UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2020

OR

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

For the transition period from __________ to __________

Commission file number 001-07436

HSBC USA Inc.
(Exact name of registrant as specified in its charter)

Maryland	**13-2764867**
(State of incorporation)	**(I.R.S. Employer Identification No.)**
452 Fifth Avenue, New York, New York	**10018**
(Address of principal executive offices)	**(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

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of July 31, 2020, there were 714 shares of the registrant's common stock outstanding, all of which are owned by HSBC North America Holdings Inc.

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PART I

Item 1. Financial Statements

CONSOLIDATED STATEMENT OF INCOME (LOSS) (UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Interest income:				
Loans	**$ 580**	$ 743	**$ 1,218**	$ 1,459
Securities	**262**	298	**505**	602
Trading securities	**48**	67	**128**	130
Short-term investments	**23**	173	**110**	349
Other	**5**	20	**24**	38
Total interest income	**918**	1,301	**1,985**	2,578
Interest expense:				
Deposits	**200**	380	**521**	713
Short-term borrowings	**15**	68	**55**	130
Long-term debt	**162**	306	**360**	618
Other	**3**	7	**7**	15
Total interest expense	**380**	761	**943**	1,476
Net interest income	**538**	540	**1,042**	1,102
Provision for credit losses	**219**	46	**945**	104
Net interest income after provision for credit losses	**319**	494	**97**	998
Other revenues:				
Credit card fees, net	**9**	18	**20**	30
Trust and investment management fees	**33**	31	**64**	61
Other fees and commissions	**137**	162	**288**	309
Trading revenue	**192**	123	**206**	256
Other securities gains, net	**31**	23	**59**	30
Servicing and other fees from HSBC affiliates	**81**	88	**169**	169
Gain (loss) on instruments designated at fair value and related derivatives	**22**	(17)	**—**	(26)
Other income (loss)	**(41)**	8	**45**	(3)
Total other revenues	**464**	436	**851**	826
Operating expenses:				
Salaries and employee benefits	**190**	221	**397**	431
Support services from HSBC affiliates	**389**	411	**771**	791
Occupancy expense, net	**38**	48	**178**	93
Goodwill impairment (Note 8)	**—**	—	**784**	—
Other expenses	**110**	94	**202**	209
Total operating expenses	**727**	774	**2,332**	1,524
Income (loss) before income tax	**56**	156	**(1,384)**	300
Income tax expense (benefit)	**49**	35	**(108)**	70
Net income (loss)	**$ 7**	$ 121	**$ (1,276)**	$ 230

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (LOSS) (UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Net income (loss)	**$ 7**	$ 121	**$ (1,276)**	$ 230
Net change in unrealized gains (losses), net of tax:				
Investment securities	**110**	220	**868**	399
Fair value option liabilities attributable to our own credit spread	**(261)**	7	**146**	(104)
Derivatives designated as cash flow hedges	**3**	5	**93**	19
Pension and post-retirement benefit plans	**—**	—	**—**	(3)
Total other comprehensive income (loss)	**(148)**	232	**1,107**	311
Comprehensive income (loss)	**$ (141)**	$ 353	**$ (169)**	$ 541

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

CONSOLIDATED BALANCE SHEET (UNAUDITED)

	June 30, 2020	December 31, 2019
	(in millions, except share data)	
Assets[(1)]		
Cash and due from banks	**$ 1,266**	$ 1,744
Interest bearing deposits with banks	**17,734**	2,038
Federal funds sold and securities purchased under agreements to resell	**29,255**	17,838
Trading assets (includes $2.8 billion and $336 million pledged to creditors at June 30, 2020 and December 31, 2019, respectively)	**32,409**	28,452
Securities available-for-sale (includes $1.7 billion and nil pledged to creditors at June 30, 2020 and December 31, 2019, respectively, and an allowance for credit losses of $3 million at June 30, 2020)	**41,668**	35,663
Securities held-to-maturity, net of allowance for credit losses of $2 million at June 30, 2020 (fair value of $12.1 billion and $13.4 billion at June 30, 2020 and December 31, 2019, respectively)	**11,635**	13,293
Loans (includes $35 million designated under fair value option at June 30, 2020)	**72,468**	68,553
Less – allowance for credit losses	**1,192**	637
Loans, net	**71,276**	67,916
Loans held for sale (includes $45 million and $178 million designated under fair value option at June 30, 2020 and December 31, 2019, respectively)	**147**	289
Properties and equipment, net	**148**	177
Goodwill	**458**	1,242
Other assets, net of allowance for credit losses of $4 million at June 30, 2020	**6,866**	6,723
Total assets	**$ 212,862**	$ 175,375
Liabilities[(1)]		
Debt:		
Domestic deposits:		
Noninterest bearing	**$ 30,902**	$ 24,132
Interest bearing (includes $5.4 billion and $7.2 billion designated under fair value option at June 30, 2020 and December 31, 2019, respectively)	**117,015**	90,766
Foreign deposits:		
Noninterest bearing	**175**	137
Interest bearing	**7,941**	4,658
Total deposits	**156,033**	119,693
Short-term borrowings (includes nil and $373 million designated under fair value option at June 30, 2020 and December 31, 2019, respectively)	**6,102**	3,659
Long-term debt (includes $9.3 billion and $10.3 billion designated under fair value option at June 30, 2020 and December 31, 2019, respectively)	**25,746**	26,697
Total debt	**187,881**	150,049
Trading liabilities	**3,218**	3,235
Interest, taxes and other liabilities	**3,619**	3,835
Total liabilities	**194,718**	157,119
Equity		
Preferred stock (no par value; 40,999,000 shares authorized; 1,265 shares issued and outstanding at both June 30, 2020 and December 31, 2019)	**1,265**	1,265
Common equity:		
Common stock ($5 par; 150,000,000 shares authorized; 714 shares issued and outstanding at both June 30, 2020 and December 31, 2019)	**—**	—
Additional paid-in capital	**15,746**	15,736
Retained earnings	**303**	1,534
Accumulated other comprehensive income (loss)	**830**	(279)
Total common equity	**16,879**	16,991
Total equity	**18,144**	18,256
Total liabilities and equity	**$ 212,862**	$ 175,375

(1) The following table summarizes assets and liabilities related to our consolidated variable interest entities ("VIEs") at June 30, 2020 and December 31, 2019. Assets and liabilities exclude intercompany balances that eliminate in consolidation. See Note 17, "Variable Interest Entities," for additional information.

	June 30, 2020	December 31, 2019
	(in millions)	
Assets		
Loans	**$ 39**	$ —
Other assets	**86**	98
Total assets	**$ 125**	$ 98
Liabilities		
Interest, taxes and other liabilities	**$ 23**	$ 38
Total liabilities	**$ 23**	$ 38

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

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

Three Months Ended June 30,	2020	2019
	(in millions)	
Preferred stock		
Balance at beginning and end of period	**$ 1,265**	$ 1,265
Common stock		
Balance at beginning and end of period	**—**	—
Additional paid-in capital		
Balance at beginning of period	**15,741**	15,736
Employee benefit plans	**5**	(2)
Balance at end of period	**15,746**	15,734
Retained earnings		
Balance at beginning of period	**335**	1,607
Net income	**7**	121
Cash dividends declared on preferred stock	**(39)**	(38)
Balance at end of period	**303**	1,690
Accumulated other comprehensive income (loss)		
Balance at beginning of period	**978**	(287)
Other comprehensive income (loss), net of tax	**(148)**	232
Balance at end of period	**830**	(55)
Total common equity	**16,879**	17,369
Total equity	**$ 18,144**	$ 18,634

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (Continued) (UNAUDITED)

Six Months Ended June 30,	2020	2019
	(in millions)	
Preferred stock		
Balance at beginning and end of period	**$ 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
Return of capital to parent	**—**	(2,400)
Employee benefit plans	**10**	(2)
Balance at end of period	**15,746**	15,734
Retained earnings		
Balance at beginning of period	**1,534**	1,471
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
Balance at beginning of period, adjusted	**1,618**	1,498
Net income (loss)	**(1,276)**	230
Cash dividends declared on preferred stock	**(39)**	(38)
Balance at end of period	**303**	1,690
Accumulated other comprehensive income (loss)		
Balance at beginning of period	**(279)**	(366)
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**	—
Balance at beginning of period, adjusted	**(277)**	(366)
Other comprehensive income, net of tax	**1,107**	311
Balance at end of period	**830**	(55)
Total common equity	**16,879**	17,369
Total equity	**$ 18,144**	$ 18,634

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

CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

Six Months Ended June 30,	2020	2019
	(in millions)	
Cash flows from operating activities		
Net income (loss)	**$ (1,276)**	$ 230
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation and amortization	**101**	30
Goodwill impairment	**784**	—
Provision for credit losses	**945**	104
Net realized gains on securities available-for-sale	**(59)**	(30)
Net change in other assets and liabilities	**(2,029)**	2,306
Net change in loans held for sale:		
Originations and purchases of loans held for sale	**(1,854)**	(1,160)
Sales and collections of loans held for sale	**1,971**	1,155
Net change in trading assets and liabilities	**(3,974)**	(11,141)
Lower of amortized cost or fair value adjustments on loans held for sale	**8**	—
Loss on instruments designated at fair value and related derivatives	**—**	26
Net cash used in operating activities	**(5,383)**	(8,480)
Cash flows from investing activities		
Net change in federal funds sold and securities purchased under agreements to resell	**(11,417)**	4,879
Securities available-for-sale:		
Purchases of securities available-for-sale	**(15,917)**	(12,608)
Proceeds from sales of securities available-for-sale	**7,899**	4,189
Proceeds from maturities of securities available-for-sale	**4,256**	3,832
Securities held-to-maturity:		
Purchases of securities held-to-maturity	**(515)**	(384)
Proceeds from sales of securities held-to-maturity	**340**	—
Proceeds from maturities of securities held-to-maturity	**1,810**	1,109
Change in loans:		
Originations, net of collections	**(4,450)**	(3,654)
Loans sold to third parties	**397**	464
Net cash provided by disposal (used for acquisitions) of properties and equipment	**2**	(15)
Other, net	**(218)**	52
Net cash used in investing activities	**(17,813)**	(2,136)
Cash flows from financing activities		
Net change in deposits	**33,306**	5,671
Debt:		
Net change in short-term borrowings	**2,443**	4,469
Issuance of long-term debt	**6,350**	2,928
Repayment of long-term debt	**(3,656)**	(4,294)
Return of capital to parent	**—**	(2,400)
Other increases (decreases) in capital surplus	**10**	(2)
Dividends paid	**(39)**	(38)
Net cash provided by financing activities	**38,414**	6,334
Net change in cash and due from banks and interest bearing deposits with banks	**15,218**	(4,282)
Cash and due from banks and interest bearing deposits with banks at beginning of period	**3,782**	17,214
Cash and due from banks and interest bearing deposits with banks at end of period	**$ 19,000**	$ 12,932

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. Organization and Presentation

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"). The accompanying unaudited interim consolidated financial statements of HSBC USA and its subsidiaries (collectively "HUSI") have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X, as well as in accordance with predominant practices within the banking industry. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all normal and recurring adjustments considered necessary for a fair statement of financial position, results of operations and cash flows for the interim periods have been made. HUSI may also be referred to in these notes to the consolidated financial statements as "we," "us" or "our." These unaudited interim consolidated financial statements should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2019 (the "2019 Form 10-K"). Certain reclassifications have been made to prior period amounts to conform to the current period presentation.

The preparation of financial statements in conformity with U.S. GAAP requires the use of estimates and assumptions that affect reported amounts and disclosures. Actual results could differ from those estimates. Interim results should not be considered indicative of results in future periods.

2. *Strategic Initiatives*

As discussed in our 2019 Form 10-K, 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. We will also streamline our functional and operations support model by removing duplication and reduce 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 over a two year period of approximately $350-$400 million ($265-$305 million after-tax). In addition, during the second quarter of 2020, we determined we would incur additional pre-tax charges of approximately $60-$80 million ($45-$60 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	**$ 32**	**$ 34**
Commercial Banking	**8**	**10**
Global Banking and Markets	**120**	**140**
Corporate Center[1]	**250**	**296**
Total	**$ 410**	**$ 480**

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

Late in the second quarter of 2020, we decided to lift the pause we had put in place in March on staff reductions as coronavirus ("COVID-19") restrictions have begun to ease and some businesses began to re-open. Our Restructuring Plan is moving forward as planned, including consolidation of our retail branch network and wholesale and retail middle and back office functions, each under a single operations structure, and the creation of our Wealth and Personal Banking business which was completed in the second quarter. During the three and six months ended June 30, 2020 we recorded pre-tax charges in connection with our Restructuring Plan totaling $49 million and $160 million, respectively. While we remain committed to our multi-year strategic plan to re-profile our business, the timing of the strategic actions as outlined in our 2019 Form 10-K may be re-sequenced or delayed beyond 24 months as the circumstances around the COVID-19 pandemic continue to develop. We continue to re-assess our strategic plan and may take additional actions in future periods.

The following table summarizes the changes in the liability associated with our Restructuring Plan during the three and six months ended June 30, 2020:

	Severance and Other Employee Costs[1]	Lease Termination and Associated Costs[2]	Total
		(in millions)	
Three Months Ended June 30, 2020			
Restructuring liability at beginning of period	**$ 9**	**$ 24**	**$ 33**
Restructuring costs recorded during the period	**13**	**—**	**13**
Restructuring costs paid during the period	**—**	**(1)**	**(1)**
Restructuring liability at end of period	**$ 22**	**$ 23**	**$ 45**
Six Months Ended June 30, 2020			
Restructuring liability at beginning of period	**$ —**	**$ —**	**$ —**
Restructuring costs recorded during the period	**22**	**24**	**46**
Restructuring costs paid during the period	**—**	**(1)**	**(1)**
Restructuring liability at end of period	**$ 22**	**$ 23**	**$ 45**

(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 for segment reporting purposes. 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 for segment reporting purposes.

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 the fourth quarter of 2019). As a result, we recorded impairment charges during the first quarter of 2020 to write down the lease right-of-use ("ROU") assets, net of estimated sublease income, by $52 million (was reduced by $6 million during the second quarter of 2020) and to write down the leasehold improvement assets associated with these branches by $16 million 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 for segment reporting purposes. The branches targeted for exit under the Restructuring Plan were closed by the end of the second quarter of 2020.

In addition, during the second quarter of 2020, we recorded $10 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 income (loss) and were reported in the Global Banking and Markets business segment for segment reporting purposes.

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 the three and six months ended June 30, 2020, we recorded $32 million and $42 million of allocated costs from HTSU, primarily including severance costs and, in the year-to-date period, contract cancellation and equipment removal charges associated with the branch exits discussed above. These costs were reported in the Corporate Center business segment for segment reporting purposes.

3. Trading Assets and Liabilities

Trading assets and liabilities consisted of the following:

	June 30, 2020	December 31, 2019
	(in millions)	
Trading assets:		
U.S. Treasury	**$ 6,317**	$ 6,763
U.S. Government agency issued or guaranteed	**16**	18
U.S. Government sponsored enterprises	**26**	20
Asset-backed securities	**148**	168
Corporate and foreign bonds	**9,302**	10,826
Equity securities	**3,178**	5,693
Precious metals	**10,139**	1,909
Derivatives, net	**3,283**	3,055
Total trading assets	**$ 32,409**	$ 28,452
Trading liabilities:		
Securities sold, not yet purchased	**$ 637**	$ 1,182
Payables for precious metals	**19**	124
Derivatives, net	**2,562**	1,929
Total trading liabilities	**$ 3,218**	$ 3,235

At June 30, 2020 and December 31, 2019, the fair value of derivatives included in trading assets is net of $3,516 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 June 30, 2020 and December 31, 2019, the fair value of derivatives included in trading liabilities is net of $6,043 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 9, "Derivative Financial Instruments," for further information on our trading derivatives and related collateral.

