⁽³⁾	9.3	20,543	3.0 ⁽³⁾	8.4
Risk-weighted assets: ⁽⁴⁾						
HSBC USA	107,808			121,407		
HSBC Bank USA	105,681			118,618		
Adjusted quarterly average assets: ⁽⁵⁾						
HSBC USA	198,698			173,270		
HSBC Bank USA	200,026			170,722		
Total leverage exposure: ⁽⁶⁾						
HSBC USA	221,216			247,590		
HSBC Bank USA	221,334			244,008		

⁽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 maintain capital equal to or in excess of 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 minimums.
- (3) There is no SLR component in the definition of a well-capitalized banking institution. The ratios shown are the regulatory minimums.
- (4) Calculated using the generally-applicable Standardized Approach.
- (5) Represents the Tier 1 leverage ratio denominator which reflects quarterly average assets adjusted for amounts permitted to be deducted from Tier 1 capital.
- (6) Represents the SLR denominator which includes adjusted quarterly average assets plus certain off-balance sheet exposures.

In 2019, the FRB and the other federal banking agencies jointly finalized rules to implement the Economic Growth, Regulatory Relief and Consumer Protection Act ("Relief Act") that tailor the application of the enhanced prudential standards for large bank holding companies and foreign banking organizations (the "Tailoring Rules"). Under the Tailoring Rules, Category III firms, such as HSBC North America, and their depository institution subsidiaries, such as HSBC Bank USA, are permitted to opt-out of the requirement to recognize most elements of AOCI in regulatory capital. As a result, HSBC North America and HSBC Bank USA, made a one-time election to opt-out of the requirement to include all components of AOCI (with the exception of accumulated net gains and losses on cash flow hedges related to items that are not carried at fair value on the consolidated balance sheet) in common equity Tier 1 capital, effective beginning with March 31, 2020 reporting. At December 31, 2019, HSBC North America and HSBC Bank USA were required to include all components of AOCI in regulatory capital.

In response to the COVID-19 pandemic, the federal banking agencies issued a final rule that provides the option to transition in the regulatory capital impacts of the new current expected credit loss accounting standard over a five-year period. HSBC North America and HSBC Bank USA have elected the five-year transition option and, as a result, beginning in 2020, our capital ratios are reported in accordance with the transition rules in the final rule. Accordingly, during 2020 and 2021, we will exclude from regulatory capital the change in retained earnings resulting from adoption of the new accounting standard on January 1, 2020 as well as 25 percent of the change in the allowance for credit losses recognized between January 1, 2020 and December 31, 2021. Beginning January 1, 2022, the excluded impacts will be phased in to regulatory capital over a three-year transition period and will be fully reflected at January 1, 2025.

Also in response to the COVID-19 pandemic, the FRB issued a final rule adopting a temporary change to the calculation of the SLR that permits intermediate holding companies, such as HSBC North America, to exclude U.S. Treasury securities and deposits at Federal Reserve Banks from the denominator of their SLR. This change, which took effect April 1, 2020, will remain in place until at least March 31, 2021 and is designed to allow banking institutions to expand their balance sheets to accommodate increased customer deposits while continuing to provide credit to companies and households. The federal banking agencies have also issued a final rule that permits depository institutions such as HSBC Bank USA to exclude temporarily U.S. Treasury securities and deposits at Federal Reserve Banks from the denominator of their SLR. This change took effect June 1, 2020 and will remain in place until March 31, 2021 although it may be extended if the adverse economic impacts of the COVID-19 pandemic persist.

During 2020 and 2019, 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.

During 2019, HSBC USA received a common stock return of capital of \$2.4 billion from its subsidiary, HSBC Bank USA, and paid a distribution on its common stock of \$2.4 billion from surplus capital to its parent, HSBC North America.

26. *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, 2020 and 2019 which are consolidated on our balance sheet. Assets and liabilities exclude intercompany balances that eliminate in consolidation.

	December 31, 2020		December 31, 2019	
	Consolidated Assets	Consolidated Liabilities	Consolidated Assets	Consolidated Liabilities
	(in millions)			
Low income housing limited liability partnership:				
Other assets	\$ 79	\$ —	\$ 98	\$ —
Interest, taxes and other liabilities	—	9	—	38
Subtotal	79	9	98	38
Venture debt financing entity:				
Loans	10	—	—	—
Interest, taxes and other liabilities	—	1	—	—
Subtotal	10	1	—	—
Total	\$ 89	\$ 10	\$ 98	\$ 38

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 was mandatorily redeemable. 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 were the primary beneficiary of the LLP due to the nature of our continuing involvement and, as a result, we consolidated the LLP and reported the equity interest issued to the third party investor in long-term debt 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. In 2019, the equity interest issued to the third party investor was redeemed.

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 (benefit).

Venture debt financing entity In 2019, HSBC USA organized and provided equity financing to HSBC Ventures USA Inc. ("HSBC Ventures"), an entity designed to provide debt financing to venture capital-backed companies generally in the form of term or revolving loans, or loan commitments. Given the typically early stage and development of the companies, the loans are typically collateralized by all of the company's assets and intellectual property, or by specific items such as receivables or equipment. The loan terms may, at times, also include warrants for company stock granting HSBC Ventures a share of the financial returns in case of a positive realization event. HSBC USA also provides debt financing to HSBC Ventures in the form of loans on an as-needed basis. HSBC Ventures is a VIE because it does not have sufficient equity investment at risk to finance its activities. As the sole investor, HSBC USA is considered to be the primary beneficiary because it has the obligation to absorb losses and the right to receive benefits that could be potentially significant to HSBC Ventures. As a result, we consolidate HSBC Ventures and report the third party loans and warrants, if any, on our consolidated balance sheet.

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 involvement in these VIEs, at December 31, 2020 and 2019:

	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, 2020				
Limited partnership investments.....	\$ 4,266	\$ 629	\$ 285	\$ 629
At December 31, 2019				
Structured note vehicles.....	\$ 1,524	\$ 510	\$ 9	\$ 1,515
Limited partnership investments.....	2,160	561	300	562
Total.....	\$ 3,684	\$ 1,071	\$ 309	\$ 2,077

Information on the types of VIEs with which we are involved, the nature of our involvement and the variable interests held in those entities is presented below.

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 as well as any outstanding funding commitments extended to the partnerships.

Structured note vehicles During the third quarter of 2020, the one remaining structured note vehicle was unwound and our investment in the structured note vehicle along with the related derivatives were terminated, resulting in a net loss on sale that was not significant. At the time of unwind, our investment in the structured note vehicle had a total carrying value of \$501 million, which was recorded in trading assets on the consolidated balance sheet. Prior to the third quarter of 2020, we provided derivatives, such as interest rate and currency swaps, to structured note vehicles and, in certain instances, invested in the vehicles' debt instruments. We held variable interests in these structured note vehicles in the form of total return swaps under which we took on the risks and benefits of the structured notes they issued. The same risks and benefits were passed on to third party entities through back-end total return swaps. We earned a spread for facilitating the transaction. Since we did not have the power to direct the activities of the VIE and was not the primary beneficiary, we did not consolidate them. We recorded all investments in, and derivative contracts with, unconsolidated structured note vehicles at fair value on our consolidated balance sheet.

During 2019, 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 loss of \$39 million, reflecting a payment made to the derivative counterparty as a result of the termination. At the time of unwind, our investment in the structured note vehicle had a total carrying value of \$1,293 million, which was recorded in trading assets on the consolidated balance sheet.

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 4, "Trading Assets and Liabilities," Note 5, "Securities," and Note 28, "Fair Value Measurements," and, therefore, are not disclosed in this note to avoid redundancy.

27. 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, 2020 and 2019. Following the table is a description of the various arrangements.

	December 31, 2020		December 31, 2019	
	Carrying Value	Notional / Maximum Exposure to Loss	Carrying Value	Notional / Maximum Exposure to Loss
	(in millions)			
Credit derivatives ⁽¹⁾⁽²⁾	\$ 144	\$ 19,500	\$ (63)	\$ 38,739
Financial standby letters of credit, net of participations ⁽³⁾⁽⁴⁾	—	5,703	—	5,657
Performance standby letters of credit, net of participations ⁽³⁾⁽⁴⁾	—	2,842	—	3,779
Total	<u>\$ 144</u>	<u>\$ 28,045</u>	<u>\$ (63)</u>	<u>\$ 48,175</u>

⁽¹⁾ Includes \$13,550 million and \$18,391 million of notional issued for the benefit of HSBC affiliates at December 31, 2020 and 2019, respectively.

⁽²⁾ For credit derivatives, the maximum loss is represented by the notional amounts without consideration of mitigating effects from collateral or recourse arrangements.

⁽³⁾ Includes \$1,836 million and \$1,623 million of both financial and performance standby letters of credit issued for the benefit of HSBC affiliates at December 31, 2020 and 2019, respectively.

⁽⁴⁾ 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.

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 position at any time. The following table summarizes our net credit derivative positions at December 31, 2020 and 2019:

	December 31, 2020		December 31, 2019	
	Carrying / Fair Value	Notional	Carrying / Fair Value	Notional
(in millions)				
Sell-protection credit derivative positions.....	\$ 144	\$ 19,500	\$ (63)	\$ 38,739
Buy-protection credit derivative positions.....	(74)	33,111	77	51,310
Net position ⁽¹⁾	<u>\$ 70</u>	<u>\$ 13,611</u>	<u>\$ 14</u>	<u>\$ 12,571</u>

⁽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.