4. Securities

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

June 30, 2020	Amortized Cost	Allowance for Credit Losses[1]	Unrealized Gains	Unrealized Losses	Fair Value
			(in millions)		
Securities available-for-sale:					
U.S. Treasury	$ 17,695	$ —	$ 658	$ (186)	$ 18,167
U.S. Government sponsored enterprises:					
Mortgage-backed securities	4,989	—	297	—	5,286
Collateralized mortgage obligations	519	—	16	—	535
Direct agency obligations	1,877	—	9	(6)	1,880
U.S. Government agency issued or guaranteed:					
Mortgage-backed securities	8,449	—	258	(3)	8,704
Collateralized mortgage obligations	2,413	—	33	(1)	2,445
Direct agency obligations	310	—	1	(7)	304
Asset-backed securities collateralized by:					
Home equity	31	(3)	—	—	28
Other	116	—	—	(7)	109
Foreign debt securities[2]	4,205	—	6	(1)	4,210
Total available-for-sale securities	$ 40,604	$ (3)	$ 1,278	$ (211)	$ 41,668
Securities held-to-maturity:					
U.S. Government sponsored enterprises:					
Mortgage-backed securities	$ 1,453	$ —	$ 54	$ —	$ 1,507
Collateralized mortgage obligations	1,095	—	63	(1)	1,157
U.S. Government agency issued or guaranteed:					
Mortgage-backed securities	2,614	—	91	—	2,705
Collateralized mortgage obligations	6,463	—	261	—	6,724
Obligations of U.S. states and political subdivisions	10	(1)	2	—	11
Asset-backed securities collateralized by residential mortgages	2	(1)	1	—	2
Total held-to-maturity securities	$ 11,637	$ (2)	$ 472	$ (1)	$ 12,106

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	$ 35,732	$ 261	$ (330)	$ 35,663
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	$ 13,293	$ 165	$ (27)	$ 13,431

(1) As discussed in Note 21, "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 (loss). 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 both June 30, 2020 and January 1, 2020, the allowance for credit losses on securities available-for-sale was $3 million.

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 June 30, 2020 classified as to the length of time the losses have existed:

	One Year or Less			Greater Than One Year		
June 30, 2020	**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	**16**	**$ (60)**	**$ 2,241**	**19**	**$ (126)**	**$ 2,136**
U.S. Government sponsored enterprises	**11**	**(5)**	**845**	**9**	**(1)**	**47**
U.S. Government agency issued or guaranteed	**10**	**(9)**	**1,168**	**5**	**(2)**	**33**
Asset-backed securities	**3**	**(7)**	**110**	**2**	**—**	**—**
Foreign debt securities	**15**	**(1)**	**1,477**	**6**	**—**	**272**
Securities available-for-sale	**55**	**$ (82)**	**$ 5,841**	**41**	**$ (129)**	**$ 2,488**

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 June 30, 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:

	One Year or Less			Greater Than One Year		
December 31, 2019	**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	78	$ (73)	$ 8,005	171	$ (257)	$ 8,467
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	62	$ (3)	$ 950	351	$ (24)	$ 2,227

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

Allowance for credit losses As discussed further in Note 6, "Allowance for Credit Losses," beginning January 1, 2020, we exclude from our calculation of lifetime expected credit losses ("lifetime ECL") securities for which we expect that non-payment of the amortized cost basis will be zero ("Zero Expected Credit Loss Exception"). 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. See Note 6, "Allowance for Credit Losses," for further discussion of this calculation 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.

At both June 30, 2020 and January 1, 2020, the allowance for credit losses on securities held-to-maturity was $2 million.

At June 30, 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 June 30, 2020	**Investment Grade**	**Non-Investment Grade**	**Total**
		(in millions)	
U.S. Government sponsored enterprises	**$ 2,548**	**$ —**	**$ 2,548**
U.S. Government agency issued or guaranteed	**9,077**	**—**	**9,077**
Obligations of U.S. states and political subdivisions	**10**	**—**	**10**
Asset-backed securities collateralized by residential mortgages	**2**	**—**	**2**
Total securities held-to-maturity	**$ 11,637**	**$ —**	**$ 11,637**

Other securities gains, net The following table summarizes realized gains and losses on investment securities transactions attributable to available-for-sale securities:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Gross realized gains	**$ 36**	$ 27	**$ 87**	$ 43
Gross realized losses	**(5)**	(4)	**(28)**	(13)
Net realized gains	**$ 31**	$ 23	**$ 59**	$ 30

As discussed in Note 21, "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., the London Interbank Offered Rate ("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 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 June 30, 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 June 30, 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 June 30, 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	$ 1,020	.43%	$ 4,687	1.50%	$ 6,579	1.38%	$ 5,409	1.80%
U.S. Government sponsored enterprises	735	2.82	663	1.92	3,085	2.55	2,902	2.37
U.S. Government agency issued or guaranteed	—	—	99	1.84	1	7.88	11,072	2.38
Asset-backed securities	—	—	—	—	62	4.84	85	3.02
Foreign debt securities	2,696	.51	1,509	1.24	—	—	—	—
Total amortized cost	$ 4,451	.87%	$ 6,958	1.49%	$ 9,727	1.78%	$ 19,468	2.22%
Total fair value	$ 4,458		$ 7,127		$ 10,277		$ 19,806	
Held-to-maturity:								
U.S. Government sponsored enterprises	$ 18	2.73%	$ 445	2.66%	$ 531	2.27%	$ 1,554	3.21%
U.S. Government agency issued or guaranteed	—	—	12	3.76	16	4.60	9,049	2.62
Obligations of U.S. states and political subdivisions	—	—	6	3.56	4	4.17	—	—
Asset-backed securities	—	—	—	—	—	—	2	5.94
Total amortized cost	$ 18	2.74%	$ 463	2.70%	$ 551	2.35%	$ 10,605	2.71%
Total fair value	$ 18		$ 477		$ 569		$ 11,042	

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

	June 30, 2020	December 31, 2019
	(in millions)	
Equity securities carried at fair value	**$ 282**	$ 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 the second quarter of 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 (loss) in the consolidated statement of income (loss). At December 31, 2019, 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 $327 million and $559 million, respectively, at June 30, 2020 and $110 million and $559 million, respectively, at December 31, 2019.

5. Loans

Loans consisted of the following:

	June 30, 2020	December 31, 2019
	(in millions)	
Commercial loans:		
Real estate, including construction	**$ 11,420**	$ 11,501
Business and corporate banking[(1)]	**17,345**	13,479
Global banking[(2)]	**18,668**	17,915
Other commercial:		
Affiliates[(3)]	**1,565**	2,343
Other	**2,915**	2,973
Total other commercial	**4,480**	5,316
Total commercial	**51,913**	48,211
Consumer loans:		
Residential mortgages	**18,281**	17,801
Home equity mortgages	**792**	853
Credit cards	**1,175**	1,405
Other consumer[(4)]	**307**	283
Total consumer	**20,555**	20,342
Total loans	**$ 72,468**	$ 68,553

(1) Includes loans funded under the Paycheck Protection Program ("PPP") which totaled $1,197 million at June 30, 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 14, "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 $35 million at June 30, 2020. See Note 10, "Fair Value Option," for further details.

Net deferred origination costs totaled $44 million and $79 million at June 30, 2020 and December 31, 2019, respectively. At June 30, 2020 and December 31, 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 COVID-19. 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 troubled debt restructurings ("TDR Loans"). We are applying the guidance in the Interagency Statement. Borrowers that were not current at the time the relief was granted 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 impacted 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 payment deferral is for six months or less. For consumer loans, when a borrower requests and is provided with extended relief in the form of a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and 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.

Aging Analysis of Past Due Loans The following table summarizes the past due status of our loans at June 30, 2020 and December 31, 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 impacted during the deferral period.

	Past Due		Total Past Due		
	30 - 89 Days	90+ Days	30 Days or More	Current[1]	Total Loans
			(in millions)		
At June 30, 2020					
Commercial loans:					
Real estate, including construction	**$ 11**	**$ —**	**$ 11**	**$ 11,409**	**$ 11,420**
Business and corporate banking	**20**	**17**	**37**	**17,308**	**17,345**
Global banking	**—**	**—**	**—**	**18,668**	**18,668**
Other commercial	**32**	**—**	**32**	**4,448**	**4,480**
Total commercial	**63**	**17**	**80**	**51,833**	**51,913**
Consumer loans:					
Residential mortgages	**387**	**315**	**702**	**17,579**	**18,281**
Home equity mortgages	**13**	**24**	**37**	**755**	**792**
Credit cards	**20**	**27**	**47**	**1,128**	**1,175**
Other consumer	**6**	**6**	**12**	**295**	**307**
Total consumer	**426**	**372**	**798**	**19,757**	**20,555**
Total loans	**$ 489**	**$ 389**	**$ 878**	**$ 71,590**	**$ 72,468**
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.

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 June 30, 2020			
Commercial:			
Real estate, including construction	**$ 41**	**$ —**	**$ 1**
Business and corporate banking	**229**	**3**	**11**
Global banking	**383**	**—**	**132**
Total commercial	**653**	**3**	**144**
Consumer:			
Residential mortgages[(1)(2)(3)]	**428**	**—**	**177**
Home equity mortgages[(1)(2)]	**38**	**—**	**31**
Credit cards	**—**	**28**	**—**
Other consumer	**—**	**3**	**—**
Total consumer	**466**	**31**	**208**
Total nonperforming loans	**$ 1,119**	**$ 34**	**$ 352**
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 June 30, 2020 and December 31, 2019, nonaccrual consumer mortgage loans include $293 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 June 30, 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 21, "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.

(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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in millions)			
Interest income that would have been recorded if the nonaccrual loans had been current in accordance with contractual terms during the period	**$ 11**	$ 7	**$ 19**	$ 16
Interest income that was recorded on nonaccrual loans and included in interest income during the period	**(1)**	3	**6**	6

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 and, where there is sufficient collateral, an allowance for expected credit losses is not recognized or is minimal.

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 June 30, 2020 and December 31, 2019, we had collateral-dependent residential mortgage loans totaling $802 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 June 30, 2020 and December 31, 2019, we had collateral-dependent commercial loans totaling $593 million and $227 million, respectively.

Troubled debt restructurings TDR Loans, including beginning in 2020 loans which we reasonably expect to become 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 restructure had been anticipated. During the three and six months ended June 30, 2020, there were no commercial loans removed from TDR Loan classification. During the second quarter of 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 June 30, 2020 due to their short-term nature as discussed under the Interagency Statement.

The following table summarizes our TDR Loans at June 30, 2020 and December 31, 2019:

	June 30, 2020	December 31, 2019
	(in millions)	
Commercial loans:		
Business and corporate banking	**$ 71**	$ 36
Global banking	**74**	68
Total commercial(1)	**145**	104
Consumer loans:		
Residential mortgages(2)	**549**	580
Home equity mortgages(2)	**31**	32
Credit cards	**5**	4
Total consumer	**585**	616
Total TDR Loans(3)	**$ 730**	$ 720

(1) Additional commitments to lend to commercial borrowers whose loans have been modified in TDR Loans totaled $49 million and $222 million at June 30, 2020 and December 31, 2019, respectively.

(2) At June 30, 2020 and December 31, 2019, the carrying value of consumer mortgage TDR Loans includes $501 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.

(3) At June 30, 2020 and December 31, 2019, the carrying value of TDR Loans includes $357 million and $230 million, respectively, of loans which are classified as nonaccrual.

The following table presents information about loans which were modified during the three and six months ended June 30, 2020 and 2019 and as a result of this action became classified as TDR Loans:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Commercial loans:				
Business and corporate banking	**$ 4**	$ —	**$ 4**	$ —
Global banking	**32**	—	**44**	—
Total commercial	**36**	—	**48**	—
Consumer loans:				
Residential mortgages	**3**	—	**7**	1
Home equity mortgages	**1**	—	**2**	—
Credit cards	**1**	1	**2**	2
Total consumer	**5**	1	**11**	3
Total	**$ 41**	$ 1	**$ 59**	$ 3

The weighted-average contractual rate reduction for consumer loans which became classified as TDR Loans during the three and six months ended June 30, 2020 was 1.07 percent and 2.65 percent, respectively, compared with 3.88 percent and 1.45 percent, during the three and six months ended June 30, 2019, 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 three and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Consumer loans:				
Residential mortgages	**$ —**	$ 1	**$ 1**	$ 3
Total consumer	**$ —**	$ 1	**$ 1**	$ 3

During the three and six months ended June 30, 2020 and 2019, 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 June 30, 2020:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total at Jun. 30, 2020	Total at Dec. 31, 2019
						(in millions)				
Real estate, including construction:										
Special mention	$ —	$ 146	$ 244	$ 189	$ 45	$ 365	$ —	$ —	$ 989	$ 516
Substandard	—	130	—	—	—	52	—	—	182	203
Doubtful	—	—	—	—	—	34	—	—	34	—
Total real estate, including construction	—	276	244	189	45	451	—	—	1,205	719
Business and corporate banking:										
Special mention	—	23	106	16	38	779	445	5	1,412	467
Substandard	—	—	38	61	2	246	325	2	674	386
Doubtful	—	16	—	—	—	37	115	—	168	23
Total business and corporate banking	—	39	144	77	40	1,062	885	7	2,254	876
Global banking:										
Special mention	—	—	49	—	—	—	474	—	523	184
Substandard	—	—	—	—	—	264	166	—	430	196
Doubtful	—	—	—	—	—	74	143	—	217	15
Total global banking	—	—	49	—	—	338	783	—	1,170	395
Other commercial:										
Special mention	—	—	—	—	—	126	—	—	126	11
Substandard	—	—	—	—	—	—	—	—	—	—
Doubtful	—	—	—	—	—	—	—	—	—	—
Total other commercial	—	—	—	—	—	126	—	—	126	11
Total commercial:										
Special mention	—	169	399	205	83	1,270	919	5	3,050	1,178
Substandard	—	130	38	61	2	562	491	2	1,286	785
Doubtful	—	16	—	—	—	145	258	—	419	38
Total commercial	$ —	$ 315	$ 437	$ 266	$ 85	$ 1,977	$ 1,668	$ 7	$ 4,755	$ 2,001

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 June 30, 2020:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total at Jun. 30, 2020	Total at Dec. 31, 2019
					(in millions)					
Real estate, including construction:										
Performing loans	$ 538	$ 3,865	$ 3,154	$ 1,384	$ 268	$ 2,061	$ 84	$ 25	$ 11,379	$ 11,495
Nonaccrual loans	—	—	—	—	1	40	—	—	41	6
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	—	—	—	—
Total real estate, including construction	538	3,865	3,154	1,384	269	2,101	84	25	11,420	11,501
Business and corporate banking:										
Performing loans	1,265	837	445	301	172	4,273	9,431	389	17,113	13,396
Nonaccrual loans	—	15	13	52	—	20	126	3	229	82
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	3	—	3	1
Total business and corporate banking	1,265	852	458	353	172	4,293	9,560	392	17,345	13,479
Global banking:										
Performing loans	379	1,082	367	265	108	6,754	9,330	—	18,285	17,766
Nonaccrual loans	—	—	—	—	—	141	242	—	383	149
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	—	—	—	—
Total global banking	379	1,082	367	265	108	6,895	9,572	—	18,668	17,915
Other commercial:										
Performing loans	91	424	275	220	110	660	2,700	—	4,480	5,316
Nonaccrual loans	—	—	—	—	—	—	—	—	—	—
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	—	—	—	—
Total other commercial	91	424	275	220	110	660	2,700	—	4,480	5,316
Total commercial:										
Performing loans	2,273	6,208	4,241	2,170	658	13,748	21,545	414	51,257	47,973
Nonaccrual loans	—	15	13	52	1	201	368	3	653	237
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	3	—	3	1
Total commercial	$ 2,273	$ 6,223	$ 4,254	$ 2,222	$ 659	$ 13,949	$ 21,916	$ 417	$ 51,913	$ 48,211