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 \$44 million and \$52 million at December 31, 2020 and 2019, respectively. Also included in other liabilities is an allowance for credit losses on unfunded standby letters of credit of \$32 million and \$26 million at December 31, 2020 and 2019, 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, 2020 as an indicative proxy of payment risk:

Notional/Contractual Amounts	Average Life (in years)	Credit Ratings of the Obligors		
		Investment Grade	Non-Investment Grade	Total
(dollars are in millions)				
Sell-protection Credit Derivatives ⁽¹⁾				
Single name credit default swaps ("CDS").....	2.8	\$ 10,466	\$ 4,257	\$ 14,723
Index credit derivatives.....	3.7	1,206	3,332	4,538
Total return swaps.....	5.8	54	185	239
Subtotal.....		11,726	7,774	19,500
Standby Letters of Credit ⁽²⁾	1.0	6,362	2,183	8,545
Total.....		\$ 18,088	\$ 9,957	\$ 28,045

⁽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 described in Note 29, "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.

In 2017, we sold substantially all of our remaining Visa Class B Shares to a third party. 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 \$67 million and \$85 million at December 31, 2020 and 2019, 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. We have entered into a total return swap position to economically hedge the periodic payments made under these swap agreements. 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. In 2020, we recorded a loss of \$9 million primarily related to extending the maturity of the total return swap position used to economically hedge the periodic payments made under the swap agreements. In 2019, we recorded a loss of \$52 million related to an increase in the expected timing of the final resolution of the related litigation and, to a lesser extent, changes in the Visa Class B Share conversion rate. In 2018, we recorded a loss of \$7 million related to changes in the Visa Class B Share conversion rate. See Note 15, "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 operating leases for premises and equipment. See Note 11, "Leases," for information regarding our leases, including a maturity analysis of our operating lease liabilities.

Mortgage Loan Repurchase Obligations We originate and sell mortgage loans to third parties and provide various representations and warranties related to, 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.

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 were immaterial at December 31, 2020 and 2019.

Our estimated repurchase liability for obligations arising from the breach of representations and warranties associated with mortgage loans sold was \$3 million and \$4 million at December 31, 2020 and 2019, respectively. Our repurchase liability 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, 2020. 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 29, "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, 2020	December 31, 2019
	(in millions)	
Interest bearing deposits with banks ⁽¹⁾	\$ 2,158	\$ 2,682
Trading assets ⁽²⁾	1,265	525
Securities available-for-sale ⁽³⁾	8,652	6,814
Securities held-to-maturity ⁽³⁾	1,076	1,688
Loans ⁽⁴⁾	18,146	14,342
Other assets ⁽⁵⁾	2,352	3,517
Total	<u>\$ 33,649</u>	<u>\$ 29,568</u>

⁽¹⁾ Represents gross amount of cash on deposit with banks related to derivative collateral-support agreements, of which a majority has been netted against derivative liabilities on the consolidated balance sheet.

⁽²⁾ Trading assets are primarily pledged against liabilities associated with repurchase agreements.

⁽³⁾ 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 FHLB and the Federal Reserve Bank of New York.

⁽⁴⁾ Loans are primarily residential mortgage loans pledged against current and potential borrowings from the FHLB and the Federal Reserve Bank of New York.

⁽⁵⁾ Represents gross amount of cash on deposit with non-banks related to derivative collateral support agreements, of which a majority has been netted against derivative liabilities on the consolidated balance sheet.

Debt securities pledged as collateral under repurchase agreements 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 \$2,077 million and nil at December 31, 2020 and 2019, respectively. The fair value of trading assets that could be sold or repledged was \$1,265 million and \$336 million at December 31, 2020 and 2019, respectively.

The fair value of collateral we accepted under security resale agreements but was not reported on the consolidated balance sheet was \$41,447 million and \$19,174 million at December 31, 2020 and 2019, respectively. Of this collateral, \$41,047 million and \$18,199 million could be sold or repledged at December 31, 2020 and 2019, respectively, of which \$4,063 million and \$2,062 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, 2020 and 2019:

					Gross Amounts Not Offset in the Balance Sheet					
	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet ⁽¹⁾	Net Amounts Presented in the Balance Sheet		Financial Instruments ⁽²⁾	Cash Collateral Received / Pledged		Net Amount ⁽³⁾		
	(in millions)									
At December 31, 2020										
Assets:										
Securities purchased under resale agreements...	\$ 41,382	\$ 5,636	\$ 35,746	\$ 35,746	\$ —	\$ —				
Liabilities:										
Securities sold under repurchase agreements.....	\$ 7,401	\$ 5,636	\$ 1,765	\$ 1,762	\$ —	\$ 3				
At December 31, 2019										
Assets:										
Securities purchased under resale agreements...	\$ 19,167	\$ 1,329	\$ 17,838	\$ 17,832	\$ —	\$ 6				
Liabilities:										
Securities sold under repurchase agreements.....	\$ 2,401	\$ 1,329	\$ 1,072	\$ 1,068	\$ —	\$ 4				

⁽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, 2020 and 2019:

	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, 2020						
U.S. Treasury, U.S. Government sponsored and U.S. Government agency securities.....	\$ 4,091	\$ 2,810	\$ 500	\$ —	\$ —	\$ 7,401
At December 31, 2019						
U.S. Treasury, U.S. Government sponsored and U.S. Government agency securities.....	\$ 2,401	\$ —	\$ —	\$ —	\$ —	\$ 2,401

28. 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 guidance 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 valuation adjustment - The credit valuation 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.

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.

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, 2020 and 2019, and indicates the fair value hierarchy of the valuation techniques utilized to determine such fair value. Unless otherwise noted below, assets and liabilities in the following table are recorded at fair value through net income (loss).

December 31, 2020	Fair Value Measurements on a Recurring Basis					
	Level 1	Level 2	Level 3	Gross Balance	Netting ⁽⁶⁾	Net Balance
	(in millions)					
Assets:						
Trading assets, excluding derivatives:						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	\$ 5,145	\$ 192	\$ —	\$ 5,337	\$ —	\$ 5,337
Asset-backed securities:						
Collateralized debt obligations	—	63	—	63	—	63
Residential mortgages	—	—	15	15	—	15
Student loans	—	65	—	65	—	65
Debt securities issued by foreign entities	7,953	18	—	7,971	—	7,971
Equity securities	6,043	—	—	6,043	—	6,043
Precious metals trading	—	4,989	—	4,989	—	4,989
Derivatives: ⁽¹⁾						
Interest rate contracts	15	6,637	35	6,687	—	6,687
Foreign exchange contracts	—	18,452	15	18,467	—	18,467
Equity contracts	—	5,051	565	5,616	—	5,616
Precious metals contracts	—	1,323	—	1,323	—	1,323
Credit contracts	—	298	69	367	—	367
Other contracts ⁽²⁾	—	—	8	8	—	8
Derivatives netting	—	—	—	—	(29,616)	(29,616)
Total derivatives	15	31,761	692	32,468	(29,616)	2,852
Securities available-for-sale: ⁽³⁾						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	22,880	12,528	—	35,408	—	35,408
Asset-backed securities:						
Home equity	—	—	27	27	—	27
Other	—	—	104	104	—	104
Debt securities issued by foreign entities	1,942	3,191	—	5,133	—	5,133
Loans ⁽⁴⁾	—	32	—	32	—	32
Loans held for sale ⁽⁴⁾	—	36	—	36	—	36
Other assets:						
Equity securities	—	149	—	149	—	149
Equity securities measured at net asset value ⁽⁵⁾	—	—	—	135	—	135
Total assets	\$ 43,978	\$ 53,024	\$ 838	\$ 97,975	\$ (29,616)	\$ 68,359
Liabilities:						
Domestic deposits ⁽⁴⁾	\$ —	\$ 3,509	\$ 646	\$ 4,155	\$ —	\$ 4,155
Trading liabilities, excluding derivatives	727	2,312	—	3,039	—	3,039
Derivatives: ⁽¹⁾						
Interest rate contracts	9	6,615	1	6,625	—	6,625
Foreign exchange contracts	—	18,597	6	18,603	—	18,603
Equity contracts	—	3,845	446	4,291	—	4,291
Precious metals contracts	28	1,550	—	1,578	—	1,578
Credit contracts	—	291	6	297	—	297
Other contracts ⁽²⁾	—	—	67	67	—	67
Derivatives netting	—	—	—	—	(28,914)	(28,914)
Total derivatives	37	30,898	526	31,461	(28,914)	2,547
Long-term debt ⁽⁴⁾	—	10,277	448	10,725	—	10,725
Total liabilities	\$ 764	\$ 46,996	\$ 1,620	\$ 49,380	\$ (28,914)	\$ 20,466