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 June 30, 2020:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term Loans	Total at Jun. 30, 2020	Total at Dec. 31, 2019
					(in millions)					
Real estate, including construction:										
Investment grade	$ 357	$ 1,511	$ 1,549	$ 527	$ 180	$ 1,146	$ 9	$ 3	$ 5,282	$ 6,332
Non-investment grade	181	2,354	1,605	857	89	955	75	22	6,138	5,169
Total real estate, including construction	538	3,865	3,154	1,384	269	2,101	84	25	11,420	11,501
Business and corporate banking:										
Investment grade	354	355	73	46	33	1,846	3,301	104	6,112	6,029
Non-investment grade	911	497	385	307	139	2,447	6,259	288	11,233	7,450
Total business and corporate banking	1,265	852	458	353	172	4,293	9,560	392	17,345	13,479
Global banking:										
Investment grade	277	1,003	136	250	26	4,247	5,770	—	11,709	12,981
Non-investment grade	102	79	231	15	82	2,648	3,802	—	6,959	4,934
Total global banking	379	1,082	367	265	108	6,895	9,572	—	18,668	17,915
Other commercial:										
Investment grade	83	97	127	207	105	545	2,377	—	3,541	4,649
Non-investment grade	8	327	148	13	5	115	323	—	939	667
Total other commercial	91	424	275	220	110	660	2,700	—	4,480	5,316
Total commercial:										
Investment grade	1,071	2,966	1,885	1,030	344	7,784	11,457	107	26,644	29,991
Non-investment grade	1,202	3,257	2,369	1,192	315	6,165	10,459	310	25,269	18,220
Total commercial	$ 2,273	$ 6,223	$ 4,254	$ 2,222	$ 659	$ 13,949	$ 21,916	$ 417	$ 51,913	$ 48,211

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 June 30, 2020:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Total at Jun. 30, 2020	Total at Dec. 31, 2019
					(in millions)				
Residential mortgages(1)(2)	$ 23	$ 5	$ 11	$ 28	$ 17	$ 329	$ —	$ 413	$ 350
Home equity mortgages(1)(2)	—	—	—	—	—	27	—	27	25
Credit cards							38	38	34
Other consumer	1	1	—	—	—	3	3	8	7
Total consumer	$ 24	$ 6	$ 11	$ 28	$ 17	$ 359	$ 41	$ 486	$ 416

(1) At June 30, 2020 and December 31, 2019, consumer mortgage loan delinquency includes $243 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 June 30, 2020 and December 31, 2019, consumer mortgage loans include $122 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 June 30, 2020:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Total at Jun. 30, 2020	Total at Dec. 31, 2019
					(in millions)				
Residential mortgages:									
Performing loans	$ 2,293	$ 2,780	$ 1,670	$ 1,912	$ 2,219	$ 6,979	$ —	$ 17,853	$ 17,420
Nonaccrual loans	11	10	9	21	20	357	—	428	381
Total residential mortgages	2,304	2,790	1,679	1,933	2,239	7,336	—	18,281	17,801
Home equity mortgages:									
Performing loans	27	54	42	39	50	542	—	754	807
Nonaccrual loans	—	—	1	—	—	37	—	38	46
Total home equity mortgages	27	54	43	39	50	579	—	792	853
Credit cards:									
Performing loans	—	—	—	—	—	—	1,147	1,147	1,381
Accruing loans contractually past due 90 days or more	—	—	—	—	—	—	28	28	24
Total credit cards	—	—	—	—	—	—	1,175	1,175	1,405
Other consumer:									
Performing loans	58	57	1	2	3	119	64	304	278
Accruing loans contractually past due 90 days or more	—	1	—	—	—	—	2	3	5
Total other consumer	58	58	1	2	3	119	66	307	283
Total consumer:									
Performing loans	2,378	2,891	1,713	1,953	2,272	7,640	1,211	20,058	19,886
Nonaccrual loans	11	10	10	21	20	394	—	466	427
Accruing loans contractually past due 90 days or more	—	1	—	—	—	—	30	31	29
Total consumer	$ 2,389	$ 2,902	$ 1,723	$ 1,974	$ 2,292	$ 8,034	$ 1,241	$ 20,555	$ 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 June 30, 2020:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Total at Jun. 30, 2020	Total at Dec. 31, 2019
					(in millions)				
Residential mortgages	$ —	$ —	$ —	$ 1	$ 1	$ 547	$ —	$ 549	$ 580
Home equity mortgages	—	—	—	—	—	31	—	31	32
Credit cards	—	—	—	—	—	—	5	5	4
Total consumer	$ —	$ —	$ —	$ 1	$ 1	$ 578	$ 5	$ 585	$ 616

Concentration of Credit Risk At June 30, 2020 and December 31, 2019, our loan portfolios included interest-only residential mortgage and home equity mortgage loans totaling $3,448 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.

6. Allowance for Credit Losses

As discussed further in Note 21, "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. Comparative information at December 31, 2019, which is not comparable as it does not reflect the adoption of the new accounting guidance, has been retained as previously reported.

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 the heading "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 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, unless determined otherwise. See *Updates to Economic Scenarios and Other Changes During the Six Months Ended June 30, 2020* below for further discussion. Key Central scenario assumptions 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 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 in the Central scenario for all variables. The reversion path for variables in the Upside and Downside scenarios is generally non-linear.

For the Central scenario, we set key assumptions such as Gross Domestic Product ("GDP") growth, inflation, unemployment, housing 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 independent model review 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.

We recognize that the Consensus Economic Scenario approach using three scenarios may be insufficient in certain economic environments. Additional analysis may be requested at management's discretion. This may result in a change to the weighting assigned to the three scenarios or the inclusion of extra scenarios.

We exclude from our lifetime ECL calculation financial assets which qualify for the 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 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.

Description of Consensus Economic Scenarios Adopted on January 1, 2020 The following discussion summarizes the key macroeconomic variable forecasts in 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 the first half of 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 Federal Reserve Board ("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 current 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 of $125 million for risk factors associated with large loan exposure in our commercial loan portfolio at January 1, 2020.

Updates to Economic Scenarios and Other Changes During the Six Months Ended June 30, 2020 As a result of the deterioration in economic conditions caused by the spread of the COVID-19 pandemic during the first quarter of 2020 and the related increase in economic uncertainty given the rapidly changing economic impact, we determined that the Consensus Economic Scenarios described above were no longer representative of management's view of forecasted economic conditions and, as a result, three new COVID-19 forward-looking economic scenarios were developed and utilized for estimating lifetime ECL at March 31, 2020. The three new COVID-19 scenarios, referred to as mild, moderate and severe, were assigned weightings with the majority of the weighting placed on the mild scenario and progressively lower weights placed on the moderate and severe scenarios. This weighting was deemed appropriate for the estimation of lifetime ECL under conditions at that time. See Note 6, "Allowance for Credit Losses," in our Form 10-Q for the three month period ended March 31, 2020 (the "2020 First Quarter Form 10-Q") for further discussion of the scenarios utilized at March 31, 2020.

During the second quarter of 2020, economic conditions remained weak and economic uncertainty caused by the COVID-19 pandemic continued to remain high. As a result, we updated our Upside and Downside scenarios, in addition to updating our Central scenario, to reflect management's current view of forecasted economic conditions and utilized the three updated Consensus Economic Scenarios for estimating lifetime ECL at June 30, 2020. In addition, given the high level of economic uncertainty in the current environment, we developed and utilized a fourth scenario, 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. 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 key macroeconomic variable forecasts in the Central, Upside, Downside and Alternative Downside scenarios at June 30, 2020.

In the Central scenario, GDP returns to expansion in the third quarter of 2020, after quarter-over-quarter contractions in both the first and second quarters, under the assumption of a phased re-opening of the economy. With the economic recovery, the unemployment rate gradually declines after peaking in the second quarter of 2020. The residential housing market enters into a mild downturn in the second half of 2020, lagging behind the economy. 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 after reaching its trough in the second quarter of 2020.

In the Upside scenario, the re-opening of the economy is expected to proceed at a faster pace than in the Central scenario. As a result, the economy rebounds stronger and the unemployment rate falls faster. Home prices only drop slightly in the second half of 2020, before resuming an upward trend in the second quarter of 2021. In this scenario, the equity price index returns to the pre-COVID-19 level by the beginning of 2022 and the FRB begins raising its policy rate in 2021.

In the Downside scenario, the re-opening of the economy is delayed due to a rapid rise of COVID-19 cases. In this scenario, the economic recovery starting in the third quarter of 2020 is quite anemic, with the unemployment rate staying at double digits through the end of 2021. The residential housing downturn lasts longer than in the Central scenario 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 more than half of its value by the middle 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, economic recessions re-emerge in both 2021 and 2022, under the assumption that no vaccine or effective treatment for COVID-19 can be broadly distributed. 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. At the same time, contracting corporate activities pushes the commercial real estate market into a severe downturn. Volatility in the financial markets remains extremely high for the rest of 2021, driving corporate credit spreads even higher than the levels from the 2007-2009 recession. Flight to safe haven assets pushes the 10-year U.S. Treasury yield to negative territory in this scenario.

In addition to the updates to the economic scenarios, during the three and six months ended June 30, 2020, we increased our management judgment allowance for risk factors associated with large loan exposure in our commercial loan portfolio by $27 million and $122 million, respectively, to $247 million at June 30, 2020, reflecting an increase in projected lifetime large loan defaults.

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.

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 and loss given default ("LGD") are assigned 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 the allowance for credit losses methodology. 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 may reflect consideration of management judgment of risk factors that are considered likely to cause estimated credit losses associated with the existing portfolio to differ from historical loss experience as well as where the models used to generate the reserves do not produce an estimate that is sufficient to encompass the current view of lifetime ECL. 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 TDR 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 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 which do not qualify as TDR 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 monthly based on a rolling average of several months' data using the most recently available information.

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 are considered likely to cause estimated credit losses associated with the existing portfolio to differ from historical loss experience as well as where the models used to generate the reserves do not produce an estimate that is sufficient to encompass the current view of lifetime ECL. 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.

Collateral-dependent loans As discussed above, beginning January 1, 2020, expected recoveries related to subsequent increases in the fair value of collateral for collateral-dependent loans that were previously written down below current recovery value estimates are recognized in the allowance for credit losses. The amount recognized is limited to the cumulative amount of prior write-offs. See Note 5, "Loans," for additional information regarding collateral-dependent loans.

Off-balance sheet credit exposures A separate estimate of lifetime ECL 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 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 of credit.

Securities See Note 4, "Securities," for discussion of the methodologies utilized for calculating the allowance for credit losses on our securities available-for-sale and securities held-to-maturity portfolios.

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

	June 30, 2020	January 1, 2020	December 31, 2019
		(in millions)	
Allowance for credit losses:			
Loans	**$ 1,192**	**$ 467**	$ 637
Securities held-to-maturity(1)	**2**	**2**	—
Other financial assets measured at amortized cost(2)	**4**	**3**	—
Securities available-for-sale(1)	**3**	**3**	—
Total allowance for credit losses	**$ 1,201**	**$ 475**	$ 637
Liability for off-balance sheet credit exposures	**$ 253**	**$ 158**	$ 104

(1) See Note 4, "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 three and six months ended June 30, 2020 and 2019:

	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)				
Three Months Ended June 30, 2020									
Allowance for credit losses – beginning of period	**$ 92**	**$ 382**	**$ 248**	**$ 5**	**$ (41)**	**$ 16**	**$ 212**	**$ 17**	**$ 931**
Provision charged (credited) to income	**28**	**106**	**176**	**(1)**	**20**	**(1)**	**3**	**6**	**337**
Charge-offs	**—**	**(55)**	**—**	**—**	**(1)**	**—**	**(26)**	**(2)**	**(84)**
Recoveries	**—**	**1**	**—**	**1**	**3**	**1**	**1**	**1**	**8**
Net (charge-offs) recoveries	**—**	**(54)**	**—**	**1**	**2**	**1**	**(25)**	**(1)**	**(76)**
Allowance for credit losses – end of period	**$ 120**	**$ 434**	**$ 424**	**$ 5**	**$ (19)**	**$ 16**	**$ 190**	**$ 22**	**$ 1,192**

	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)								
Three Months Ended June 30, 2019									
Allowance for credit losses – beginning of period	$ 119	$ 239	$ 122	$ 15	$ 10	$ 8	$ 63	$ 7	$ 583
Provision charged (credited) to income	30	13	(9)	(6)	1	(1)	19	(1)	46
Charge-offs	—	(2)	(3)	—	(3)	(1)	(12)	(2)	(23)
Recoveries	—	1	—	—	3	1	1	1	7
Net (charge-offs) recoveries	—	(1)	(3)	—	—	—	(11)	(1)	(16)
Allowance for credit losses – end of period	$ 149	$ 251	$ 110	$ 9	$ 11	$ 7	$ 71	$ 5	$ 613
Six Months Ended June 30, 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	**79**	**319**	**286**	**—**	**50**	**2**	**98**	**15**	**849**
Charge-offs	**—**	**(67)**	**(19)**	**—**	**—**	**(2)**	**(48)**	**(4)**	**(140)**
Recoveries	**—**	**3**	**—**	**1**	**5**	**3**	**3**	**1**	**16**
Net (charge-offs) recoveries	**—**	**(64)**	**(19)**	**1**	**5**	**1**	**(45)**	**(3)**	**(124)**
Allowance for credit losses – end of period	**$ 120**	**$ 434**	**$ 424**	**$ 5**	**$ (19)**	**$ 16**	**$ 190**	**$ 22**	**$ 1,192**
Six Months Ended June 30, 2019									
Allowance for credit losses – beginning of period	$ 116	$ 219	$ 108	$ 15	$ 13	$ 7	$ 58	$ 5	$ 541
Provision charged (credited) to income	33	35	5	(6)	—	—	35	2	104
Charge-offs	—	(4)	(3)	—	(7)	(2)	(25)	(3)	(44)
Recoveries	—	1	—	—	5	2	3	1	12
Net (charge-offs) recoveries	—	(3)	(3)	—	(2)	—	(22)	(2)	(32)
Allowance for credit losses – end of period	$ 149	$ 251	$ 110	$ 9	$ 11	$ 7	$ 71	$ 5	$ 613

The following table summarizes the changes in the liability for off-balance sheet credit exposures during the three and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in millions)			
Balance at beginning of period	**$ 371**	$ 89	**$ 104**	$ 96
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses	**—**	—	**54**	—
Balance at beginning of period, adjusted	**371**	89	**158**	96
Provision charged (credited) to income	**(118)**	1	**95**	(6)
Balance at end of period	**$ 253**	$ 90	**$ 253**	$ 90

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 4, "Securities," and Note 5, "Loans."

	June 30, 2020
	(in millions)
Accrued interest receivables:	
Loans	**$ 156**
Securities held-to-maturity	**29**
Other financial assets measured at amortized cost	**1**
Securities available-for-sale	**105**
Total accrued interest receivables	**291**
Allowance for credit losses	**3**
Accrued interest receivables, net	**$ 288**

During the three and six months ended June 30, 2020, we charged-off accrued interest receivables by reversing interest income for loans of $3 million and $4 million, respectively.

7. Loans Held for Sale

Loans held for sale consisted of the following:

	June 30, 2020	December 31, 2019
	(in millions)	
Commercial loans:		
Real estate, including construction	**$ —**	$ 83
Business and corporate banking	**—**	35
Global banking	**103**	94
Total commercial	**103**	212
Consumer loans:		
Residential mortgages	**44**	77
Total consumer	**44**	77
Total loans held for sale	**$ 147**	$ 289

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 $45 million and $178 million at June 30, 2020 and December 31, 2019, respectively. See Note 10, "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 $58 million and $34 million at June 30, 2020 and December 31, 2019, respectively. During both the three and six months ended June 30, 2020, we recorded $9 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 (loss) 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 both the three and six months ended June 30, 2019.

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 (loss) 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. Beginning with 2018 applications, 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 (loss) in the consolidated statement of income (loss), was a gain of $2 million and a loss of $1 million during the three and six months ended June 30, 2020, respectively, compared with losses of $1 million and $2 million during the three and six months ended June 30, 2019, 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 $1 million and $2 million at June 30, 2020 and December 31, 2019, respectively. The valuation allowance on commercial loans held for sale was $1 million and nil at June 30, 2020 and December 31, 2019, respectively.

8. Goodwill

Goodwill was $458 million and $1,242 million at June 30, 2020 and December 31, 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 recent 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 early April 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. As discussed in our 2019 Form 10-K, our goodwill impairment testing is highly sensitive to certain assumptions and estimates used.

During the second quarter of 2020, 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.

9. 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.

	June 30, 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]	—	**84**	—	164
Interest rate contracts	—	**84**	—	165
Derivatives accounted for as cash flow hedges[1]				
Foreign exchange contracts - bilateral OTC[2]	**19**	**1**	16	20
Interest rate contracts - bilateral OTC[2]	—	—	—	1
Total derivatives accounted for as hedges	**19**	**85**	16	186
Trading derivatives not accounted for as hedges[3]				
Exchange-traded[2]	**9**	**12**	110	3
OTC-cleared[2]	**71**	**80**	167	29
Bilateral OTC[2]	**16,739**	**19,146**	11,990	13,324
Interest rate contracts	**16,819**	**19,238**	12,267	13,356
Exchange-traded[2]	—	—	80	—
OTC-cleared [2]	—	**8**	—	—
Bilateral OTC[2]	**19,706**	**18,871**	16,440	15,786
Foreign exchange contracts	**19,706**	**18,879**	16,520	15,786
Equity contracts - Bilateral OTC[2]	**3,585**	**3,635**	3,753	3,993
Exchange-traded[2]	**1**	**99**	71	80
Bilateral OTC[2]	**1,625**	**1,791**	1,087	1,309
Precious metals contracts	**1,626**	**1,890**	1,158	1,389
OTC-cleared[2]	**94**	—	1	—
Bilateral OTC[2]	**699**	**900**	1,138	1,024
Credit contracts	**793**	**900**	1,139	1,024
Other non-qualifying derivatives not accounted for as hedges[1]				
Interest rate contracts - bilateral OTC[2]	**139**	**3**	128	51
Foreign exchange contracts - bilateral OTC[2]	—	**1**	—	—
Equity contracts - bilateral OTC[2]	**857**	**291**	1,354	75
Credit contracts - bilateral OTC[2]	**3**	**54**	—	44
Other contracts - bilateral OTC[2][4]	**9**	**73**	10	85
Total derivatives	**43,556**	**45,049**	36,345	35,989
Less: Gross amounts of receivable / payable subject to enforceable master netting agreements[5][7]	**36,240**	**36,240**	29,510	29,510
Less: Gross amounts of cash collateral received / posted subject to enforceable master netting agreements[6][7]	**3,913**	**6,042**	3,683	4,390
Net amounts of derivative assets / liabilities presented in the balance sheet	**3,403**	**2,767**	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	**638**	**1,002**	891	553
Net amounts of derivative assets / liabilities	**$ 2,765**	**$ 1,765**	$ 2,261	$ 1,536

(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) Consists of swap agreements entered into in conjunction with the sales of Visa Inc. ("Visa") Class B common shares ("Class B Shares").

(5) Represents the netting of derivative receivable and payable balances for the same counterparty under enforceable netting agreements.

(6) Represents the netting of cash collateral posted and received by counterparty under enforceable netting agreements.

(7) Netting is performed at a counterparty level in cases where enforceable master netting agreements are in place, regardless of the type of derivative instrument. Therefore, we have not allocated netting to the different types of derivative instruments shown in the table above.

See Note 18, "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 June 30, 2020 and December 31, 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 June 30, 2020				
Securities available-for-sale ("AFS")	**$ 9,547**	**$ 1,167**	**$ 780**	**$ 1,947**
Deposits(2)	**3,234**	**234**	**—**	**234**
Long-term debt	**5,932**	**328**	**(19)**	**309**
At December 31, 2019				
Securities available-for-sale ("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 the first quarter of 2020, $3.0 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 14, "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):

	Location of Gain (Loss) Recognized in Income	Gain (Loss) on Derivatives	Gain (Loss) on Hedged Items
		(in millions)	
Three Months Ended June 30, 2020			
Interest rate contracts / Securities AFS	Net interest income	**$ 12**	**$ 52**
Interest rate contracts / Deposits	Net interest income	**—**	**(35)**
Interest rate contracts / Long-term debt	Net interest income	**50**	**(61)**
Total		**$ 62**	**$ (44)**
Three Months Ended June 30, 2019			
Interest rate contracts / Securities AFS	Net interest income	$ (404)	$ 488
Interest rate contracts / Long-term debt	Net interest income	153	(290)
Total		$ (251)	$ 198
Six Months Ended June 30, 2020			
Interest rate contracts / Securities AFS	Net interest income	**$ (1,144)**	**$ 1,230**
Interest rate contracts / Deposits	Net interest income	**120**	**(181)**
Interest rate contracts / Long-term debt	Net interest income	**227**	**(290)**
Total		**$ (797)**	**$ 759**
Six Months Ended June 30, 2019			
Interest rate contracts / Securities AFS	Net interest income	$ (661)	$ 838
Interest rate contracts / Long-term debt	Net interest income	237	(489)
Total		$ (424)	$ 349

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 (loss). When the cash flows being hedged materialize and are recorded in income or expense, the associated gain or loss from the hedging derivative previously recorded in accumulated other comprehensive 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 June 30, 2020, active cash flow hedge relationships extend or mature through March 2023. During the three and six months ended June 30, 2020, respectively, $4 million and $10 million of losses related to discontinued cash flow hedge relationships were amortized to earnings from AOCI compared with losses of $9 million and $19 million during the three and six months ended June 30, 2019, respectively. During the next twelve months, we expect to amortize $9 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		Location of Gain (Loss) Reclassified from AOCI into Income	Gain (Loss) Reclassified From AOCI into Income	
	2020	**2019**		**2020**	**2019**
			(in millions)		
Three Months Ended June 30,					
Foreign exchange contracts	**$ —**	$ —	Net interest income	**$ —**	$ —
Interest rate contracts	**—**	(2)	Net interest income	**(4)**	(9)
Total	**$ —**	$ (2)		**$ (4)**	$ (9)
Six Months Ended June 30,					
Foreign exchange contracts	**$ —**	$ 1	Net interest income	**$ —**	$ —
Interest rate contracts	**113**	5	Net interest income	**(10)**	(19)
Total	**$ 113**	$ 6		**$ (10)**	$ (19)

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 (loss).
- 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 18, "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 (loss). See Note 7, "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 (loss) 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			
		Three Months Ended June 30,		Six Months Ended June 30,	
		2020	2019	2020	2019
		(in millions)			
Interest rate contracts	Trading revenue	**$ (135)**	$ (171)	**$ (118)**	$ (115)
Foreign exchange contracts[1]	Trading revenue	**(144)**	253	**(809)**	239
Equity contracts	Trading revenue	**(189)**	(61)	**1,068**	(150)
Precious metals contracts[1]	Trading revenue	**223**	36	**383**	53
Credit contracts	Trading revenue	**35**	(145)	**(622)**	(267)
Total		**$ (210)**	$ (88)	**$ (98)**	$ (240)

(1) During the third quarter of 2019, we changed our presentation for certain derivatives that were previously reported in foreign exchange contracts and began reporting these derivatives in precious metals contracts. As a result, we have reclassified $424 million and $575 million of gains from foreign exchange contracts to precious metals contracts during the three and six months ended June 30, 2019, respectively, to conform with the current year presentation.

The significant gains and losses recognized in trading revenue on derivatives during the six months ended June 30, 2020, primarily in foreign exchange, equity and credit contracts, reflect the impact of market volatility caused by the spread of 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			
		Three Months Ended June 30,		Six Months Ended June 30,	
		2020	2019	2020	2019
		(in millions)			
Interest rate contracts	Gain (loss) on instruments designated at fair value and related derivatives	**$ 19**	$ 180	**$ 269**	$ 336
Interest rate contracts	Other income (loss)	**2**	(1)	**(1)**	(2)
Foreign exchange contracts	Gain (loss) on instruments designated at fair value and related derivatives	**—**	1	**(2)**	—
Equity contracts	Gain (loss) on instruments designated at fair value and related derivatives	**1,085**	324	**(613)**	1,238
Credit contracts	Gain (loss) on instruments designated at fair value and related derivatives	**—**	—	**37**	—
Credit contracts	Other income (loss)	**(38)**	(4)	**13**	(14)
Other contracts[1]	Other income (loss)	**(12)**	(3)	**(1)**	(9)
Total		**$ 1,056**	$ 497	**$ (298)**	$ 1,549

(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 June 30, 2020 was $1,122 million, for which we had posted collateral of $674 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 18, "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	$ 33	$ 183

Notional Value of Derivative Contracts The following table summarizes the notional values of derivative contracts:

	June 30, 2020	December 31, 2019
	(in millions)	
Interest rate:		
Futures and forwards	**$ 492,827**	$ 597,980
Swaps	**1,633,572**	2,130,442
Options written	**85,733**	158,861
Options purchased	**90,289**	164,265
	2,302,421	3,051,548
Foreign exchange:		
Swaps, futures and forwards	**1,114,801**	1,362,959
Options written	**31,766**	44,876
Options purchased	**31,970**	46,085
Spot	**81,472**	67,060
	1,260,009	1,520,980
Commodities, equities and precious metals:		
Swaps, futures and forwards	**65,008**	55,678
Options written	**35,138**	39,035
Options purchased	**45,260**	49,517
	145,406	144,230
Credit derivatives	**83,278**	90,049
Other contracts[1]	**1,074**	1,044
Total	**$ 3,792,188**	$ 4,807,851

(1) Consists of swap agreements entered into in conjunction with the sales of Visa Class B Shares.

10. *Fair Value Option*

We report our results to HSBC in accordance with HSBC Group accounting and reporting policies ("Group Reporting Basis"), which apply International Financial Reporting Standards ("IFRSs") as issued by the International Accounting Standards Board ("IASB") and endorsed by the European Union ("EU"). We typically have elected to apply fair value option ("FVO") accounting to selected financial instruments to align the measurement attributes of those instruments under U.S. GAAP and the Group Reporting Basis and to simplify the accounting model applied to those financial instruments. We elected to apply FVO accounting to certain commercial loans held for sale, certain securities 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 (loss), 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 June 30, 2020, there were loans with a fair value of $5 million (unpaid principal balance of $9 million) for which the fair value option has been elected that were 90 days or more past due while there were no loans for which the fair value option has been elected in nonaccrual status. At December 31, 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 June 30, 2020			
Student loans held for investment	**$ 35**	**$ 37**	**$ (2)**
Commercial loans held for sale	**45**	**56**	**(11)**
Fixed rate long-term debt	**971**	**741**	**230**
Hybrid instruments:			
Structured deposits	**5,395**	**6,092**	**(697)**
Structured notes	**8,350**	**7,877**	**473**
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 three and six months ended June 30, 2020 and 2019:

	Loans and Loans Held for Sale	Long-Term Debt	Hybrid Instruments	Total
		(in millions)		
Three Months Ended June 30, 2020				
Interest rate and other components[1]	**$ —**	**$ 2**	**$ (1,089)**	**$ (1,087)**
Credit risk component[2][3]	**5**	**—**	**—**	**5**
Total mark-to-market on financial instruments designated at fair value	**5**	**2**	**(1,089)**	**(1,082)**
Mark-to-market on related derivatives	**—**	**—**	**1,096**	**1,096**
Net realized gain on related long-term debt derivatives	**—**	**8**	**—**	**8**
Gain (loss) on instruments designated at fair value and related derivatives	**$ 5**	**$ 10**	**$ 7**	**$ 22**
Three Months Ended June 30, 2019				
Interest rate and other components[1]	$ —	$ (100)	$ (422)	$ (522)
Credit risk component[2]	—	—	—	—
Total mark-to-market on financial instruments designated at fair value	—	(100)	(422)	(522)
Mark-to-market on related derivatives	—	83	413	496
Net realized gain on related long-term debt derivatives	—	9	—	9
Gain (loss) on instruments designated at fair value and related derivatives	$ —	$ (8)	$ (9)	$ (17)
Six Months Ended June 30, 2020				
Interest rate and other components[1]	**$ —**	**$ (132)**	**$ 490**	**$ 358**
Credit risk component[2][3]	**(49)**	**—**	**—**	**(49)**
Total mark-to-market on financial instruments designated at fair value	**(49)**	**(132)**	**490**	**309**
Mark-to-market on related derivatives	**37**	**150**	**(510)**	**(323)**
Net realized gain on related long-term debt derivatives	**—**	**14**	**—**	**14**
Gain (loss) on instruments designated at fair value and related derivatives	**$ (12)**	**$ 32**	**$ (20)**	**$ —**
Six Months Ended June 30, 2019				
Interest rate and other components[1]	$ —	$ (169)	$ (1,434)	$ (1,603)
Credit risk component[2]	3	—	—	3
Total mark-to-market on financial instruments designated at fair value	3	(169)	(1,434)	(1,600)
Mark-to-market on related derivatives	—	136	1,419	1,555
Net realized gain on related long-term debt derivatives	—	19	—	19
Gain (loss) on instruments designated at fair value and related derivatives	$ 3	$ (14)	$ (15)	$ (26)

(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 (loss).

(3) During six months ended June 30, 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.

11. 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:

Three Months Ended June 30,	2020	2019
	(in millions)	
Unrealized gains (losses) on investment securities:		
Balance at beginning of period	**$ 644**	$ (340)
Other comprehensive income (loss) for period:		
Net unrealized gains arising during period, net of tax of $41 million and $73 million, respectively	**129**	235
Reclassification adjustment for gains realized in net income (loss), net of tax of $(7) million and $(5) million, respectively[1]	**(24)**	(18)
Provision for credit losses realized in net income (loss), net of tax of less than $1 million[2]	**1**	—
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 $1 million and $1 million, respectively[3]	**4**	3
Total other comprehensive income (loss) for period	**110**	220
Balance at end of period	**754**	(120)
Unrealized gains (losses) on fair value option liabilities attributable to our own credit spread:		
Balance at beginning of period	**398**	190
Other comprehensive income (loss) for period:		
Net unrealized gains (losses) arising during the period, net of tax of $(82) million and $2 million, respectively	**(261)**	7
Total other comprehensive income (loss) for period	**(261)**	7
Balance at end of period	**137**	197
Unrealized gains (losses) on derivatives designated as cash flow hedges:		
Balance at beginning of period	**(61)**	(145)
Other comprehensive income (loss) for period:		
Net unrealized losses arising during period, net of tax of nil and $(1) million, respectively	**—**	(1)
Reclassification adjustment for losses realized in net income (loss), net of tax of $1 million and $3 million, respectively[4]	**3**	6
Total other comprehensive income for period	**3**	5
Balance at end of period	**(58)**	(140)
Pension and postretirement benefit liability:		
Balance at beginning and end of period	**(3)**	8
Total accumulated other comprehensive income (loss) at end of period	**$ 830**	$ (55)

Six Months Ended June 30,	2020	2019
	(in millions)	
Unrealized gains (losses) on investment securities:		
Balance at beginning of period	**$ (116)**	$ (519)
Cumulative effect adjustment to initially apply new accounting guidance for measuring credit losses on securities available-for-sale, net of tax of $1 million[5]	**2**	—
Balance at beginning of period, adjusted	**(114)**	(519)
Other comprehensive income (loss) for period:		
Net unrealized gains arising during period, net of tax of $286 million and $128 million, respectively	**906**	415
Reclassification adjustment for gains realized in net income (loss), net of tax of $(14) million and $(7) million, respectively[1]	**(45)**	(23)
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 $2 million and $2 million, respectively[3]	**7**	7
Total other comprehensive income for period	**868**	399
Balance at end of period	**754**	(120)
Unrealized gains (losses) on fair value option liabilities attributable to our own credit spread:		
Balance at beginning of period	**(9)**	301
Other comprehensive income (loss) for period:		
Net unrealized gains (losses) arising during period, net of tax of $46 million and $(33) million, respectively	**146**	(104)
Total other comprehensive income (loss) for period	**146**	(104)
Balance at end of period	**137**	197
Unrealized gains (losses) on derivatives designated as cash flow hedges:		
Balance at beginning of period	**(151)**	(159)
Other comprehensive income (loss) for period:		
Net unrealized gains arising during period, net of tax of $28 million and $1 million, respectively	**85**	5
Reclassification adjustment for losses realized in net income (loss), net of tax of $2 million and $5 million, respectively[4]	**8**	14
Total other comprehensive income for period	**93**	19
Balance at end of period	**(58)**	(140)
Pension and postretirement benefit liability:		
Balance at beginning of period	**(3)**	11
Other comprehensive income (loss) for period:		
Change in unfunded pension and postretirement liability, net of tax of nil and $(1) million, respectively	**—**	(3)
Total other comprehensive loss for period	**—**	(3)
Balance at end of period	**(3)**	8
Total accumulated other comprehensive income (loss) at end of period	**$ 830**	$ (55)

(1) Amount reclassified to net income (loss) is included in other securities gains, net in our consolidated statement of income (loss).

(2) 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).

(3) 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.

(4) Amount reclassified to net income (loss) is included in net interest income in our consolidated statement of income (loss).