December 31, 2019	Fair Value Measurements on a Recurring Basis					
	Level 1	Level 2	Level 3	Gross Balance	Netting ⁽⁶⁾	Net Balance
	(in millions)					
Assets:						
Trading assets, excluding derivatives:						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	\$ 6,763	\$ 38	\$ —	\$ 6,801	\$ —	\$ 6,801
Asset-backed securities:						
Collateralized debt obligations	—	71	—	71	—	71
Residential mortgages	—	—	17	17	—	17
Student loans	—	80	—	80	—	80
Corporate and other domestic debt securities	—	—	510	510	—	510
Debt securities issued by foreign entities	10,095	221	—	10,316	—	10,316
Equity securities	5,693	—	—	5,693	—	5,693
Precious metals trading	—	1,909	—	1,909	—	1,909
Derivatives: ⁽¹⁾						
Interest rate contracts	110	12,275	10	12,395	—	12,395
Foreign exchange contracts	80	16,456	—	16,536	—	16,536
Equity contracts	—	4,922	185	5,107	—	5,107
Precious metals contracts	70	1,085	3	1,158	—	1,158
Credit contracts	—	1,060	79	1,139	—	1,139
Other contracts ⁽²⁾	—	—	10	10	—	10
Derivatives netting	—	—	—	—	(33,193)	(33,193)
Total derivatives	260	35,798	287	36,345	(33,193)	3,152
Securities available-for-sale: ⁽³⁾						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	17,532	14,702	—	32,234	—	32,234
Asset-backed securities:						
Home equity	—	32	—	32	—	32
Other	—	—	111	111	—	111
Debt securities issued by foreign entities	3,158	128	—	3,286	—	3,286
Loans held for sale ⁽⁴⁾	—	178	—	178	—	178
Other assets:						
Equity securities	—	147	—	147	—	147
Equity securities measured at net asset value ⁽⁵⁾	—	—	—	136	—	136
Total assets	<u>\$ 43,501</u>	<u>\$ 53,304</u>	<u>\$ 925</u>	<u>\$ 97,866</u>	<u>\$ (33,193)</u>	<u>\$ 64,673</u>
Liabilities:						
Domestic deposits ⁽⁴⁾	\$ —	\$ 6,435	\$ 774	\$ 7,209	\$ —	\$ 7,209
Trading liabilities, excluding derivatives	1,182	124	—	1,306	—	1,306
Derivatives: ⁽¹⁾						
Interest rate contracts	3	13,570	—	13,573	—	13,573
Foreign exchange contracts	—	15,805	1	15,806	—	15,806
Equity contracts	—	3,955	113	4,068	—	4,068
Precious metals contracts	80	1,306	3	1,389	—	1,389
Credit contracts	—	1,048	20	1,068	—	1,068
Other contracts ⁽²⁾	—	—	85	85	—	85
Derivatives netting	—	—	—	—	(33,900)	(33,900)
Total derivatives	83	35,684	222	35,989	(33,900)	2,089
Short-term borrowings ⁽⁴⁾	—	373	—	373	—	373
Long-term debt ⁽⁴⁾	—	9,993	354	10,347	—	10,347
Total liabilities	<u>\$ 1,265</u>	<u>\$ 52,609</u>	<u>\$ 1,350</u>	<u>\$ 55,224</u>	<u>\$ (33,900)</u>	<u>\$ 21,324</u>

⁽¹⁾ Includes trading derivative assets of \$2,801 million and \$3,055 million and trading derivative liabilities of \$2,358 million and \$1,929 million at December 31, 2020 and 2019, respectively, as well as derivatives held for hedging and commitments accounted for as derivatives. See Note 15, "Derivative Financial Instruments," for additional information. Excluding changes in fair value of a derivative instrument associated with a qualifying cash flow hedge, which are recognized initially in other comprehensive income, derivative assets and liabilities are recorded at fair value through net income (loss).

⁽²⁾ Consists of swap agreements entered into in conjunction with the sales of Visa Class B Shares.

⁽³⁾ Securities available-for-sale are recorded at fair value through other comprehensive income. Changes in the allowance for credit losses on securities available-for-sale are recorded through net income (loss).

- (4) See Note 16, "Fair Value Option," for additional information. Excluding the fair value movement on fair value option liabilities attributable to our own credit spread, which is recorded in other comprehensive income, fair value option assets and liabilities are recorded at fair value through net income (loss).
- (5) Investments that are measured at fair value using the net asset value per share practical expedient have not been classified in the fair value hierarchy.
- (6) Represents counterparty and cash collateral netting which allow the offsetting of amounts relating to certain contracts if certain conditions are met.

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 2020 and 2019. 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) Still Held Included in		
	Jan. 1, 2020	Earnings	Other Compre- hensive Income	Purch- ases	Issu- ances	Settle- ments	Transfers Into Level 3	Transfers Out of Level 3	Dec. 31, 2020	Earnings	Other Compre- hensive Income		
	(in millions)												
Assets:													
Trading assets, excluding derivatives: ⁽¹⁾													
Residential mortgage asset- backed securities	\$ 17	\$ (2)	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 15	\$ (2)	\$ —		
Corporate and other domestic debt securities ..	510	(13)	—	—	—	(497)	—	—	—	—	—		
Derivatives, net: ⁽²⁾													
Interest rate contracts	10	23	—	—	—	—	1	—	34	23	—		
Foreign exchange contracts	(1)	(1)	—	—	—	—	11	—	9	(1)	—		
Equity contracts...	72	129	—	—	—	(47)	(37)	2	119	147	—		
Credit contracts...	59	7	—	—	—	(3)	—	—	63	(7)	—		
Other contracts ⁽³⁾ ..	(75)	(9)	—	—	—	25	—	—	(59)	—	—		
Asset-backed securities available-for- sale ⁽⁴⁾	111	—	(9)	—	—	1	28	—	131	—	(9)		
Total assets	<u>\$ 703</u>	<u>\$ 134</u>	<u>\$ (9)</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (521)</u>	<u>\$ 3</u>	<u>\$ 2</u>	<u>\$ 312</u>	<u>\$ 160</u>	<u>\$ (9)</u>		
Liabilities:													
Domestic deposits ⁽⁵⁾	\$ (774)	\$ (15)	\$ (2)	\$ —	\$ (43)	\$ 125	\$ —	\$ 63	\$ (646)	\$ (20)	\$ (2)		
Long-term debt ⁽⁵⁾	(354)	(12)	—	—	(262)	159	(1)	22	(448)	(30)	—		
Total liabilities	<u>\$ (1,128)</u>	<u>\$ (27)</u>	<u>\$ (2)</u>	<u>\$ —</u>	<u>\$ (305)</u>	<u>\$ 284</u>	<u>\$ (1)</u>	<u>\$ 85</u>	<u>\$ (1,094)</u>	<u>\$ (50)</u>	<u>\$ (2)</u>		

	Total Realized / Unrealized Gains (Losses) Included in							Current Period Unrealized Gains (Losses) Still Held Included in			
	Jan. 1, 2019	Earnings	Other Compre- hensive Income	Purch- ases	Issu- ances	Settle- ments	Transfers Into Level 3	Transfers Out of Level 3	Dec. 31, 2019	Earnings	Other Compre- hensive Income
(in millions)											
Assets:											
Trading assets, excluding derivatives: ⁽¹⁾											
Collateralized debt obligations.....	\$ 100	\$ 2	\$ —	\$ —	\$ —	\$ (30)	\$ —	\$ (72)	\$ —	\$ —	\$ —
Residential mortgage asset- backed securities.....	16	1	—	—	—	—	—	—	17	—	—
Student loan asset-backed securities.....	92	5	—	—	—	(17)	—	(80)	—	—	—
Corporate and other domestic debt securities..	1,803	—	—	—	—	(1,293)	—	—	510	—	—
Derivatives, net: ⁽²⁾											
Interest rate contracts.....	2	13	—	—	—	—	—	(5)	10	11	—
Foreign exchange contracts.....	(1)	4	—	—	—	21	(21)	(4)	(1)	—	—
Equity contracts...	(52)	122	—	—	—	1	—	1	72	112	—
Credit contracts...	52	(36)	—	—	—	31	4	8	59	10	—
Other contracts ⁽³⁾ ...	(35)	(63)	—	—	—	23	—	—	(75)	—	—
Asset-backed securities available-for- sale ⁽⁴⁾	107	—	4	—	—	—	—	—	111	—	4
Other assets ⁽⁶⁾	4	—	—	—	—	(4)	—	—	—	—	—
Total assets.....	<u>\$ 2,088</u>	<u>\$ 48</u>	<u>\$ 4</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (1,268)</u>	<u>\$ (17)</u>	<u>\$ (152)</u>	<u>\$ 703</u>	<u>\$ 133</u>	<u>\$ 4</u>
Liabilities:											
Domestic deposits ⁽⁵⁾	\$ (925)	\$ (99)	\$ (14)	\$ —	\$ (188)	\$ 236	\$ (7)	\$ 223	\$ (774)	\$ (149)	\$ (14)
Long-term debt ⁽⁵⁾	(412)	(43)	(5)	—	(156)	144	—	118	(354)	(51)	(5)
Total liabilities.....	<u>\$ (1,337)</u>	<u>\$ (142)</u>	<u>\$ (19)</u>	<u>\$ —</u>	<u>\$ (344)</u>	<u>\$ 380</u>	<u>\$ (7)</u>	<u>\$ 341</u>	<u>\$ (1,128)</u>	<u>\$ (200)</u>	<u>\$ (19)</u>

⁽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 \$692 million and derivative liabilities of \$526 million at December 31, 2020 and derivative assets of \$287 million and derivative liabilities of \$222 million at December 31, 2019. Gains (losses) on derivatives, net are predominantly included in trading revenue and gain (loss) on instruments designated at fair value and related derivatives in the consolidated statement of income (loss).

⁽³⁾ Consists of swap agreements entered into in conjunction with the sales of Visa Class B Shares. Gains (losses) on these swap agreements are included in other income in the consolidated statement of income (loss).

⁽⁴⁾ Realized gains (losses) on securities available-for-sale are included in other securities gains, net in the consolidated statement of income (loss). Changes in the allowance for credit losses on securities available-for-sale are included in the provision for credit losses in the consolidated statement of income (loss). Unrealized gains (losses) on securities available-for-sale are included in other comprehensive income.

⁽⁵⁾ Excluding unrealized gains (losses) on fair value option liabilities attributable to our own credit spread, which are recorded in other comprehensive income, gains (losses) on fair value option liabilities are included in gain (loss) on instruments designated at fair value and related derivatives in the consolidated statement of income (loss).

⁽⁶⁾ Represented contingent consideration receivable associated with the sale of certain private banking client relationships, which concluded in 2019. Gains (losses) associated with this transaction were included in other income in the consolidated statement of income (loss).

Significant Unobservable Inputs for Recurring Fair Value Measurements

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, 2020 and 2019:

December 31, 2020

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs	Weighted Average⁽¹⁾
Residential mortgage asset-backed securities.....	\$ 15	Broker quotes or consensus pricing and, where applicable, discounted cash flows	Prepayment rates	10%	N/A
			Conditional default rates	5%	N/A
			Loss severity rates	65%	N/A
			Discount margin	500bps	N/A
Interest rate derivative contracts.....	\$ 34	Market comparable adjusted for probability to fund and, where applicable, discounted cash flows or option pricing model	Probability to fund for rate lock commitments	41% - 100%	78%
			Likelihood of transaction being executed	90%	N/A
			Interest rate yield curve	4% - 7%	6%
Foreign exchange derivative contracts ⁽²⁾	\$ 9	Option pricing model	Implied volatility of currency pairs	9% - 11%	10%
			Cross-currency basis	(9)bps - 40bps	24bps
Equity derivative contracts ⁽²⁾	\$ 119	Option pricing model	Equity / Equity Index volatility	0% - 67%	27%
			Equity / Equity and Equity / Index correlation	17% - 62%	30%
			Equity dividend yields and forward price	(1)% - 0%	0%
Credit derivative contracts.....	\$ 63	Option pricing model and, where applicable, discounted cash flows	Credit default swap spreads	150bps	N/A
Other derivative contracts.....	\$ (59)	Discounted cash flows	Conversion rate	1.6 times	N/A
			Expected duration	2 years	N/A
Asset-backed securities available-for-sale.....	\$ 131	Discounted cash flows	Market assumptions related to yields for comparable instruments	4%	N/A
Domestic deposits (structured deposits) ⁽²⁾⁽³⁾	\$ (646)	Option adjusted discounted cash flows	Implied volatility of currency pairs	9% - 11%	10%
			Equity / Equity Index volatility	0% - 42%	15%
			Equity / Equity and Equity / Index correlation	43% - 47%	45%
Long-term debt (structured notes) ⁽²⁾⁽³⁾	\$ (448)	Option adjusted discounted cash flows	Implied volatility of currency pairs	9% - 11%	10%
			Equity / Equity Index volatility	0% - 67%	23%
			Equity / Equity and Equity / Index correlation	32% - 62%	52%

December 31, 2019

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs	Weighted Average ⁽¹⁾
Residential mortgage asset-backed securities.....	\$ 17	Broker quotes or consensus pricing and, where applicable, discounted cash flows	Prepayment rates	1%	N/A
			Conditional default rates	8%	N/A
			Loss severity rates	70%	N/A
			Discount margin	600bps	N/A
Corporate and other domestic debt securities.....	\$ 510	Discounted cash flows	Spread volatility on collateral assets	4%	N/A
			Correlation between insurance claim shortfall and collateral value	80%	N/A
Interest rate derivative contracts.....	\$ 10	Market comparable adjusted for probability to fund and, where applicable, discounted cash flows	Probability to fund for rate lock commitments	42% - 100%	80%
			Likelihood of transaction being executed	90%	N/A
Foreign exchange derivative contracts ⁽²⁾	\$ (1)	Option pricing model	Implied volatility of currency pairs	6% - 11%	8%
Equity derivative contracts ⁽²⁾	\$ 72	Option pricing model	Equity / Equity Index volatility	7% - 36%	22%
			Equity / Equity and Equity / Index correlation	43% - 79%	49%
			Equity dividend yields	0% - 4%	2%
Credit derivative contracts.....	\$ 59	Option pricing model and, where applicable, discounted cash flows	Credit default swap spreads	41bps	N/A
Other derivative contracts.....	\$ (75)	Discounted cash flows	Conversion rate	1.6 times	N/A
			Expected duration	3 years	N/A
Asset-backed securities available-for-sale.....	\$ 111	Discounted cash flows	Market assumptions related to yields for comparable instruments	0% - 3%	2%
Domestic deposits (structured deposits) ⁽²⁾⁽³⁾	\$ (774)	Option adjusted discounted cash flows	Implied volatility of currency pairs	6% - 11%	8%
			Equity / Equity Index volatility	7% - 28%	13%
			Equity / Equity and Equity / Index correlation	43% - 49%	46%
Long-term debt (structured notes) ⁽²⁾⁽³⁾	\$ (354)	Option adjusted discounted cash flows	Implied volatility of currency pairs	6% - 11%	8%
			Equity / Equity Index volatility	7% - 29%	16%
			Equity / Equity and Equity / Index correlation	54% - 79%	64%

⁽¹⁾ For asset-backed securities available-for-sale, the value shown is the arithmetic average. For foreign exchange derivatives, equity derivatives, structured deposits and structured notes, weighted averages are calculated based on the fair value of the instruments. For all remaining instrument types, weighted averages are calculated based on the notional value of the instruments.

⁽²⁾ 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.

⁽³⁾ Structured deposits and structured notes contain embedded derivative features whose fair value measurements contain significant Level 3 inputs. See equity and foreign exchange derivatives below for a discussion of the uncertainty of Level 3 inputs related to structured deposits and structured notes.

N/A Not Applicable

Uncertainty of Level 3 Inputs to Fair Value Measurements

Residential mortgage asset-backed securities - Prepayment rate, probability of default, loss severity rate and discount margin are significant unobservable inputs.

- Prepayment rate - The rate at which borrowers pay off the loans early. The prepayment rate is affected by a number of factors including location of the collateral, interest rate type of the loan, borrowers' credit and sensitivity to interest rate movement.
- Probability of default - Annualized percentage of default rate over a group of collateral such as residential mortgage loans.
- Loss severity rate - The loss severity rate is the percentage of total lifetime losses (both interest and principal) as a percentage of principal balance measured at default date.

- Discount margin - An expected return earned in addition to the index underlying (in this case LIBOR) is another input into valuation of securities.

A significant increase (decrease) in one or more of these inputs would have resulted in a lower (higher) fair value measurement of the securities. Generally, a change in assumption for default probability would have been accompanied by a directionally similar change in loss severity, and a directionally opposite change in prepayment speed.

Interest rate derivatives - The fair value measurement of certain forward starting interest rate derivatives is affected by the underlying project contingency risk for which probability of execution is not certain (i.e., the interest rate derivative can be canceled if the project fails to execute). For mortgage rate lock commitments, the fair value measurement is affected by the probability of executing and funding the mortgage. An increase (decrease) in the likelihood of a project or mortgage being executed would have resulted in a lower (higher) fair value measurement of the interest rate derivative. For certain other interest rate derivatives, the interest rates for longer dated tenors were not observable. An increase (decrease) in the interest rate would have resulted in a higher (lower) fair value measurement of the derivative depending on if we receive or pay the floating rate.

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 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 and are not observable. A significant increase (decrease) in the implied volatility would have resulted in a higher (lower) fair value of a long position in the derivative contract. For a derivative referenced to a basket of variables such as equities or foreign currencies, the fair value measurement is also affected by the correlation of the referenced variables. Correlation measures the relative change in values among two or more variables (i.e., equity or foreign currency pair), which can be positively or negatively correlated. A majority of the correlations are not observable, but are derived based on historical data. A significant increase (decrease) in the correlation of the referenced variables would have resulted in a higher (lower) fair value of a long position in the derivative contract. For certain other foreign exchange derivatives, the cross-currency basis for longer dated tenors were not observable. An increase (decrease) in the cross-currency basis would have resulted in a higher (lower) fair value measurement of the derivative depending on if we receive or pay the floating rate plus the basis spread.

Credit derivatives - The fair value measurement of certain credit derivatives is primarily affected by the credit spreads of credit default swap contracts insuring asset-backed securities. A significant increase (decrease) in the credit spreads would have resulted in a lower (higher) fair value measurement of the credit derivative.

Other derivatives - The fair value of the swap agreements we entered into in conjunction with the sales of 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 have resulted in a higher (lower) fair value measurement of the derivative.

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 have resulted in a decrease (increase) in the fair value measurement of the securities.

Significant Transfers Into and Out of Level 3 Measurements During 2020, we transferred \$63 million of domestic deposits and \$22 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. During 2020, we also transferred \$37 million of equity contracts from Level 2 to Level 3 as the inputs used to value these contracts have become less observable. Additionally, during 2020 we transferred \$28 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.

During 2019, we transferred \$223 million of domestic deposits and \$118 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 2019, we transferred \$72 million of collateralized debt obligations ("CDOs") and \$80 million of student loan asset-backed securities from Level 3 to Level 2 as the inputs used to value these securities have become more observable reflecting improved market liquidity for these securities.

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) loans classified as held for sale reported at the lower of amortized cost or fair value, (b) impaired loans or assets that are written down to fair value based on the valuation of underlying collateral during the period and (c) goodwill, lease ROU assets or leasehold improvement assets that were written down 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, 2020 and 2019. The gains (losses) during 2020 and 2019 are also included.