(5) See Note 21, "New Accounting Pronouncements," for additional discussion.

12. Pension and Other Postretirement Benefits

Defined Benefit Pension Plan The table below reflects the portion of pension expense and its related components of the combined HSBC North America Pension Plan (either the "HSBC North America Pension Plan" or the "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 liability.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Interest cost on projected benefit obligation	**$ 12**	$ 14	**$ 24**	$ 29
Expected return on plan assets	**(20)**	(19)	**(39)**	(37)
Amortization of net actuarial loss	**2**	5	**4**	12
Administrative costs	**1**	1	**2**	2
Pension (income) expense	**$ (5)**	$ 1	**$ (9)**	$ 6

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Interest cost on accumulated benefit obligation	**$ 1**	$ 1	**$ 1**	$ 1
Amortization of net actuarial gain	**(1)**	(1)	**(1)**	(1)
Net periodic postretirement benefit cost	**$ —**	$ —	**$ —**	$ —

13. 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 three and six months ended June 30, 2020 and 2019. See Note 22, "Fee Income from Contracts with Customers," in our 2019 Form 10-K for a description of the various types of fee-based activities and how revenue associated with these activities is recognized. There have been no significant changes in these activities since December 31, 2019.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in millions)			
Credit card fees, net	**$ 9**	$ 18	**$ 20**	$ 30
Trust and investment management fees	**33**	31	**64**	61
Other fees and commissions:				
Account services	**58**	68	**119**	133
Credit facilities	**64**	81	**137**	150
Other fees	**15**	13	**32**	26
Total other fees and commissions	**137**	162	**288**	309
Servicing and other fees from HSBC affiliates	**81**	88	**169**	169
Insurance[(1)]	**2**	4	**4**	6
Total fee income from contracts with customers	**262**	303	**545**	575
Other non-fee revenues	**202**	133	**306**	251
Total other revenues[(2)]	**$ 464**	$ 436	**$ 851**	$ 826

(1) Included within other income (loss) in the consolidated statement of income (loss).

(2) See Note 15, "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 We recognized interchange fees of $13 million and $35 million during the three and six months ended June 30, 2020, respectively, compared with $26 million and $48 million during the three and six months ended June 30, 2019, respectively. Credit card rewards program costs totaled $5 million and $18 million during the three and six months ended June 30, 2020, respectively, compared with $10 million and $22 million during the three and six months ended June 30, 2019, respectively.

Deferred Fee Income

Information related to deferred fee income on loan commitments, revolving credit facilities and standby letters of credit is included in Note 18, "Guarantee Arrangements, Pledged Assets and Repurchase Agreements," and Note 19, "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 June 30, 2020 and December 31, 2019, respectively. We expect to recognize this revenue over a remaining period of one year or less.

Other than trust and investment management fees as discussed in our 2019 Form 10-K, 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.

14. 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, National Association (together with its subsidiaries, "HSBC Bank USA") to other HSBC affiliates (other than Federal Deposit Insurance Corporation insured banks) are legally required to be secured by eligible collateral. The following tables present related party balances and the income (expense) generated by related party transactions:

	June 30, 2020	December 31, 2019
	(in millions)	
Assets:		
Cash and due from banks	**$ 466**	$ 850
Interest bearing deposits with banks	**135**	40
Securities purchased under agreements to resell[1]	**2,153**	4,600
Trading assets	**86**	79
Loans	**1,565**	2,343
Other[2]	**863**	456
Total assets	**$ 5,268**	$ 8,368
Liabilities:		
Deposits	**$ 15,790**	$ 9,000
Trading liabilities	**53**	293
Short-term borrowings	**295**	1,166
Long-term debt	**4,865**	7,848
Other[2]	**210**	931
Total liabilities	**$ 21,213**	$ 19,238

(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.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in millions)			
Income (Expense):				
Interest income	**$ 12**	$ 47	**$ 38**	$ 90
Interest expense	**(79)**	(152)	**(199)**	(276)
Net interest expense	**(67)**	(105)	**(161)**	(186)
Trading revenue (expense)	**(356)**	(9)	**(617)**	(1,523)
Servicing and other fees from HSBC affiliates:				
HSBC Bank plc	**41**	46	**88**	81
HSBC Markets (USA) Inc. ("HMUS")	**26**	27	**50**	57
Other HSBC affiliates	**14**	15	**31**	31
Total servicing and other fees from HSBC affiliates	**81**	88	**169**	169
Gain (loss) on instruments designated at fair value and related derivatives	**1,096**	412	**(510)**	1,420
Support services from HSBC affiliates:				
HTSU	**(272)**	(298)	**(535)**	(575)
HMUS	**(19)**	(23)	**(46)**	(50)
Other HSBC affiliates	**(98)**	(90)	**(190)**	(166)
Total support services from HSBC affiliates	**(389)**	(411)	**(771)**	(791)
Rental income from HSBC affiliates, net[1]	**6**	12	**18**	24
Stock based compensation expense[2]	**(7)**	(8)	**(13)**	(14)

(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 12, "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 June 30, 2020 and December 31, 2019, long-term debt with affiliates reflected $4.9 billion and $7.8 billion, respectively, of borrowings from HSBC North America. During the first quarter of 2020, $3.0 billion of these borrowings were recharacterized as time deposits, including $1.5 billion of fixed-rate senior debt which matures in March 2021 and $1.5 billion of fixed-rate senior debt which matures in March 2026. The remaining outstanding balances include:

- $2.0 billion of fixed-rate senior debt which matures in May 2021;
- $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.

We have a $150 million uncommitted line of credit with HSBC North America. There was no outstanding balance under this credit facility at either June 30, 2020 or December 31, 2019.

We have also incurred short-term borrowings with certain affiliates, largely securities sold under repurchase agreements with HSBC Securities (USA) Inc. ("HSI"). In addition, certain affiliates have also placed deposits with us.

Lending and Derivative Related Arrangements Extended to HSBC Affiliates:

At June 30, 2020 and December 31, 2019, we had the following loan balances outstanding with HSBC affiliates:

	June 30, 2020	December 31, 2019
	(in millions)	
HMUS and subsidiaries	**$ 1,438**	$ 2,296
Other short-term affiliate lending	**127**	47
Total loans	**$ 1,565**	$ 2,343

HMUS and subsidiaries We have extended loans and lines, some of them uncommitted, to HMUS and its subsidiaries in the amount of $12.0 billion at both June 30, 2020 and December 31, 2019 of which $1.4 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 June 30, 2020 or December 31, 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 June 30, 2020 and December 31, 2019, there were $127 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 $912.2 billion and $1,111.5 billion at June 30, 2020 and December 31, 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 $167 million and $90 million at June 30, 2020 and December 31, 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.

Services Provided Between HSBC Affiliates:

Under multiple service level agreements, we provide services to and receive services from various HSBC affiliates. These activities are summarized in Note 23, "Related Party Transactions," in our 2019 Form 10-K. There have been no significant changes in these activities since December 31, 2019.

Other Transactions with HSBC Affiliates:

At both June 30, 2020 and December 31, 2019, we had $1,265 million of non-cumulative preferred stock issued and outstanding to HSBC North America. See Note 18, "Preferred Stock," in our 2019 Form 10-K for additional details.

15. 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 the second quarter of 2020 and is discussed further below, Commercial Banking ("CMB"), Global Banking and Markets ("GB&M") 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 the second quarter of 2020, we implemented a change to our internal management reporting to begin reporting 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 the second quarter of 2020, we also decided to implement a change to our internal management reporting to begin allocating Balance Sheet Management ("BSM"), which was historically reported within the CC segment, to the WPB, CMB and GB&M 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.

The following table summarizes the impact of these changes on reported segment profit (loss) before tax, total assets and total deposits as of and for the three months and six months ended June 30, 2019:

	As Previously Reported	After Reporting Changes
	(in millions)	
Segment profit (loss) before tax during the three months ended June 30, 2019:		
RBWM	$ (26)	NR
WPB	NR	$ (8)
CMB	106	114
GB&M	94	126
PB	(4)	NR
CC	19	(43)
Segment profit (loss) before tax during the six months ended June 30, 2019:		
RBWM	$ (72)	NR
WPB	NR	$ (34)
CMB	221	236
GB&M	231	295
PB	(3)	NR
CC	16	(104)
Segment total assets at June 30, 2019:		
RBWM(1)	$ 18,907	NR
WPB	NR	$ 50,886
CMB	26,735	35,568
GB&M	87,114	126,864
PB(1)	6,952	NR
CC	76,055	2,445
Segment total deposits at June 30, 2019:		
RBWM	$ 33,606	NR
WPB	NR	$ 42,942
CMB	23,554	24,299
GB&M	29,674	32,840
PB	7,226	NR
CC	6,021	—

(1) Segment total assets at June 30, 2019 included goodwill that was previously allocated to RBWM and PB of $581 million and $321 million, respectively.

NR Not Reported

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 BSM. BSM 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 and endorsed by the EU, and, as a result, our segment results are prepared and presented using financial information prepared on the Group Reporting Basis as operating results are monitored and reviewed, trends are evaluated and decisions about allocating resources, such as employees, are primarily made on this basis. We continue, however, to monitor capital adequacy and report to regulatory agencies on a U.S. GAAP basis.

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 are summarized in Note 24, "Business Segments," in our 2019 Form 10-K. Other than the changes discussed below, there have been no other significant changes since December 31, 2019 in the differences between U.S. GAAP and the Group Reporting Basis impacting our results.

Expected credit losses - As discussed further in Note 21, "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 for the requirements of IFRS 9, "Financial Instruments" ("IFRS 9"), only financial assets which are considered to have experienced a significant increase in credit risk or for which there is objective evidence of impairment require an allowance based on lifetime ECL. Under the Group Reporting Basis, financial assets which have not experienced a significant increase in credit risk since initial recognition only require an allowance based on expected credit losses resulting from default events that are possible within the next 12 months. Principally as a result of this difference, the allowance for credit losses remains higher under U.S. GAAP than under the Group Reporting Basis. In addition, the new guidance 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) under U.S. GAAP, which results in an impact to earnings substantially consistent with the Group Reporting Basis. Prior to January 1, 2020, these expected recoveries were not recognized under U.S. GAAP.

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	GB&M	CC	Total	Group Reporting Basis Adjustments[1]	Group Reporting Basis Reclassi-fications[2]	U.S. GAAP Consolidated Totals
					(in millions)			
Three Months Ended June 30, 2020								
Net interest income	**$ 197**	**$ 204**	**$ 122**	**$ (7)**	**$ 516**	**$ 2**	**$ 20**	**$ 538**
Other operating income	**99**	**52**	**263**	**85**	**499**	**(19)**	**(16)**	**464**
Total operating income	**296**	**256**	**385**	**78**	**1,015**	**(17)**	**4**	**1,002**
Expected credit losses / provision for credit losses	**36**	**181**	**19**	**—**	**236**	**(17)**	**—**	**219**
	260	**75**	**366**	**78**	**779**	**—**	**4**	**783**
Operating expenses	**326**	**142**	**201**	**63**	**732**	**(9)**	**4**	**727**
Profit (loss) before income tax	**$ (66)**	**$ (67)**	**$ 165**	**$ 15**	**$ 47**	**$ 9**	**$ —**	**$ 56**
Three Months Ended June 30, 2019								
Net interest income	$ 265	$ 206	$ 156	$ (17)	$ 610	$ 3	$ (73)	$ 540
Other operating income	104	60	189	12	365	(3)	74	436
Total operating income	369	266	345	(5)	975	—	1	976
Expected credit losses / provision for credit losses	13	9	3	—	25	23	(2)	46
	356	257	342	(5)	950	(23)	3	930
Operating expenses	364	143	216	38	761	10	3	774
Profit (loss) before income tax	$ (8)	$ 114	$ 126	$ (43)	$ 189	$ (33)	$ —	$ 156

	Group Reporting Basis Consolidated Amounts							
	WPB	**CMB**	**GB&M**	**CC**	**Total**	**Group Reporting Basis Adjustments[1]**	**Group Reporting Basis Reclassi-fications[2]**	**U.S. GAAP Consolidated Totals**
					(in millions)			
Six Months Ended June 30, 2020								
Net interest income	**$ 429**	**$ 414**	**$ 212**	**$ (20)**	**$ 1,035**	**$ 5**	**$ 2**	**$ 1,042**
Other operating income	**173**	**110**	**526**	**61**	**870**	**(23)**	**4**	**851**
Total operating income	**602**	**524**	**738**	**41**	**1,905**	**(18)**	**6**	**1,893**
Expected credit losses / provision for credit losses	**176**	**304**	**135**	**—**	**615**	**330**	**—**	**945**
	426	**220**	**603**	**41**	**1,290**	**(348)**	**6**	**948**
Operating expenses	**1,361**	**289**	**393**	**198**	**2,241**	**85**	**6**	**2,332**
Profit (loss) before income tax	**$ (935)**	**$ (69)**	**$ 210**	**$ (157)**	**$ (951)**	**$ (433)**	**$ —**	**$ (1,384)**
Balances at end of period:								
Total assets	**$ 61,326**	**$ 41,511**	**$ 155,090**	**$ 2,449**	**$ 260,376**	**$ (47,514)**	**$ —**	**$ 212,862**
Total loans, net	**24,059**	**28,125**	**17,673**	**—**	**69,857**	**(3,931)**	**5,350**	**71,276**
Goodwill	**—**	**358**	**—**	**—**	**358**	**100**	**—**	**458**
Total deposits	**49,871**	**39,245**	**54,414**	**—**	**143,530**	**(4,874)**	**17,377**	**156,033**
Six Months Ended June 30, 2019								
Net interest income	$ 538	$ 412	$ 329	$ (45)	$ 1,234	$ 9	$ (141)	$ 1,102
Other operating income	194	121	379	9	703	(20)	143	826
Total operating income	732	533	708	(36)	1,937	(11)	2	1,928
Expected credit losses / provision for credit losses	34	15	(14)	—	35	64	5	104
	698	518	722	(36)	1,902	(75)	(3)	1,824
Operating expenses	732	282	427	68	1,509	18	(3)	1,524
Profit (loss) before income tax	$ (34)	$ 236	$ 295	$ (104)	$ 393	$ (93)	$ —	$ 300
Balances at end of period:								
Total assets	$ 50,886	$ 35,568	$ 126,864	$ 2,445	$ 215,763	$ (31,700)	$ —	$ 184,063
Total loans, net	23,683	25,792	20,853	—	70,328	(2,340)	3,877	71,865
Goodwill	902	358	—	—	1,260	347	—	1,607
Total deposits	42,942	24,299	32,840	—	100,081	(3,434)	20,314	116,961

(1) Represents adjustments associated with differences between U.S. GAAP and the Group Reporting Basis.

(2) Represents differences in financial statement presentation between U.S. GAAP and the Group Reporting Basis.

16. 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 reduced its reserve requirement to zero percent. 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 June 30, 2020 and December 31, 2019:

	June 30, 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	**$ 15,662**	**4.5% (2)**	**13.1%**	$ 15,876	4.5% (2)	13.1%
HSBC Bank USA	**17,913**	**6.5**	**15.3**	18,043	6.5	15.2
Tier 1 capital ratio:						
HSBC USA	**16,927**	**6.0**	**14.2**	17,141	6.0	14.1
HSBC Bank USA	**20,413**	**8.0**	**17.5**	20,543	8.0	17.3
Total capital ratio:						
HSBC USA	**20,820**	**10.0**	**17.4**	19,743	10.0	16.3
HSBC Bank USA	**23,140**	**10.0**	**19.8**	22,724	10.0	19.2
Tier 1 leverage ratio:						
HSBC USA	**16,927**	**4.0 (2)**	**8.1**	17,141	4.0 (2)	9.9
HSBC Bank USA	**20,413**	**5.0**	**10.0**	20,543	5.0	12.0
Supplementary leverage ratio ("SLR"):						
HSBC USA	**16,927**	**3.0 (3)**	**7.6**	17,141	3.0 (3)	6.9
HSBC Bank USA	**20,413**	**3.0 (3)**	**9.4**	20,543	3.0 (3)	8.4
Risk-weighted assets:(4)						
HSBC USA	**119,380**			121,407		
HSBC Bank USA	**116,707**			118,618		
Adjusted quarterly average assets:(5)						
HSBC USA	**208,230**			173,270		
HSBC Bank USA	**205,153**			170,722		
Total leverage exposure:(6)						
HSBC USA	**221,490**			247,590		
HSBC Bank USA	**217,494**			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 have the ratios reflected in the above table, and must not be subject to a directive, order, or written agreement to meet and maintain specific capital levels.