	Non-Recurring Fair Value Measurements at December 31, 2020				Total Gains (Losses) For the Year Ended December 31, 2020
	Level 1	Level 2	Level 3	Total	
	(in millions)				
Residential mortgage loans held for sale ⁽¹⁾	\$ —	\$ 4	\$ —	\$ 4	\$ —
Consumer loans ⁽²⁾	—	312	—	312	18
Commercial loans held for sale ⁽³⁾	—	68	—	68	(23)
Commercial loans ⁽⁴⁾	—	—	270	270	(169)
Real estate owned ⁽⁵⁾	—	1	—	1	2
Goodwill ⁽⁶⁾	—	—	—	—	(784)
Leases ⁽⁷⁾	—	—	3	3	(92)
Total assets at fair value on a non-recurring basis	\$ —	\$ 385	\$ 273	\$ 658	\$ (1,048)

	Non-Recurring Fair Value Measurements at December 31, 2019				Total Gains (Losses) For the Year Ended December 31, 2019
	Level 1	Level 2	Level 3	Total	
	(in millions)				
Residential mortgage loans held for sale ⁽¹⁾	\$ —	\$ 12	\$ —	\$ 12	\$ —
Consumer loans ⁽²⁾	—	14	—	14	(7)
Commercial loans ⁽⁴⁾	—	—	50	50	(25)
Real estate owned ⁽⁵⁾	—	6	—	6	(1)
Goodwill ⁽⁶⁾	—	—	372	372	(365)
Leases ⁽⁷⁾	—	—	2	2	(13)
Total assets at fair value on a non-recurring basis	\$ —	\$ 32	\$ 424	\$ 456	\$ (411)

⁽¹⁾ At December 31, 2020 and 2019, the fair value of the loans held for sale was below cost.

⁽²⁾ Represents residential mortgage loans held for investment whose carrying amount was adjusted during the period based on the fair value of the underlying collateral. The increase at December 31, 2020 reflects the impact of adopting new accounting guidance which requires expected recoveries related to subsequent increases in the fair value of collateral for collateral-dependent loans to be recognized in the allowance for credit losses beginning January 1, 2020. See Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," for additional discussion.

⁽³⁾ At December 31, 2020, the fair value of the loans held for sale was below cost.

⁽⁴⁾ Certain commercial loans are individually assessed for impairment. 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.

⁽⁶⁾ During the first quarter of 2020, the goodwill allocated to our previously separate RBWM and PB businesses were both written down to \$0 million. During 2019, the goodwill allocated to our previously separate RBWM business was written down to \$372 million. See Note 10, "Goodwill and Other Long-Lived Assets," for further discussion of the results of our goodwill impairment testing, including the events and circumstances leading to the impairments.

⁽⁷⁾ Beginning in 2019 and into the first quarter of 2020, we determined that we would exit certain branches and, as a result, the lease ROU assets and leasehold improvement assets associated with these branches were written down based on their estimated remaining useful lives. During 2020, we also wrote down the lease ROU assets associated with certain office space that we determined we would exit. See Note 3, "Strategic Initiatives," and Note 11, "Leases," for further discussion.

Significant Unobservable Inputs for Non-Recurring Fair Value Measurements

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, 2020 and 2019:

At December 31, 2020

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs	Weighted Average ⁽¹⁾
Commercial loans	\$ 270	Valuation of third party appraisal on underlying collateral	Loss severity rates	0% - 76%	35%

At December 31, 2019

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs	Weighted Average ⁽¹⁾
Commercial loans	\$ 50	Valuation of third party appraisal on underlying collateral	Loss severity rates	9% - 100%	45%

⁽¹⁾ Weighted average is calculated based on the carrying value of the loans.

Valuation Techniques

Following is a description of valuation methodologies used for assets and liabilities recorded at fair value.

Securities purchased and sold under resale and repurchase agreements designated under FVO - We elected to apply FVO accounting to 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.

Consumer loans designated under FVO - Beginning January 1, 2020, we elected to apply FVO accounting to certain student loans held for investment. The fair value of these loans is based on observed market prices of instruments with similar characteristics.

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 observed market prices of instruments with similar characteristics. 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. Where observable market parameters are not available, fair value is determined using the discounted cash flow method using assumptions consistent with those which would be used by market participants in valuing such loans, including estimates of prepayment rates, default rates, loss severities and market rates of return. We also may hold discussions on value directly with potential investors.

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 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 elected to apply FVO accounting to certain commercial loans held for sale at fair value. Where available, fair value is based on observable market 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 individually assessed for impairment - Generally represents collateral-dependent commercial loans with fair value determined based on pricing quotes obtained from an independent third party appraisal.

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 CDOs – 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. Certain equity securities represent investments in private equity funds that help us comply with the Community Reinvestment Act. The fair value of these investments are estimated using the net asset value per share as calculated by the fund managers. Distributions will be received from the funds as the underlying assets are liquidated. While the funds do not allow us to redeem our investments, we are permitted to sell or transfer our investments subject to the approval of the fund manager. Unfunded commitments associated with these investments totaled \$33 million and \$41 million at December 31, 2020 and 2019, respectively.

The following tables provide additional information relating to our asset-backed securities, including CDOs, at December 31, 2020:

Trading asset-backed securities:

Rating of Securities: ⁽¹⁾	Collateral Type:	Level 2	Level 3	Total
		(in millions)		
AAA - A	Collateralized debt obligations	\$ 39	\$ —	\$ 39
	Student loans	65	—	65
	Total AAA - A	104	—	104
BBB - B	Collateralized debt obligations	24	—	24
CCC - Unrated	Residential mortgages - Subprime	—	15	15
		<u>\$ 128</u>	<u>\$ 15</u>	<u>\$ 143</u>

Available-for-sale asset-backed securities:

Rating of Securities: ⁽¹⁾	Collateral Type:	Level 3
		(in millions)
AAA - A	Home equity - Alt A	\$ 27
BBB - B	Other	104
		<u>\$ 131</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 CDOs 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 valuation adjustments") in determining the fair value measurement. For derivative instruments, we calculate the credit valuation 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 valuation 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 90 days to reflect observable local market data, including local area sales data.

Structured notes and deposits designated under FVO – Structured notes and deposits are hybrid instruments containing embedded derivatives and are elected to be measured at fair value in their entirety under FVO 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 designated under FVO – We elected to apply FVO accounting to certain of our 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.

Additional Disclosures About the Fair Value of Financial Instruments that are Not Carried at Fair Value on the Consolidated Balance Sheet The fair value estimates set forth below 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 carrying amount of certain financial instruments recorded at cost on the consolidated balance sheet 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, federal funds sold and purchased, securities purchased and sold under resale and repurchase agreements, deposits with no stated maturity (e.g., demand, savings and certain money market deposits), short-term borrowings and dividends payable.

The following table summarizes the carrying value and estimated fair value of our financial instruments, excluding financial instruments that are carried at fair value on a recurring basis, at December 31, 2020 and 2019, and their classification within the fair value hierarchy:

December 31, 2020	Carrying Value	Fair Value	Level 1	Level 2	Level 3
(in millions)					
Financial assets:					
Short-term financial assets, net of allowance for credit losses	\$ 15,667	\$ 15,667	\$ 1,302	\$ 14,353	\$ 12
Federal funds sold and securities purchased under agreements to resell	35,746	35,746	—	35,746	—
Securities held-to-maturity, net of allowance for credit losses	8,981	9,369	—	9,369	—
Commercial loans, net of allowance for credit losses	40,785	41,417	—	—	41,417
Commercial loans held for sale	93	93	—	93	—
Consumer loans, net of allowance for credit losses	20,256	19,865	—	—	19,865
Residential mortgage loans held for sale	208	217	—	217	—
Financial liabilities:					
Short-term financial liabilities	\$ 4,965	\$ 4,965	\$ —	\$ 4,952	\$ 13
Deposits	140,995	141,001	—	141,001	—
Long-term debt	9,254	9,720	—	9,720	—
December 31, 2019	Carrying Value	Fair Value	Level 1	Level 2	Level 3
(in millions)					
Financial assets:					
Short-term financial assets	\$ 3,800	\$ 3,800	\$ 1,744	\$ 2,038	\$ 18
Federal funds sold and securities purchased under agreements to resell	17,838	17,838	—	17,838	—
Securities held-to-maturity	13,293	13,431	—	13,431	—
Commercial loans, net of allowance for credit losses	47,704	49,252	—	—	49,252
Commercial loans held for sale	34	34	—	34	—
Consumer loans, net of allowance for credit losses	20,212	19,889	—	—	19,889
Residential mortgage loans held for sale	77	78	—	77	1
Financial liabilities:					
Short-term financial liabilities	\$ 3,304	\$ 3,304	\$ —	\$ 3,286	\$ 18
Deposits	112,484	112,425	—	112,425	—
Long-term debt	16,350	16,696	—	16,696	—

Lending-related commitments - The fair value of loan commitments, revolving credit facilities and standby letters of credit are not included in the above 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 loan commitments, revolving credit facilities and standby letters of credit totaled \$137 million and \$162 million at December 31, 2020 and 2019, respectively.

29. *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.

During 2020, we recorded expense related to legal matters (excluding attorney's fees) of \$68 million compared with expense of \$54 million and \$522 million during 2019 and 2018, respectively.

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 \$150 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 ongoing 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.

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.

In June 2018, the defendants, including the HSBC entities, reached an agreement with counsel for the putative Federal Rule of Civil Procedure 23(b)(3) opt-out class, seeking monetary relief, to resolve all claims as filed in a third consolidated amended class action complaint in *In re Payment Card Interchange Fee and Merchant Discount Antitrust Litigation*, MDL 1720, E.D.N.Y. The court granted final approval of the settlement in December 2019. Certain HSBC entities are responsible for a *pro*

rata portion of the settlement amount, for which they are reserved, pursuant to the Sharing Agreements entered into by the defendants. In January 2020, objectors to the settlement filed an appeal.