(2) There are no common equity Tier 1 or Tier 1 leverage ratio components in the definition of a well-capitalized bank holding company. The ratios shown are the regulatory 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 and their depository institution subsidiaries such as HSBC North America and 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, in March 2020, the federal banking agencies issued an interim 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 interim 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.

In addition, in April 2020, the FRB issued an interim final rule adopting a temporary change to the calculation of the SLR that permits bank holding companies such as HSBC North America and HSBC USA, 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 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. In May 2020, the federal banking agencies issued an interim final rule that permits depository institutions such as HSBC Bank USA to exclude 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.

17. 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 June 30, 2020 and December 31, 2019 which are consolidated on our balance sheet. Assets and liabilities exclude intercompany balances that eliminate in consolidation.

	June 30, 2020		December 31, 2019	
	Consolidated Assets	Consolidated Liabilities	Consolidated Assets	Consolidated Liabilities
	(in millions)			
Low income housing limited liability partnership:				
Other assets	**$ 86**	**$ —**	$ 98	$ —
Interest, taxes and other liabilities	**—**	**23**	—	38
Subtotal	**86**	**23**	98	38
Venture debt financing entity:				
Loans	**39**	**—**	—	—
Interest, taxes and other liabilities	**—**	**—**	—	—
Subtotal	**39**	**—**	—	—
Total	**$ 125**	**$ 23**	$ 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.

As a practical expedient, we amortize our low income housing investments in proportion to the allocated tax benefits under the proportional amortization method and present the associated tax benefits net of investment amortization in income tax expense (benefit).

Venture debt financing entity During 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 usually 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 involvements in these VIEs, at June 30, 2020 and December 31, 2019:

	Total Assets Held by Unconsolidated VIEs	Carrying Value of Variable Interests Held Reported as		Maximum Exposure to Loss
		Assets	Liabilities	
		(in millions)		
At June 30, 2020				
Structured note vehicles	**$ 1,557**	**$ 510**	**$ 42**	**$ 1,515**
Limited partnership investments	**2,634**	**597**	**311**	**597**
Total	**$ 4,191**	**$ 1,107**	**$ 353**	**$ 2,112**
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.

Structured note vehicles We provide derivatives, such as interest rate and currency swaps, to structured note vehicles and, in certain instances, invest in the vehicles' debt instruments. We hold variable interests in these structured note vehicles in the form of total return swaps under which we take on the risks and benefits of the structured notes they issue. The same risks and benefits are passed on to third party entities through back-end total return swaps. We earn a spread for facilitating the transaction. Since we do not have the power to direct the activities of the VIE and are not the primary beneficiary, we do not consolidate them. Our maximum exposure to loss is the notional amount of the derivatives wrapping the structured notes. The maximum exposure to loss of $1,515 million at June 30, 2020 would occur in the unlikely scenario where the value of the structured notes is reduced to zero and, at the same time, the counterparty of the back-end swap defaults with zero recovery. In certain instances, we hold credit default swaps with the structured note vehicles under which we receive credit protection on specified reference assets in exchange for the payment of a premium. Through these derivatives, the vehicles assume the credit risk associated with the reference assets which are then passed on to the holders of the debt instruments they issue. Because they create rather than absorb variability, the credit default swaps we hold are not considered variable interests. We record all investments in, and derivative contracts with, unconsolidated structured note vehicles at fair value on our consolidated balance sheet.

During the first quarter of 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 approximately $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.

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.

Third-party sponsored securitization entities We invest in asset-backed securities issued by third party sponsored securitization entities which may be considered VIEs. The investments are transacted at arm's-length and decisions to invest are based on a credit analysis of the underlying collateral assets or the issuer. We are a passive investor in these issuers and do not have the power to direct the activities of these issuers. As such, we do not consolidate these securitization entities. Additionally, we do not have other involvements in servicing or managing the collateral assets or provide financial or liquidity support to these issuers which potentially give rise to risk of loss exposure. These investments are an integral part of the disclosure in Note 3, "Trading Assets and Liabilities," Note 4, "Securities," and Note 19, "Fair Value Measurements," and, therefore, are not disclosed in this note to avoid redundancy.

18. 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 June 30, 2020 and December 31, 2019. Following the table is a description of the various arrangements.

	June 30, 2020		December 31, 2019	
	Carrying Value	Notional / Maximum Exposure to Loss	Carrying Value	Notional / Maximum Exposure to Loss
	(in millions)			
Credit derivatives[1][2]	**$ (448)**	**$ 35,560**	$ (63)	$ 38,739
Financial standby letters of credit, net of participations[3][4]	**—**	**5,520**	—	5,657
Performance standby letters of credit, net of participations[3][4]	**—**	**3,631**	—	3,779
Total	**$ (448)**	**$ 44,711**	$ (63)	$ 48,175

(1) Includes $16,444 million and $18,391 million of notional issued for the benefit of HSBC affiliates at June 30, 2020 and December 31, 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 $1,698 million and $1,623 million of both financial and performance standby letters of credit issued for the benefit of HSBC affiliates at June 30, 2020 and December 31, 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 June 30, 2020 and December 31, 2019:

	June 30, 2020		December 31, 2019	
	Carrying / Fair Value	Notional	Carrying / Fair Value	Notional
	(in millions)			
Sell-protection credit derivative positions	**$ (448)**	**$ 35,560**	$ (63)	$ 38,739
Buy-protection credit derivative positions	**331**	**47,718**	77	51,310
Net position[1]	**$ (117)**	**$ 12,158**	$ 14	$ 12,571

(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 $48 million and $52 million at June 30, 2020 and December 31, 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 June 30, 2020 and December 31, 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 June 30, 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")	3.0	$ 18,352	$ 7,073	$ 25,425
Index credit derivatives	4.2	4,919	3,964	8,883
Total return swaps	2.1	1,061	191	1,252
Subtotal		24,332	11,228	35,560
Standby Letters of Credit[2]	1.2	7,140	2,011	9,151
Total		$ 31,472	$ 13,239	$ 44,711

(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" in our 2019 Form 10-K. 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 $73 million and $85 million at June 30, 2020 and December 31, 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 (loss). See Note 9, "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 10, "Leases" in our 2019 Form 10-K, for a full discussion of our leases, including a maturity analysis of our operating lease liabilities.

Mortgage Loan Repurchase Obligations We have provided various representations and warranties related to the origination and sale of mortgage loans including, among other things, the ownership of the loans, the validity of the liens, the loan selection and origination process, and the compliance to the origination criteria established by the government agencies. In the event of a breach of our representations and warranties, we may be obligated to repurchase the loans with identified defects or to indemnify the buyers. Our contractual obligation arises only when the breach of representations and warranties are discovered and repurchase is demanded. From 2013 to 2017, we sold agency-eligible mortgage loan originations directly to PHH Mortgage Corporation and they are responsible for origination representations and warranties for all such loans. With the insourcing of our mortgage fulfillment operations, beginning with 2018 applications, we are now responsible for origination representations and warranties for all agency-eligible mortgage loan originations sold to third parties.

In estimating our repurchase liability arising from breaches of representations and warranties, we consider historical losses on residual risks not covered by settlement agreements adjusted for any risk factors not captured in the historical losses as well as the level of outstanding repurchase demands received. Outstanding repurchase demands received were immaterial at both June 30, 2020 and December 31, 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 June 30, 2020 and December 31, 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 June 30, 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," in our 2019 Form 10-K for additional discussion of related exposure. The outstanding principal balance on these loans was approximately $3.3 billion and $3.4 billion at June 30, 2020 and December 31, 2019, respectively.

Pledged Assets

Pledged assets included in the consolidated balance sheet consisted of the following:

	June 30, 2020	December 31, 2019
	(in millions)	
Interest bearing deposits with banks[1]	**$ 3,509**	$ 2,682
Trading assets[2]	**2,849**	525
Securities available-for-sale[3]	**7,967**	6,814
Securities held-to-maturity[3]	**1,363**	1,688
Loans[4]	**14,842**	14,342
Other assets[5]	**4,293**	3,517
Total	**$ 34,823**	$ 29,568

(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 $1,701 million and nil at June 30, 2020 and December 31, 2019, respectively. The fair value of trading assets that could be sold or repledged was $2,849 million and $336 million at June 30, 2020 and December 31, 2019, respectively.

The fair value of collateral we accepted under security resale agreements but was not reported on the consolidated balance sheet was $31,917 million and $19,174 million at June 30, 2020 and December 31, 2019, respectively. Of this collateral, $31,067 million and $18,199 million could be sold or repledged at June 30, 2020 and December 31, 2019, respectively, of which $308 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 June 30, 2020 and December 31, 2019:

	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet[1]	Net Amounts Presented in the Balance Sheet	Gross Amounts Not Offset in the Balance Sheet: Financial Instruments[2]	Gross Amounts Not Offset in the Balance Sheet: Cash Collateral Received / Pledged	Net Amount[3]
	(in millions)					
At June 30, 2020						
Assets:						
Securities purchased under resale agreements	**$ 31,873**	**$ 2,618**	**$ 29,255**	**$ 29,236**	**$ —**	**$ 19**
Liabilities:						
Securities sold under repurchase agreements	**$ 4,837**	**$ 2,618**	**$ 2,219**	**$ 2,219**	**$ —**	**$ —**
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 June 30, 2020 and December 31, 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 June 30, 2020						
U.S. Treasury, U.S. Government sponsored and U.S. Government agency securities	**$ 421**	**$ 2,993**	**$ 1,423**	**$ —**	**$ —**	**$ 4,837**
At December 31, 2019						
U.S. Treasury, U.S. Government sponsored and U.S. Government agency securities	$ 2,401	$ —	$ —	$ —	$ —	$ 2,401

19. Fair Value Measurements

Accounting principles related to fair value measurements provide a framework for measuring fair value that focuses on the exit price that would be received to sell an asset or paid to transfer a liability in the principal market (or in the absence of the principal market, the most advantageous market) accessible in an orderly transaction between willing market participants (the "Fair Value Framework"). Where required by the applicable accounting standards, assets and liabilities are measured at fair value using the "highest and best use" valuation premise. Fair value measurement guidance clarifies that financial instruments do not have alternative use and, as such, the fair value of financial instruments should be determined using an "in-exchange" valuation premise. However, the fair value measurement literature provides a valuation exception and permits an entity to measure the fair value of a group of financial assets and financial liabilities with offsetting credit risks and/or market risks based on the exit price it would receive or pay to transfer the net risk exposure of a group of assets or liabilities if certain conditions are met. We elected to apply the measurement exception to a group of derivative instruments with offsetting credit risks and market risks, which primarily relate to interest rate, foreign currency, debt and equity price risk, and commodity price risk as of the reporting date.

Fair Value Adjustments The best evidence of fair value is quoted market price in an actively traded market, where available. In the event listed price or market quotes are not available, valuation techniques that incorporate relevant transaction data and market parameters reflecting the attributes of the asset or liability under consideration are applied. Where applicable, fair value adjustments are made to ensure the financial instruments are appropriately recorded at fair value. The fair value adjustments reflect the risks associated with the products, contractual terms of the transactions, and the liquidity of the markets in which the transactions occur. The fair value adjustments are broadly categorized by the following major types:

Credit 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 June 30, 2020 and December 31, 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).

	Fair Value Measurements on a Recurring Basis					
June 30, 2020	**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	$ 6,317	$ 42	$ —	$ 6,359	$ —	$ 6,359
Asset-backed securities:						
Collateralized debt obligations	—	64	—	64	—	64
Residential mortgages	—	—	15	15	—	15
Student loans	—	69	—	69	—	69
Corporate and other domestic debt securities	—	—	501	501	—	501
Debt securities issued by foreign entities	8,693	108	—	8,801	—	8,801
Equity securities	3,178	—	—	3,178	—	3,178
Precious metals trading	—	10,139	—	10,139	—	10,139
Derivatives:[1]						
Interest rate contracts	9	16,916	33	16,958	—	16,958
Foreign exchange contracts	—	19,725	—	19,725	—	19,725
Equity contracts	—	4,065	377	4,442	—	4,442
Precious metals contracts	1	1,625	—	1,626	—	1,626
Credit contracts	—	681	115	796	—	796
Other contracts[2]	—	—	9	9	—	9
Derivatives netting	—	—	—	—	(40,153)	(40,153)
Total derivatives	10	43,012	534	43,556	(40,153)	3,403
Securities available-for-sale:[3]						
U.S. Treasury, U.S. Government agencies and sponsored enterprises	22,091	15,230	—	37,321	—	37,321
Asset-backed securities:						
Home equity	—	20	8	28	—	28
Other	—	—	109	109	—	109
Debt securities issued by foreign entities	4,172	38	—	4,210	—	4,210
Loans[4]	—	35	—	35	—	35
Loans held for sale[4]	—	45	—	45	—	45
Other assets:						
Equity securities	—	148	—	148	—	148
Equity securities measured at net asset value[5]	—	—	—	134	—	134
Total assets	$ 44,461	$ 68,950	$ 1,167	$ 114,712	$ (40,153)	$ 74,559
Liabilities:						
Domestic deposits[4]	$ —	$ 4,723	$ 672	$ 5,395	$ —	$ 5,395
Trading liabilities, excluding derivatives	637	19	—	656	—	656
Derivatives:[1]						
Interest rate contracts	12	19,313	—	19,325	—	19,325
Foreign exchange contracts	—	18,879	2	18,881	—	18,881
Equity contracts	—	3,641	285	3,926	—	3,926
Precious metals contracts	99	1,791	—	1,890	—	1,890
Credit contracts	—	901	53	954	—	954
Other contracts[2]	—	—	73	73	—	73
Derivatives netting	—	—	—	—	(42,282)	(42,282)
Total derivatives	111	44,525	413	45,049	(42,282)	2,767
Long-term debt[4]	—	8,974	347	9,321	—	9,321
Total liabilities	$ 748	$ 58,241	$ 1,432	$ 60,421	$ (42,282)	$ 18,139

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	$ 43,501	$ 53,304	$ 925	$ 97,866	$ (33,193)	$ 64,673
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	$ 1,265	$ 52,609	$ 1,350	$ 55,224	$ (33,900)	$ 21,324

(1) Includes trading derivative assets of $3,283 million and $3,055 million and trading derivative liabilities of $2,562 million and $1,929 million at June 30, 2020 and December 31, 2019, respectively, as well as derivatives held for hedging and commitments accounted for as derivatives. See Note 9, "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 (loss), 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 (loss). Changes in the allowance for credit losses on securities available-for-sale are recorded through net income (loss).