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 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. (N.D. Ga. Case No. 12-CV-03640) In 2012, three of the five counties constituting the metropolitan area of Atlanta, Georgia filed a lawsuit pursuant to the Fair Housing Act ("FHA") against HSBC North America and certain subsidiaries, including HSBC Finance and HSBC Bank USA, in connection with residential mortgage lending, servicing and financing activities. In the action, the plaintiff counties assert that the defendants allegedly violated the FHA which plaintiffs contend 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 December 2019, in order to avoid the cost, delay and uncertainty of litigation, the parties reached an agreement in principle to settle this matter, subject to final documentation and approval of the appropriate governmental bodies of each of the three county plaintiffs. The total amount of the settlement with respect to HSBC Bank USA is approximately \$580,000. The court dismissed the case with prejudice in July 2020 following finalization of the settlement. This matter will no longer be reported.

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 FHA 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 violated the FHA which plaintiff contends 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, and the court denied the HSBC defendants' motion to dismiss the amended complaint in September 2015.

In December 2019, in order to avoid the cost, delay and uncertainty of litigation, the parties reached an agreement in principle to settle this matter, subject to final documentation and approval of the appropriate governmental body for Cook County, Illinois. The total amount of the settlement with respect to HSBC Bank USA is approximately \$580,000. The court dismissed the case with prejudice in July 2020 following finalization of the settlement. This matter will no longer be reported.

Interest Rate Swap Investigation

HSBC Bank USA has reached a settlement in principle with the staff of the Division of Enforcement of the U.S. Commodity Futures Trading Commission ("CFTC") which would fully resolve the ongoing investigation of HSBC Bank USA in relation to interest rate swap transactions related to bond issuances, among other issues. The settlement in principle is subject to negotiation of final documentation and approval by the CFTC. If approved, the settlement would include a civil penalty, the full amount of which was reserved in the third quarter of 2020. The CFTC's civil enforcement action filed in December 2019 against a now-former HSBC employee charging him with violating the Commodity Exchange Act's anti-fraud provisions in relation to a 2012 interest rate swap transaction remains ongoing.

Foreign Exchange ("FX") Matters

FX Opt Out Litigation In November 2018, a complaint was filed in the U.S. District Court for the Southern District of New York by several institutions that opted out of the consolidated FX action that settled in August 2018 naming, among other institutions, the same HSBC defendants that had been named in that settled consolidated action. (*Allianz Global Investors GMBH, et al. v Bank of America Corporation, et al.* (the "FX Opt Out Litigation")). A motion to dismiss the third amended complaint was denied. Discovery is underway.

Other putative class actions making similar allegations have been pending against HSBC defendants, as well as other defendants, in the U.S. District Court for the Southern District of New York on behalf of: (1) retail customers (*Nypl v. JPMorgan Chase, et al.*; Case No. 1:15-CV-9300); and (2) "indirect purchasers" of FX (*Contant v. Bank of America Corporation, et al.*; Case No. 1:17-CV-03139). The NYPL plaintiffs have moved for class certification. The court granted final approval of the settlement in *Contant*, and the case will no longer be reported.

It is possible that additional actions will be initiated against the HSBC entities, including HSBC Bank USA, in relation to their historical foreign exchange activities.

Investigations

In January 2021, HSBC Holdings exited its 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. HSBC Holdings entered into the FX DPA in January 2018, following the conclusion of the DOJ's investigation into HSBC's historical foreign exchange activities. Under the terms of the FX DPA, the DOJ is expected to file a motion to dismiss the charges deferred by the FX DPA in due course.

HSBC Bank USA's agreement with the California Attorney General's Office to resolve its ongoing investigation was approved by a California state court in September 2020. The full amount of the settlement of \$7 million was reserved in the fourth quarter of 2019. This matter will no longer be reported.

In September 2017, HSBC and HSBC North America entered into a consent order with the FRB in connection with its investigation into HSBC Group's historical FX exchange activities, which required HSBC and HSBC North America to undertake certain remedial steps.

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. One of the former employees was found guilty in October 2017. The Second Circuit affirmed the conviction and in November 2020 the Supreme Court denied the employee's petition for a writ of certiorari.

In June 2020, the Competition Commission of South Africa, having initially referred a complaint for proceedings before the South African Competition Tribunal in February 2017, filed a revised complaint against 28 financial institutions, including HSBC Bank USA, for alleged anti-competitive behavior in the South African foreign exchange market. In August 2020, HSBC Bank USA filed an application to dismiss the revised complaint, which remains pending.

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, which were then transferred and centralized in the U.S. District Court for the Southern District of New York, 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. In October 2020, the HSBC defendants reached a settlement in principle with the plaintiffs to resolve the consolidated action. The settlement remains subject to court approval. HSBC Bank USA is fully reserved for its portion of the settlement.

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. The parties are proceeding under a third amended complaint. Discovery is proceeding.

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. In March 2020 the court granted the defendants' joint motion to dismiss the third amended complaint. Plaintiffs have filed an appeal.

Canada Litigation Beginning in December 2015, HSBC, HSBC Bank plc, HSBC USA, HSI, HSBC Bank Canada and HSBC Securities Canada have been named, along with other institutions, in several putative class actions filed in the Superior Courts of Justice in the Provinces of Ontario and Quebec, Canada. These suits allege, among other things, that the defendants conspired to manipulate the prices of gold and silver derivatives. These claims include: (1) *DiFilippo and Caron v. The Bank of Nova Scotia, et al.* (Superior Court of Justice, Ontario Province) (Gold Fix); (2) *DiFilippo and Caron v. The Bank of Nova Scotia, et al.* (Superior Court of Justice, Ontario Province) (Silver Fix); (3) *Benoit v. Bank of Nova Scotia, et al.* (Superior Court of Justice, Quebec Province) (Gold Fix); and (4) *Ayas v. La Banque de Nouvelle-Ecosse, et. al.* (Superior Court of Justice, Quebec Province) (Silver Fix). These actions are proceeding.

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 for the Southern District of New York ("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. Case 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 February 2019, the Second Circuit reversed that dismissal and remanded the cases to the US Bankruptcy Court. In August 2019, HSBC and other parties filed a petition for a writ of certiorari (the 'Petition') in the US Supreme Court, which was denied. The matter is now pending in the US Bankruptcy Court.

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 2021 for the U.K.-based defendants and November 2021 for all other defendants.

Beginning in 2009, Fairfield Sentry Limited, Fairfield Sigma Limited and Fairfield Lambda Limited (together "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 December 2018, the U.S. Bankruptcy Court issued a decision that partially granted defendants' motion to dismiss claims by the Fairfield liquidators and granted a motion by the liquidators to file amended complaints. In May 2019, the liquidators appealed certain issues from the U.S. Bankruptcy Court opinion to the US District Court for the Southern District of New York. The appeal remains pending. The HSBC defendants also filed motions to dismiss the remaining claims in the US Bankruptcy Court in March 2020. In December 2020, the US Bankruptcy Court granted in part and denied in part the HSBC defendants' motion to dismiss. The action remains 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

Beginning 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 actions filed in the Superior Court and Federal Court of Ontario Province. The actions allege 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. The Superior Court action therefore lapsed. In September 2019, the parties reached a settlement of the Canadian SSA bonds litigation for CAD \$1.323 million. The court has granted final approval. The U.S. HSBC defendants, including HSBC Bank USA, did not contribute to the settlement. This matter will no longer be reported.

Benchmark Rate Litigation

USD LIBOR: HSBC, HSBC Bank plc, 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) the FDIC, in its role as receiver for several failed banks; and (3) the National Credit Union Administration Board, in its capacity as liquidator for several failed credit unions. The other defendants in the actions 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*). During 2018, the U.S. District Court for the Southern District of New York granted final approval of the settlements with those who purchased USD LIBOR-indexed interest rate swaps and other instruments from certain non-defendant financial institutions and U.S. based lending institutions that made or purchased USD LIBOR indexed loans. The remaining settlements are subject to final court approval.

Intercontinental Exchange ("ICE") LIBOR: In January 2019, a putative class action complaint was filed in the U.S. District Court for the Southern District of New York on behalf of persons who purchased over the counter instruments paying interest

indexed to ICE LIBOR from a panel bank against HSBC Bank plc, HSBC Bank USA, HSBC North America, HSBC USA and HSI, as well as other panel banks, alleging a conspiracy to depress USD ICE LIBOR from February 2014 (when ICE began administration of LIBOR) to the present. The complaint alleges, among other things, misconduct related to the suppression of the benchmark rate in violation of U.S. antitrust and state law. In March 2020 the court granted the defendants' joint motion to dismiss in its entirety. Plaintiffs have filed an appeal. (*Putnam Bank v. Intercontinental Exchange, Inc., et al.* (Case No. 19-cv-00439)).

Mortgage Securitization Matters

In addition to the repurchase risk described in Note 27, "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 \$3.1 billion and \$3.4 billion at December 31, 2020 and 2019, 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 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."

In 2013, Deutsche Bank National Trust Company ("DBNTC"), as trustee of HASCO 2007-NC1, filed a complaint 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. Plaintiff filed an amended complaint which HSBC Bank USA moved to dismiss, and that motion was denied in November 2015. HSBC Bank USA appealed. In December 2017, the appeals court issued a decision dismissing the complaint. In November 2019, an agreement was reached to resolve the dispute, and the settlement amount was fully reserved at that time. The parties are continuing to negotiate the final documentation of the settlement.

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, the National Credit Union Administration Board, as Liquidating Agent, Commerzbank AG, Triaxx, IKB Bank AG ("IKB"), RMBS Recovery Holdings I, LLC, et al. ("Fir Tree"), VRS Holdings 2 LLC ("VRS"), Reliance Standard Life Insurance Company ("Reliance") and Park Royal LLC ("Park Royal"). A number of the 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, Reliance and Park Royal cases are pending in New York State court and Fir Tree filed cases in both New York and Virginia state courts. 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.