(4) See Note 10, "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 (loss), 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 the three and six months ended June 30, 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	
	Apr. 1, 2020	Earnings	Other Comprehensive Income	Purchases	Issuances	Settlements	Transfers Into Level 3	Transfers Out of Level 3	Jun. 30, 2020	Earnings	Other Comprehensive Income
					(in millions)						
Assets:											
Trading assets, excluding derivatives:[1]											
Residential mortgage asset-backed securities	$ 16	$ (1)	$ —	$ —	$ —	$ —	$ —	$ —	$ 15	$ (1)	$ —
Corporate and other domestic debt securities	465	36	—	—	—	—	—	—	501	36	—
Derivatives, net:[2]											
Interest rate contracts	41	(8)	—	—	—	—	—	—	33	(8)	—
Foreign exchange contracts	(3)	1	—	—	—	—	—	—	(2)	1	—
Equity contracts	(22)	107	—	—	—	6	—	1	92	113	—
Credit contracts	98	(9)	—	—	—	(27)	—	—	62	(8)	—
Other contracts[3]	(58)	(12)	—	—	—	6	—	—	(64)	—	—
Asset-backed securities available-for-sale[4]	116	—	(7)	—	—	—	8	—	117	—	(7)
Total assets	$ 653	$ 114	$ (7)	$ —	$ —	$ (15)	$ 8	$ 1	$ 754	$ 133	$ (7)
Liabilities:											
Domestic deposits[5]	$ (678)	$ (13)	$ (16)	$ —	$ (7)	$ 27	$ —	$ 15	$ (672)	$ (16)	$ (16)
Long-term debt[5]	(320)	(43)	(8)	—	(37)	48	—	13	(347)	(41)	(8)
Total liabilities	$ (998)	$ (56)	$ (24)	$ —	$ (44)	$ 75	$ —	$ 28	$ (1,019)	$ (57)	$ (24)

	Jan. 1, 2020	Total Realized / Unrealized Gains (Losses) Included in Earnings	Total Realized / Unrealized Gains (Losses) Included in Other Comprehensive Income	Purchases	Issuances	Settlements	Transfers Into Level 3	Transfers Out of Level 3	Jun. 30, 2020	Current Period Unrealized Gains (Losses) Still Held Included in Earnings	Current Period Unrealized Gains (Losses) Still Held Included in Other Comprehensive 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	(9)	—	—	—	—	—	—	501	(9)	—
Derivatives, net:(2)											
Interest rate contracts	10	23	—	—	—	—	—	—	33	23	—
Foreign exchange contracts	(1)	(1)	—	—	—	—	—	—	(2)	(1)	—
Equity contracts	72	12	—	—	—	6	—	2	92	24	—
Credit contracts	59	26	—	—	—	(23)	—	—	62	27	—
Other contracts(3)	(75)	(1)	—	—	—	12	—	—	(64)	—	—
Asset-backed securities available-for-sale(4)	111	—	(2)	—	—	—	8	—	117	—	(2)
Total assets	$ 703	$ 48	$ (2)	$ —	$ —	$ (5)	$ 8	$ 2	$ 754	$ 62	$ (2)
Liabilities:											
Domestic deposits(5)	$ (774)	$ 13	$ 2	$ —	$ (43)	$ 82	$ —	$ 48	$ (672)	$ 7	$ 2
Long-term debt(5)	(354)	38	2	—	(138)	89	—	16	(347)	23	2
Total liabilities	$ (1,128)	$ 51	$ 4	$ —	$ (181)	$ 171	$ —	$ 64	$ (1,019)	$ 30	$ 4

		Total Realized / Unrealized Gains (Losses) Included in								Current Period Unrealized Gains (Losses) Still Held Included in	
	Apr. 1, 2019	Earnings	Other Compre-hensive Income	Purch-ases	Issu-ances	Settle-ments	Transfers Into Level 3	Transfers Out of Level 3	Jun. 30, 2019	Earnings	Other Compre-hensive Income
	(in millions)										
Assets:											
Trading assets, excluding derivatives:(1)											
Collateralized debt obligations	$ 90	$ 2	$ —	$ —	$ —	$ (6)	$ —	$ —	$ 86	$ (4)	$ —
Residential mortgage asset-backed securities	16	—	—	—	—	—	—	—	16	—	—
Student loan asset-backed securities	95	—	—	—	—	(5)	—	—	90	(5)	—
Corporate and other domestic debt securities	510	—	—	—	—	—	—	—	510	—	—
Derivatives, net:(2)											
Interest rate contracts	7	8	—	—	—	—	—	(5)	10	3	—
Foreign exchange contracts	(1)	—	—	—	—	—	—	—	(1)	—	—
Equity contracts	24	39	—	—	—	1	—	(2)	62	40	—
Credit contracts	53	(3)	—	—	—	(4)	—	—	46	(2)	—
Other contracts(3)	(37)	(3)	—	—	—	5	—	—	(35)	—	—
Asset-backed securities available-for-sale(4)	109	—	4	—	—	—	—	—	113	—	4
Other assets(6)	1	—	—	—	—	—	—	—	1	—	—
Total assets	$ 867	$ 43	$ 4	$ —	$ —	$ (9)	$ —	$ (7)	$ 898	$ 32	$ 4
Liabilities:											
Domestic deposits(5)	$ (949)	$ (35)	$ 2	$ —	$ (49)	$ 64	$ (5)	$ 42	$ (930)	$ (32)	$ 2
Long-term debt(5)	(453)	(15)	1	—	(33)	20	—	39	(441)	(10)	1
Total liabilities	$ (1,402)	$ (50)	$ 3	$ —	$ (82)	$ 84	$ (5)	$ 81	$ (1,371)	$ (42)	$ 3

	Jan. 1, 2019	Total Realized / Unrealized Gains (Losses) Included in: Earnings	Total Realized / Unrealized Gains (Losses) Included in: Other Comprehensive Income	Purchases	Issuances	Settlements	Transfers Into Level 3	Transfers Out of Level 3	Jun. 30, 2019	Current Period Unrealized Gains (Losses) Still Held Included in: Earnings	Current Period Unrealized Gains (Losses) Still Held Included in: Other Comprehensive Income
	(in millions)										
Assets:											
Trading assets, excluding derivatives:(1)											
Collateralized debt obligations	$ 100	$ 3	$ —	$ —	$ —	$ (17)	$ —	$ —	$ 86	$ (10)	$ —
Residential mortgage asset-backed securities	16	—	—	—	—	—	—	—	16	—	—
Student loan asset-backed securities	92	5	—	—	—	(7)	—	—	90	(2)	—
Corporate and other domestic debt securities	1,803	—	—	—	—	(1,293)	—	—	510	—	—
Derivatives, net:(2)											
Interest rate contracts	2	13	—	—	—	—	—	(5)	10	8	—
Foreign exchange contracts	(1)	—	—	—	—	—	—	—	(1)	—	—
Equity contracts	(52)	110	—	—	—	5	—	(1)	62	115	—
Credit contracts	52	(40)	—	—	—	34	—	—	46	(2)	—
Other contracts(3)	(35)	(9)	—	—	—	9	—	—	(35)	—	—
Asset-backed securities available-for-sale(4)	107	—	6	—	—	—	—	—	113	—	6
Other assets(6)	4	—	—	—	—	(3)	—	—	1	—	—
Total assets	$ 2,088	$ 82	$ 6	$ —	$ —	$ (1,272)	$ —	$ (6)	$ 898	$ 109	$ 6
Liabilities:											
Domestic deposits(5)	$ (925)	$ (64)	$ (3)	$ —	$ (145)	$ 109	$ (5)	$ 103	$ (930)	$ (132)	$ (3)
Long-term debt(5)	(412)	(43)	(2)	—	(64)	33	—	47	(441)	(59)	(2)
Total liabilities	$ (1,337)	$ (107)	$ (5)	$ —	$ (209)	$ 142	$ (5)	$ 150	$ (1,371)	$ (191)	$ (5)

(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 $534 million and derivative liabilities of $413 million at June 30, 2020 and derivative assets of $276 million and derivative liabilities of $194 million at June 30, 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 (loss) 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 (loss).

(5) Excluding unrealized gains (losses) on fair value option liabilities attributable to our own credit spread, which are recorded in other comprehensive income (loss), 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 (loss) 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 June 30, 2020 and December 31, 2019:

June 30, 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	4%	N/A
			Conditional default rates	2%	N/A
			Loss severity rates	70%	N/A
			Discount margin	575bps	N/A
Corporate and other domestic debt securities	$ 501	Discounted cash flows	Spread volatility on collateral assets	11%	N/A
			Correlation between insurance claim shortfall and collateral value	80%	N/A
Interest rate derivative contracts	$ 33	Market comparable adjusted for probability to fund and, where applicable, discounted cash flows	Probability to fund for rate lock commitments	41% - 100%	75%
			Likelihood of transaction being executed	90%	N/A
Foreign exchange derivative contracts[2]	$ (2)	Option pricing model	Implied volatility of currency pairs	8% - 11%	10%
Equity derivative contracts[2]	$ 92	Option pricing model	Equity / Equity Index volatility	7% - 65%	40%
			Equity / Equity and Equity / Index correlation	44% - 78%	52%
			Equity dividend yields and forward price	(27)% - 1%	(2)%
Credit derivative contracts	$ 62	Option pricing model and, where applicable, discounted cash flows	Credit default swap spreads	155bps	N/A
Other derivative contracts	$ (64)	Discounted cash flows	Conversion rate	1.6 times	N/A
			Expected duration	3 years	N/A
Asset-backed securities available-for-sale	$ 117	Discounted cash flows	Market assumptions related to yields for comparable instruments	1% - 4%	3%
Domestic deposits (structured deposits)[2][3]	$ (672)	Option adjusted discounted cash flows	Implied volatility of currency pairs	8% - 11%	10%
			Equity / Equity Index volatility	7% - 47%	21%
			Equity / Equity and Equity / Index correlation	44% - 60%	47%
Long-term debt (structured notes)[2][3]	$ (347)	Option adjusted discounted cash flows	Implied volatility of currency pairs	8% - 11%	10%
			Equity / Equity Index volatility	7% - 41%	25%
			Equity / Equity and Equity / Index correlation	48% - 78%	66%

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 other 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.

Corporate and domestic debt securities - The fair value measurement of certain corporate debt securities is affected by the fair value of the underlying portfolios of investments used as collateral and the make-whole guarantee provided by third party guarantors. The probability that the collateral fair value declines below the collateral call threshold concurrent with the guarantors' failure to perform its make whole obligation is unobservable. Generally, an increase (decrease) in the probability the collateral value falls below the collateral call threshold would have been accompanied by a directionally similar change in default probability of the guarantor and would have resulted in a lower (higher) fair value measurement of the securities.

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.

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.

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 the three and six months ended June 30, 2020, we transferred $15 million and $48 million, respectively, of domestic deposits and $13 million and $16 million, respectively, 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 the three and six months ended June 30, 2019, we transferred $42 million and $103 million, respectively, of domestic deposits and $39 million and $47 million, respectively, of long-term debt, which we have elected to carry at fair value, from Level 3 to Level 2 as a result of the embedded derivative no longer being unobservable as the derivative option is closer in maturity and there is more observability in short term volatility.

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 June 30, 2020 and December 31, 2019. The gains (losses) during the three and six months ended June 30, 2020 and 2019 are also included.

	Non-Recurring Fair Value Measurements at June 30, 2020				Total Gains (Losses) For the Three Months Ended June 30, 2020	Total Gains (Losses) For the Six Months Ended June 30, 2020
	Level 1	Level 2	Level 3	Total		
	(in millions)					
Residential mortgage loans held for sale[1]	$ —	$ 4	$ —	$ 4	$ —	$ —
Consumer loans[2]	—	324	—	324	4	7
Commercial loans held for sale	—	—	—	—	(9)	(9)
Commercial loans[3]	—	—	355	355	(117)	(170)
Real estate owned[4]	—	2	—	2	1	1
Goodwill[5]	—	—	—	—	—	(784)
Leases[6]	—	—	25	25	6	(62)
Total assets at fair value on a non-recurring basis	$ —	$ 330	$ 380	$ 710	$ (115)	$ (1,017)

	Non-Recurring Fair Value Measurements at December 31, 2019				Total Gains (Losses) For the Three Months Ended June 30, 2019	Total Gains (Losses) For the Six Months Ended June 30, 2019
	Level 1	Level 2	Level 3	Total		
	(in millions)					
Residential mortgage loans held for sale[1]	$ —	$ 12	$ —	$ 12	$ —	$ —
Consumer loans[2]	—	14	—	14	$ (2)	(4)
Commercial loans[3]	—	—	50	50	—	(1)
Real estate owned[4]	—	6	—	6	—	—
Goodwill[5]	—	—	372	372	—	—
Leases[6]	—	—	2	2	—	—
Total assets at fair value on a non-recurring basis	$ —	$ 32	$ 424	$ 456	$ (2)	$ (5)

(1) At June 30, 2020 and December 31, 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 June 30, 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 21, "New Accounting Pronouncements," for additional discussion.

(3) 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.

(4) 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.

(5) 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 the third quarter of 2019, the goodwill allocated to our previously separate RBWM business was written down to $372 million. See Note 8, "Goodwill," in this Form 10-Q and Note 9, "Goodwill" in our 2019 Form 10-K for further discussion of the results of our goodwill impairment testing, including the events and circumstances leading to the impairments.

(6) Beginning in the fourth quarter of 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. See Note 2, "Strategic Initiatives," in this Form 10-Q and Note 10, "Leases" in our 2019 Form 10-K 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 June 30, 2020 and December 31, 2019:

At June 30, 2020

Financial Instrument Type	Fair Value (in millions)	Valuation Technique(s)	Significant Unobservable Inputs	Range of Inputs	Weighted Average(1)
Commercial loans	**$ 355**	Valuation of third party appraisal on underlying collateral	Loss severity rates	**0% - 97%**	**29%**

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 collateralized debt obligations ("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 $36 million and $41 million at June 30, 2020 and December 31, 2019, respectively.

The following tables provide additional information relating to our asset-backed securities, including CDOs, at June 30, 2020:

Trading asset-backed securities:

Rating of Securities:[1]	Collateral Type:	Level 2	Level 3	Total
			(in millions)	
AAA - A	Collateralized debt obligations	$ 38	$ —	$ 38
	Student loans	69	—	69
	Total AAA - A	107	—	107
BBB - B	Collateralized debt obligations	26	—	26
CCC - Unrated	Residential mortgages - Subprime	—	15	15
		$ 133	$ 15	$ 148

Available-for-sale asset-backed securities:

Rating of Securities:[1]	Collateral Type:	Level 2	Level 3	Total
			(in millions)	
AAA - A	Home equity - Alt A	$ 20	$ 8	$ 28
BBB - B	Other	—	109	109
		$ 20	$ 117	$ 137

[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 June 30, 2020 and December 31, 2019, and their classification within the fair value hierarchy:

June 30, 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	**$ 19,021**	**$ 19,021**	**$ 1,266**	**$ 17,734**	**$ 21**
Federal funds sold and securities purchased under agreements to resell	**29,255**	**29,255**	**—**	**29,255**	**—**
Securities held-to-maturity, net of allowance for credit losses	**11,635**	**12,106**	**—**	**12,106**	**—**
Commercial loans, net of allowance for credit losses	**50,930**	**51,922**	**—**	**—**	**51,922**
Commercial loans held for sale	**58**	**58**	**—**	**58**	**—**
Consumer loans, net of allowance for credit losses	**20,311**	**19,857**	**—**	**—**	**19,857**
Residential mortgage loans held for sale	**44**	**46**	**—**	**46**	**—**
Financial liabilities:					
Short-term financial liabilities	**$ 6,124**	**$ 6,124**	**$ —**	**$ 6,102**	**$ 22**
Deposits:					
Without fixed maturities	**135,816**	**135,816**	**—**	**135,816**	**—**
Fixed maturities	**14,822**	**14,850**	**—**	**14,850**	**—**
Long-term debt	**16,425**	**16,729**	**—**	**16,729**	**—**

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:					
Without fixed maturities	96,161	96,161	—	96,161	—
Fixed maturities	16,323	16,264	—	16,264	—
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 $155 million and $162 million at June 30, 2020 and December 31, 2019, respectively.

20. Litigation and Regulatory Matters

The following supplements, and should be read together with, the disclosure in Note 29, "Litigation and Regulatory Matters," in our 2019 Form 10-K and in Note 20, "Litigation and Regulatory Matters," in our Form 10-Q for the three month period ended March 31, 2020 (the "2020 First Quarter Form 10-Q"). Only those matters with significant updates and new matters since our disclosure in our 2019 Form 10-K and our 2020 First Quarter Form 10-Q are reported herein.

In addition to the matters described below and in our 2019 Form 10-K and our 2020 First Quarter Form 10-Q, in the ordinary course of business, we are routinely named as defendants in, or as parties to, various legal actions and proceedings relating to activities of our current and/or former operations. These legal actions and proceedings may include claims for substantial or indeterminate compensatory or punitive damages, or for injunctive relief. In the ordinary course of business, we also are subject to governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal), certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief. In connection with formal and informal inquiries by these regulators, we receive numerous requests, subpoenas and orders seeking documents, testimony and other information in connection with various aspects of our regulated activities.

Due to the inherent unpredictability of legal matters, including litigation, governmental and regulatory matters, particularly where the damages sought are substantial or indeterminate or when the proceedings or investigations are in the early stages, we cannot determine with any degree of certainty the timing or ultimate resolution of such matters or the eventual loss, fines, penalties or business impact, if any, that may result. We establish reserves for litigation, governmental and regulatory matters when those matters present loss contingencies that are both probable and can be reasonably estimated. Once established, reserves are adjusted from time to time, as appropriate, in light of additional information. The actual costs of resolving litigation and regulatory matters, however, may be substantially higher than the amounts reserved for those matters.