The cases brought by BlackRock, RPI, Triaxx and Commerzbank have been settled on a confidential basis and dismissed. HSBC Bank USA's motions to dismiss the cases have largely been denied. HSBC Bank USA filed motions to dismiss in the actions brought by Park Royal and by VRS and Reliance in New York state court, and those motions remain pending. In February 2018, the Virginia state court dismissed the Fir Tree case on procedural grounds, but Fir Tree appealed the decision and the case is proceeding. Discovery is underway in a number of matters.

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 (the "Nominal Corporate Defendants") in New York State Supreme Court against the directors, certain officers and certain former officers directors of those HSBC companies (the "Individual Defendants") alleging that the Individual Defendants breached their fiduciary duties to the companies and caused a waste of corporate assets by

allegedly permitting and/or causing the conduct underlying the five-year deferred prosecution agreement with the DOJ. In November 2015, the court granted the Nominal Corporate Defendants' motion to dismiss. In November 2018, the appellate court reversed the New York state court's dismissal of the action. The Nominal Corporate Defendants' motion for reargument or, in the alternative, for leave to appeal to the New York Court of Appeals was denied. In February 2019, the Nominal Corporate Defendants and most of the Individual Defendants filed a motion to dismiss in New York State Supreme Court.

In June 2020, plaintiffs filed a motion seeking court approval of the settlement reached among the parties and HSBC's directors and officers liability insurance carriers ("D&O carriers") to resolve the action. The settlement terms provide for a payment of \$72.5 million by the D&O carriers, which will be paid to HSBC upon final court approval of the settlement and from which HSBC will be required to pay any settlement expenses and plaintiffs' attorneys' fees in an amount as ultimately approved by the court. HSBC also agreed as part of the settlement to continue for a period of time certain corporate governance practices. The court granted final approval of the settlement and dismissed the action in November 2020. The matter is now concluded and will no longer be reported.

Anti-Terrorism Act Cases

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. In September 2019, the district court granted defendants' motion to dismiss. Plaintiffs have appealed the decision.

In December 2018, a new action captioned *Charlotte Freeman, et al. v. HSBC Holdings plc, et al.* 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 2004 and 2011 ("*Freeman II*"). *Freeman II* is substantially similar to the original *Freeman* action and has been designated as related to that action but includes additional plaintiffs and claims not asserted in the original *Freeman* action. The defendants filed a motion to dismiss, which the court granted in June 2020. Plaintiffs may appeal the decision.

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 and October 2017, the court dismissed claims against HSBC, 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 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. In October 2019, the court granted the defendants' motion to dismiss and plaintiffs appealed the decision. In October 2020 the US Court of Appeals for the Second Circuit affirmed the lower court's decision granting the defendants' motion to dismiss.

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. Defendants' motion to dismiss was granted in March 2019 and the plaintiffs moved for leave to amend their complaint. In February 2020, the court denied plaintiffs' motion to amend the complaint following dismissal of the action in March 2019. Plaintiffs may appeal.

In December 2018, a new action captioned *Timothy O'Sullivan, et al. v. Deutsche Bank AG, et al.* 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 ("*O'Sullivan II*"). *O'Sullivan II* is substantially similar to the original *O'Sullivan* action and has been designated

as related to that action but includes additional plaintiffs and claims not asserted in the original *O'Sullivan* action. This action has been stayed upon the parties' agreement.

Joel Tavera, et al. v. Deutsche Bank AG, et al. In December 2018, 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 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 bank 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. and that they aided and abetted primary violators of the ATA. This action has been stayed based upon the parties' agreement.

James Donaldson v. HSBC Holdings plc, et al. In December 2018, 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 2005 and 2009. The complaint was filed against HSBC, HSBC Bank plc, HSBC Bank USA, and HSBC Bank Middle East Limited, as well as other non-HSBC bank 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. and that they aided and abetted primary violators of the ATA. This action has been filed as related to the original *Freeman* action. This action has been stayed based upon the parties' agreement.

Kathleen Stephens v. HSBC Holdings plc, et al. In December 2018, 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 in 2007. The complaint was filed against HSBC, HSBC Bank plc, HSBC Bank USA, and HSBC Bank Middle East Limited, as well as other non-HSBC bank 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. and that they aided and abetted primary violators of the ATA. This action has been filed as related to the newly filed *Freeman* action. This action has been stayed based upon the parties' agreement.

Ryan Bowman et al. v. HSBC Holdings plc, et al. In April 2019, a new action in the U.S. District Court for the Eastern District of New York was filed against HSBC Holdings plc, HSBC Bank plc, HSBC Bank Middle East Limited, and HSBC Bank USA, among other defendants. Designating the case as related to *Charlotte Freeman, et al. v. HSBC Holdings plc, et al.* the claims are based on allegations that Iranian payments were purportedly provided to terrorist organizations operating in Iraq. Plaintiffs allege violations of the Anti-Terrorism Act (18 U.S.C. §2331 et seq.). The defendants filed a motion to dismiss in January 2020. In June 2020, the court granted defendants' motion to dismiss. Plaintiffs may appeal the decision.

Dana Bernhardt et al. v. HSBC Holdings plc, et al. In November 2019, families of two deceased former US military personnel commenced an action against HSBC Holdings plc, HSBC Bank plc, HSBC North America and HSBC Bank USA, among other defendants, in the U.S. District of Columbia. The complaint references a single attack in Afghanistan in 2009 and alleges that HSBC defendants conspired with, among others, Bank Melli, Bank Saderat and Al Rajhi Bank, to violate the ATA. In November 2020, the court granted the HSBC defendants' motion to dismiss. Plaintiffs may appeal the decision.

Rigoberto Vasquez and Eva Garcia et al v. Hong Kong and Shanghai Banking Corporation Ltd., HSBC Bank USA, N.A., et al. This putative class action was filed in the U.S. District Court for the Southern District of New York in March 2018 against HSBC Bank USA and the Hong Kong and Shanghai Bank Corporation. Plaintiffs purport to represent those that invested in a Ponzi scheme allegedly orchestrated by Phil Ming Xu and certain companies he allegedly controlled, such as WCM777. Hong Kong and Shanghai Banking Corporation is alleged to have accepted wire transfers from plaintiffs to WCM777 from investors in furtherance of the Ponzi scheme. HSBC Bank USA is alleged to have acted as Hong Kong and Shanghai Banking Corporation's correspondent bank for certain wire transfers to WCM777. The purported class period is from June 2013 to May 2014. Plaintiffs allege claims for Racketeer Influenced and Corrupt Organizations Act violations, aiding and abetting fraud, aiding and abetting breach of fiduciary duty, and aiding and abetting conversion. Plaintiffs seek compensatory damages in the amount of \$37 million plus punitive damages, interest and attorneys' fees and costs.

In August 2018, the HSBC defendants filed a motion to dismiss. In response, plaintiffs received leave from the court to file an amended complaint, which the HSBC defendants moved to dismiss in December 2018. In May 2019, the U.S. District Court for the Southern District of New York granted HSBC Bank USA's motion and dismissed it from the case. Plaintiffs have appealed the district court's decision.

Other Regulatory and Law Enforcement Investigations

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.

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.

30. Financial Statements of HSBC USA Inc. (Parent)

Condensed parent company financial statements follow:

Balance Sheet At December 31,	2020	2019
	(in millions)	
Assets:		
Securities held-to-maturity, net of allowance for credit losses of less than \$1 million at December 31, 2020 (fair value of \$2 million at both December 31, 2020 and 2019, respectively).....	\$ 2	\$ 2
Receivables and balances due from subsidiaries.....	14,585	14,044
Receivables from other HSBC affiliates.....	1,276	2,335
Investment in subsidiaries:		
Banking.....	21,897	21,753
Other.....	12	12
Other assets.....	182	204
Total assets.....	<u>\$ 37,954</u>	<u>\$ 38,350</u>
Liabilities:		
Interest, taxes and other liabilities.....	\$ 85	\$ 137
Payables due to subsidiaries.....	4	3
Payables due to other HSBC affiliates.....	32	35
Short-term borrowings.....	2,998	2,476
Short-term borrowings due to subsidiaries ⁽¹⁾	3,000	—
Long-term debt ⁽²⁾	10,695	14,595
Long-term debt due to other HSBC affiliates ⁽²⁾	2,849	2,848
Total liabilities.....	<u>19,663</u>	<u>20,094</u>
Total equity.....	<u>18,291</u>	<u>18,256</u>
Total liabilities and equity.....	<u>\$ 37,954</u>	<u>\$ 38,350</u>

⁽¹⁾ Reflects a borrowing due to HSBC Bank USA which matures at the end of February 2021. The borrowing will be re-evaluated prior to its maturity date and either extended or allowed to mature.

⁽²⁾ Contractual scheduled maturities for the debt over the next five years are as follows: 2021 – \$3.0 billion; 2022 – \$2.9 billion; 2023 – \$1.5 billion; 2024 – \$1.5 billion; 2025 – \$3.8 billion; and thereafter – \$0.8 billion.

Statement of Income (Loss)
Year Ended December 31,

	2020	2019	2018
	(in millions)		
Income:			
Dividends from banking subsidiaries	\$ 121	\$ 138	\$ 137
Interest from subsidiaries	101	350	367
Interest from other HSBC affiliates	43	91	55
Other income (loss) from subsidiaries	—	2	(2)
Other income (loss) from other HSBC Affiliates	552	1,645	(829)
Other income (loss)	(544)	(1,690)	792
Total income	273	536	520
Expenses:			
Interest to subsidiaries	6	—	—
Interest to other HSBC Affiliates	115	140	62
Other interest expense	228	549	574
Provision for credit losses	(1)	—	—
Other expenses with subsidiaries	15	12	8
Other expenses	3	5	2
Total expenses	366	706	646
Loss before taxes and equity in undistributed income (loss) of subsidiaries	(93)	(170)	(126)
Income tax benefit	(50)	(78)	(66)
Loss before equity in undistributed income (loss) of subsidiaries	(43)	(92)	(60)
Equity in undistributed income (loss) of subsidiaries	(897)	205	380
Net income (loss)	\$ (940)	\$ 113	\$ 320

Statement of Comprehensive Income
Year Ended December 31,

	2020	2019	2018
	(in millions)		
Net income (loss)	\$ (940)	\$ 113	\$ 320
Net change in unrealized gains (losses), net of tax:			
Investment securities	864	403	(220)
Fair value option liabilities attributable to our own credit spread	24	(310)	324
Derivatives designated as cash flow hedges	72	8	40
Pension and post-retirement benefit plans	(4)	(14)	8
Total other comprehensive income	956	87	152
Comprehensive income	\$ 16	\$ 200	\$ 472

Statement of Cash Flows
Year Ended December 31,

	2020	2019	2018
	(in millions)		
<i>Cash flows from operating activities:</i>			
Net income (loss).....	\$ (940)	\$ 113	\$ 320
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization.....	2	5	8
Net change in other assets and liabilities.....	256	1,463	(1,277)
Undistributed (income) loss of subsidiaries.....	897	(205)	(380)
Other, net.....	(2)	4	16
Cash provided by (used in) operating activities.....	213	1,380	(1,313)
<i>Cash flows from investing activities:</i>			
Net change in investments in and receivables due from subsidiaries.....	(552)	3,929	(1,045)
Net change in receivables from other HSBC affiliates.....	1,056	183	4,211
Other, net.....	—	1	10
Cash provided by investing activities.....	504	4,113	3,176
<i>Cash flows from financing activities:</i>			
Net change in payables to other HSBC affiliates.....	(1)	4	(19)
Net change in short-term borrowings.....	3,522	(56)	1,378
Issuance of long-term debt.....	3,394	2,931	5,571
Repayment of long-term debt.....	(7,565)	(5,897)	(8,722)
Return of capital to parent.....	—	(2,400)	—
Other increases (decreases) in capital surplus.....	10	—	6
Dividends paid.....	(77)	(77)	(76)
Cash used in financing activities.....	(717)	(5,495)	(1,862)
Net change in cash and due from banks and interest bearing deposits with banks.....	—	(2)	1
Cash and due from banks and interest bearing deposits with banks at beginning of year.....	—	2	1
<i>Cash and due from banks and interest bearing deposits with banks at end of year.....</i>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 2</u>
Cash paid for:			
Interest.....	\$ 379	\$ 662	\$ 649

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 25, "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:

	2020				2019			
	Fourth	Third	Second	First	Fourth	Third	Second	First
	(in millions)							
Net interest income	\$ 584	\$ 548	\$ 538	\$ 504	\$ 507	\$ 503	\$ 540	\$ 562
Provision for credit losses	(30)	(105)	219	726	(3)	94	46	58
Net interest income (expense) after provision for credit losses	614	653	319	(222)	510	409	494	504
Other revenues	328	356	464	387	542	486	436	390
Operating expenses	764	785	727	1,605	871	1,106	774	750
Income (loss) before income tax	178	224	56	(1,440)	181	(211)	156	144
Income tax expense (benefit)	30	36	49	(157)	48	39	35	35
Net income (loss)	\$ 148	\$ 188	\$ 7	\$ (1,283)	\$ 133	\$ (250)	\$ 121	\$ 109

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

During the years ended December 31, 2020, 2019 and 2018, 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 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, 2020 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, 2020. 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, 2020, 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. sanctions programs described under "Frozen Accounts and Transactions" below. The following activities conducted by our affiliates are disclosed in response to Section 13(r):

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 involving 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 2020 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 2020 and approximately 17 remain outstanding.

Other relationships with Iranian banks Activity related to U.S.-sanctioned Iranian banks not covered elsewhere in this disclosure includes the matter described below.

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. 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 2020, was approximately \$2,440.

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 13224 During 2020, the HSBC Group processed a number of small local currency payments on behalf of U.K. customers to a U.K.-registered charity that is designated under Executive Order 13224, but that is not sanctioned by the U.K., European Union, or the United Nations Security Council.

There was no measurable gross revenue or net profit to the HSBC Group during 2020 relating to these transactions.

Other activity The HSBC Group has an insurance company customer in the United Arab Emirates that, during 2020, made local currency payments for the reimbursement of medical treatment to a hospital located in the United Arab Emirates and owned by the Government of Iran. The HSBC Group processed these payments to the hospital made by its customer.

The HSBC Group has a customer in the United Arab Emirates that, during 2020, received a local currency check for the reimbursement for food and medicine samples from a hospital located in the United Arab Emirates and owned by the Government of Iran. The HSBC Group processed this check from the hospital to its customer.

The HSBC Group has a small number of customers in the United Arab Emirates that, during 2020, received local currency checks from an Iranian-owned insurance company. The HSBC Group processed these checks to its customers.

The HSBC Group has a customer in India that, during 2020, received four local currency checks from the Consulate General of the Islamic Republic of Iran as part of retirement settlement funds. The HSBC Group processed these checks to its customer.

The HSBC Group has an international organization as a customer in France, and during 2020, that customer received a local currency payment from the Iranian Embassy in Austria for membership fees. The HSBC Group processed this payment.

The HSBC Group has a customer in France that, during 2020, received four local currency payments from an Iranian-owned bank. The HSBC Group processed these payments to its customer.

The HSBC Group exited a customer relationship with the Iranian Embassy in the U.K. in 2013. In 2020, the HSBC Group made two domestic local currency payments to return funds related to this legacy customer relationship that were being held in an unclaimed balance account.

For these activities, there was no measurable gross revenue or net profit to the HSBC Group during 2020.

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 2020. There was no measurable gross revenue or net profit to the HSBC Group during 2020 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, 2020 and 2019 was \$10,277,425 and \$8,897,750, 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, 2020 and 2019 was \$2,598,012 and \$2,738,000, 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 year ended December 31, 2019 was \$9,000. 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. The tax related services billed in 2019 reflect services that were approved prior to February 28, 2019.

All Other Fees The aggregate amount billed by PwC for other services performed during the fiscal years ended December 31, 2020 and 2019 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 audit and audit related services to be provided by PwC. 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 specific audit and audit-related services. Beginning February 28, 2019, PwC does not perform any tax, compliance or other services which are not audit or audit-related. Any service not included in the annual pre-approval must be submitted on a case-by-case basis 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 and to the full Audit Committee at its next regular meeting for approval.

PART IV

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 23, 2021 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 Income

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 July 24, 2018 (incorporated by reference to [Exhibit 3.2 to HSBC USA Inc.'s Current Report on Form 8-K filed July 26, 2018](#)).
- 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. 333-158385](#), [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.
- 4.5 Description of HSBC USA Inc.'s zero coupon callable accreting notes due January 15, 2043 and zero coupon callable accreting notes due January 29, 2043 (incorporated by reference to [Exhibit 4.5 to HSBC USA Inc.'s Annual Report on Form 10-K for the year ended December 31, 2019](#)).
- 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 The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document⁽¹⁾

101.SCH Inline XBRL Taxonomy Extension Schema Document⁽¹⁾

101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document⁽¹⁾

101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document⁽¹⁾

101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document⁽¹⁾

101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document⁽¹⁾

104 Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

⁽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, 2020, formatted in Inline eXtensible Business Reporting Language ("Inline XBRL"): (i) the Consolidated Statement of Income (Loss) for the years ended December 31, 2020, 2019 and 2018, (ii) the Consolidated Statement of Comprehensive Income for the years ended December 31, 2020, 2019 and 2018, (iii) the Consolidated Balance Sheet at December 31, 2020 and 2019, (iv) the Consolidated Statement of Changes in Equity for the years ended December 31, 2020, 2019 and 2018, (v) the Consolidated Statement of Cash Flows for the years ended December 31, 2020, 2019 and 2018, 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 day the 23rd day of February 2021.

HSBC USA INC.

By: /s/ MICHAEL ROBERTS

Michael Roberts

President and Chief Executive Officer

Each person whose signature appears below constitutes and appoints L. P. Zielinski 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 23rd day of February 2021.

Signature	Title
<u>/s/ M. ROBERTS</u> (M. Roberts)	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/ B. F. KROEGER</u> (B. F. Kroeger)	Director
<u>/s/ N. G. MISTRETTA</u> (N. G. Mistretta)	Director
<u>/s/ B. ROBERTSON</u> (B. Robertson)	Director
<u>/s/ J. C. SHERBURNE</u> (J. C. Sherburne)	Director
<u>/s/ T. K. WHITFORD</u> (T. K. Whitford)	Director
<u>/s/ K. MAHTANI</u> (K. Mahtani)	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)

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-223208) of HSBC USA Inc. of our report dated February 23, 2021 relating to the financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 23, 2021

**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, Michael Roberts, 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 23, 2021

/s/ MICHAEL ROBERTS

Michael Roberts

Chairman of the Board, President
and Chief Executive Officer

Certification of Chief Financial Officer

I, Kavita Mahtani, 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 23, 2021

/s/ KAVITA MAHTANI

Kavita Mahtani
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, 2020 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, Michael Roberts, 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 23, 2021

/s/ MICHAEL ROBERTS

Michael Roberts

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, 2020 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, Kavita Mahtani, 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 23, 2021

/s/ KAVITA MAHTANI

Kavita Mahtani

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.