For the legal matters disclosed below, including litigation and governmental and regulatory matters, as well as for the legal matters disclosed in Note 29, "Litigation and Regulatory Matters," in our 2019 Form 10-K and in Note 20, "Litigation and Regulatory Matters," in our 2019 First Quarter Form 10-Q, 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 $175 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 disclosed in Note 29, "Litigation and Regulatory Matters," in our 2019 Form 10-K and in Note 20, "Litigation and Regulatory Matters," in our 2019 First Quarter Form 10-Q, 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.

DeKalb County, et al. v. HSBC North America Holdings Inc., et al. (N.D. Ga. Case No. 12-CV-03640) 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) The court dismissed the case with prejudice in July 2020 following finalization of the settlement. This matter will no longer be reported.

Foreign Exchange ("FX") Matters

HSBC Bank USA has reached an agreement in principle to resolve the ongoing investigation by the California Attorney General's Office, subject to final documentation and court approval. The full amount of the settlement was reserved in the fourth quarter of 2019.

In June 2020, the Competition Commission of South African, having initially referred a complaint for proceedings before the South African Competition Tribunal in February 2017, filed a revised complaint against a total of 28 financial institutions, including HSBC Bank USA, for alleged anti-competitive behavior in the South African foreign exchange market.

Precious Metals Fix Matters

Platinum and Palladium Fix Litigation Plaintiffs appealed the court's March 2020 order granting the defendants' joint motion to dismiss the third amended complaint.

Madoff Litigation

In the *Picard v. HSBC et al* action, the US Supreme Court denied the petition for a writ of certiorari filed by certain parties, including a number of foreign affiliates of HSBC Bank USA, seeking review of the Second Circuit Court of Appeals' reversal of the U.S. Bankruptcy Court decision dismissing claims against those entities. The matter is now pending in the US Bankruptcy Court.

The appeal is fully briefed in the action brought by the liquidators of Fairfield Sentry Limited, Fairfield Sigma Limited and Fairfield Lambda Limited (together "Fairfield"), which relates to the US Bankruptcy Court's December 2018 decision that partially granted defendants' motion to dismiss claims by the Fairfield liquidators and granted a motion by the liquidators to file amended complaints. We await a decision from the US District Court for the Southern District of New York, where the appeal is pending. The HSBC defendants also filed motions to dismiss the remaining claims in the US Bankruptcy Court in March 2020.

Benchmark Rate Litigation

Intercontinental Exchange ("ICE") LIBOR: Plaintiffs appealed the court’s March 2020 order granting the defendants' joint motion to dismiss the complaint.

Shareholder Derivative Action In May 2014, a shareholder derivative action was filed by a shareholder of HSBC purportedly on behalf of HSBC, HSBC Bank USA, HSBC North America and HSBC USA (the "Nominal Corporate Defendants") in New York state court against certain current and former directors and officers of the Nominal Corporate Defendants (the "Individual Defendants"), alleging that the Individual Defendants breached their fiduciary duties to the Nominal Corporate Defendants and caused a waste of corporate assets by allegedly permitting and/or causing the conduct underlying the five-year deferred prosecution agreement with the US Department of Justice entered into in December 2012. In January 2020, the parties reached a resolution in principle of the matter. Thereafter, 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 preliminary approval of the settlement in July 2020 and scheduled a final settlement approval hearing for October 2020.

Anti-Terrorism Act Cases

Charlotte Freeman, et al. v. HSBC Holdings plc, et al. In June 2020, the court granted defendants' motion to dismiss the Freeman II action that was filed in December 2018. Plaintiffs may appeal the decision.

Ryan Bowman et al. v. HSBC Holdings plc, et al. In June 2020, the court granted defendants' motion to dismiss. Plaintiffs may appeal the decision.

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.

21. New Accounting Pronouncements

The following new accounting pronouncements were adopted effective January 1, 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 4, "Securities," Note 5, "Loans," and Note 6, "Allowance for Credit Losses," for the new disclosures required by this standard, including further discussion of our accounting policies and methodologies used to estimate ECL beginning in 2020. 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 balances 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 temporary 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 can elect by accounting topic or industry subtopic 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 to contract modifications or existing hedging relationships after December 31, 2022. 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 4, "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.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

Certain matters discussed throughout this Form 10-Q 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-Q 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 decision by the United Kingdom ("U.K.") to exit 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 that we are able to conduct business with;
- 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 current Administration and upcoming elections in the U.S.;
- 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;
- our ability to cross-sell our products to existing customers;
- changes in Financial Accounting Standards Board ("FASB") and International Accounting Standards Board ("IASB") accounting standards and their interpretation;
- heightened regulatory and government enforcement scrutiny of financial institutions, including in connection with product governance and sales practices, account opening and closing procedures, customer and employee complaints and sales compensation structures related to such practices;
- 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 our Annual Report on Form 10-K for the year ended December 31, 2019 (the "2019 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. You should, however, consider any additional disclosures of a forward-looking nature that arise after the date hereof as may be discussed in any of our subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q or Current Reports on Form 8-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."

Economic Environment The U.S. economy deteriorated rapidly into recession during the second quarter of 2020 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 neither the magnitude nor the duration of the pandemic and its repercussions is clear. Unprecedented government economic intervention has likely dampened the pandemic's effects, but at uncertain long-term cost. U.S. Gross Domestic Product ("GDP") contracted at an estimated annual rate of 32.9 percent in the second quarter of 2020, while the total unemployment rate increased significantly to 11.1 percent at June 2020. 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 decided to hold short-term interest rates steady in June 2020 and indicated it expects short-term rates to remain unchanged until it is confident that the economy has weathered recent events.

The impact of the COVID-19 pandemic on economic conditions both in the United States and abroad during the first half of 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 2020 and beyond.

Performance, Developments and Trends As mentioned above, the COVID-19 pandemic continues to cause disruption to our customers, vendors and employees. The outbreak of this virus has disrupted global financial markets and negatively affected supply and demand across a broad range of industries. This pandemic has had a significant impact on our business, financial condition and results of operations during the first half of the year, including the impairment of goodwill associated with our Retail Banking and Wealth Management and Private Banking reporting units in the first quarter, an increase to the provision for credit losses on our loan portfolio and valuation losses associated with certain financial instruments due to market volatility, which have largely recovered during the second quarter. Additionally, in April 2020, Fitch changed the 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 the 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 are evolving and will continue to impact our business in future periods as it may not be fully contained for an extended period of time. Should the current economic conditions persist or deteriorate further, we expect that this environment will continue to adversely impact our business which could include, but not be limited to, further impacts on our 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 due to the unprecedented impact on economic and market drivers related to the COVID-19 pandemic. 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, among other factors, to 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 matter 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 and/or widely accepted treatment becomes available which might not occur for an extended period of time, 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.

Late in the second quarter of 2020, we decided to lift the pause we had put in place in March on the staff reductions relating to our restructuring plan as COVID-19 restrictions have begun to ease. As a result, we recorded $43 million of severance related costs during the second quarter, including $13 million of direct costs and $30 million of allocated costs from HSBC Technology & Services ("HTSU"). Our restructuring plan is moving forward as planned, including consolidation of our retail branch network and wholesale and retail middle and back office functions, each under a single operations structure, and the creation of our Wealth and Personal Banking business which was completed in the second quarter. While we remain committed to our multi-year strategic plan to re-profile our business, the timing of the strategic actions as outlined in our 2019 Form 10-K may be re-sequenced or delayed beyond 24 months as the circumstances around the COVID-19 pandemic continue to develop. We continue to re-assess our strategic plan and may take additional actions in future periods. See Note 2, "Strategic Initiatives," in the accompanying consolidated financial statements.

The following table sets forth selected financial highlights for HUSI on a U.S. GAAP basis for the three and six months ended June 30, 2020 and 2019 and at June 30, 2020 and December 31, 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(dollars are in millions)			
Net income (loss)	**$ 7**	$ 121	**$ (1,276)**	$ 230
Rate of return on average:				
Total assets	**—%**	.3%	**(1.3)%**	.3%
Risk-weighted assets	**—**	.4	**(2.1)**	.4
Common equity	**(.8)**	1.9	**(15.4)**	2.2
Tangible common equity	**(.8)**	2.2	**(16.2)**	2.4
Total equity	**.2**	2.6	**(13.9)**	2.5
Net interest margin	**1.10**	1.32	**1.12**	1.37
Efficiency ratio	**72.6**	79.3	**123.2**	79.0
Commercial net charge-off ratio(1)	**.37**	.03	**.31**	.02
Consumer net charge-off ratio(1)	**.45**	.24	**.41**	.26

(1) Excludes loans held for sale.

	June 30, 2020	December 31, 2019
	(dollars are in millions)	
Additional Select Ratios:		
Allowance as a percent of loans(1)	**1.64%**	.93%
Commercial allowance as a percent of loans(1)	**1.89**	1.05
Consumer allowance as a percent of loans(1)	**1.02**	.64
Consumer two-months-and-over contractual delinquency	**2.36**	2.04
Loans to deposits ratio(2)	**55.71**	71.60
Common equity Tier 1 capital to risk-weighted assets	**13.1**	13.1
Tier 1 capital to risk-weighted assets	**14.2**	14.1
Total capital to risk-weighted assets	**17.4**	16.3
Tier 1 leverage ratio	**8.1**	9.9
Supplementary leverage ratio	**7.6**	6.9
Total equity to total assets	**8.5**	10.4
Select Balance Sheet Data:		
Cash and interest bearing deposits with banks	**$ 19,000**	$ 3,782
Trading assets	**32,409**	28,452
Securities available-for-sale	**41,668**	35,663
Loans:		
Commercial loans	**51,913**	48,211
Consumer loans	**20,555**	20,342
Total loans	**72,468**	68,553
Deposits	**156,033**	119,693

(1) Excludes loans held for sale.

(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.

Net income (loss) was income of $7 million and a loss of $1,276 million during the three and six months ended June 30, 2020, respectively, compared with income of $121 million and $230 million during the three and six months ended June 30, 2019, respectively. Income (loss) before income tax was income of $56 million and a loss of $1,384 million during the three and six months ended June 30, 2020, respectively, compared with income of $156 million and $300 million during the three and six months ended June 30, 2019, respectively. The decrease in income (loss) before income tax during the three and six months ended June 30, 2020 was due primarily to a higher provision for credit losses driven by the deterioration of economic conditions caused by the COVID-19 pandemic and, in the year-to-date period, higher operating expenses driven by a goodwill impairment charge recorded during the first quarter of 2020 as discussed below. Also contributing to the decrease in the year-to-date period was lower net interest income.

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 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. 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. As discussed in our 2019 Form 10-K, our goodwill impairment testing is highly sensitive to certain assumptions and estimates used. We will continue to monitor changes to our business forecasts as we continue to perform periodic analysis of the risks and strategies of our business and product offerings. If further 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. For additional discussion of the results of our interim goodwill impairment testing, see Note 8, "Goodwill," in the accompanying consolidated financial statements.

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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
	(in millions)			
Income (loss) before income tax, as reported	**$ 56**	$ 156	**$ (1,384)**	$ 300
Goodwill impairment	**—**	—	**784**	—
Costs to achieve[1]	**49**	—	**151**	—
Severance costs[2]	**—**	16	**—**	17
Adjusted performance[3]	**$ 105**	$ 172	**$ (449)**	$ 317

(1) Reflects costs related to the delivery of the strategic plan we announced in February 2020 to restructure our operations ("Restructuring Plan") as discussed further in "Executive Overview" in MD&A in our 2019 Form 10-K. Costs to achieve primarily consisted of lease impairment and other related costs, severance costs, allocated costs from HTSU, and trading losses associated with the exit of certain derivative contracts. See Note 2, "Strategic Initiatives," in the accompanying consolidated financial statements for a more detailed discussion of these costs. The expense during the six months ended June 30, 2020 also includes a $9 million gain on the sale of one of our owned retail branch properties.

(2) Reflects severance costs associated with a 2019 global effort aimed to right-size our cost base.

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

Excluding the impact of the items in the table above, our adjusted performance during the three and six months ended June 30, 2020 decreased $67 million and $766 million compared with prior year periods due primarily to a higher provision for credit losses driven by the deterioration of economic conditions caused by the COVID-19 pandemic and, in the year-to-date period, lower net interest income. These decreases were 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 March 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 can elect by accounting topic or industry subtopic 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 LIBOR, such as loans, derivatives and long-term debt, extending past 2021 when the U.K. Financial Conduct Authority has announced it will no longer require banks to submit rates for LIBOR. We continue to actively participate in HSBC's global transition program with the objective of facilitating an orderly transition of all products, processes, models and curves, as well as all legacy LIBOR contracts, onto replacement rates. In particular, during the first half of 2020, we:

- implemented risk disclosures for new sales of LIBOR-based products across all of our business lines;
- incorporated the new fallback language recommended by the ARRC into new LIBOR-based contracts for adjustable rate mortgage loans; and
- sold substantially all of our LIBOR-linked variable rate debt securities maturing beyond 2021.

While our global businesses continue to develop their capabilities to offer alternative rate products and the supporting processes and systems, the COVID-19 pandemic has impacted the speed at which they are able to develop these capabilities and the readiness of our customers to use alternative rate products. Consequently, the sale of LIBOR-based products with maturities beyond 2021 will continue for longer than initially anticipated and is likely to increase the volume of legacy contracts that will need to be transitioned. 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. Therefore, we expect the transition of legacy contracts onto replacement rates to occur over a shortened time period. In combination with the greater number of legacy contracts requiring transition, this increases the overall level of execution risk on the transition process, which could potentially increase the level of conduct and operational risks. We are currently targeting to have pricing and data/workflow requirements related to transitioning legacy contracts onto replacement rates finalized in the third quarter of 2020. For further discussion of our LIBOR transition program and the associated risks, see "Executive Overview" in MD&A in our 2019 Form 10-K.

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.

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. We have currently not elected this option, because of the accounting treatment otherwise afforded under the interagency statement on short-term loan modifications discussed below. 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, beginning on March 18, 2020. This moratorium has been extended until August 31, 2020. 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 troubled debt restructurings

("TDR Loans"). We are applying the guidance in the Interagency Statement. Borrowers that were not current at the time the relief was granted are assessed for TDR Loan classification in accordance with our accounting policies. These loans were not significant at June 30, 2020.

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 impacted 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 payment deferral is for six months or less. For consumer loans, when a borrower requests and is provided with extended relief in the form of a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and 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 COVID-19. The following table summarizes information about loans under these programs as of June 30, 2020. Not included in the following table are 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.

	June 30, 2020		
	Number of Loans	**Loan Amount**	**Program Details**
	(in thousands)	**(in millions)**	
Commercial[1]	**0.5**	**$ 1,229**	Primarily deferrals of up to twelve months
Consumer:			
Residential mortgages[2]	**2.5**	**1,322**	Deferrals of either three or six month increments up to a maximum of twelve months
Home equity mortgages[2]	**0.5**	**61**	Deferrals of either three or six month increments up to a maximum of twelve months
Credit cards	**15.9**	**70**	Deferrals of either four or six months increments up to a maximum of six months
Other consumer	**2.3**	**18**	Deferrals of either four or six months increments up to a maximum of six months
Total consumer	**21.2**	**1,471**	
Total	**21.7**	**$ 2,700**	

(1) Includes approximately $380 million of commercial loans where the borrowers were provided with extended payment deferral relief of more than six months at June 30, 2020, none of which have been placed on nonaccrual status or classified as TDR Loans.

(2) Consumer mortgage loans where the borrowers were provided with extended payment deferral relief of more than six months and, as a result, have been placed on nonaccrual status and classified as TDR Loans were not significant at June 30, 2020.

When the payment relief period ends, we expect to offer borrowers 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. Depending on which actions a borrower takes at the end of their relief period, some of these options would result in TDR Loan classification. 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.

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 $1,197 million at June 30, 2020. In July 2020, the Paycheck Protection Program Extension Act was signed into law, establishing August 8, 2020 as the new deadline to apply for a PPP loan.

Main Street Lending Program In July 2020, the Main Street Lending Program ("MSLP") became fully operational. The 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 are evaluating whether we will participate in the MSLP.

Basis of Reporting

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
		(in millions)		
Profit (loss) before tax – U.S. GAAP basis	**$ 56**	$ 156	**$ (1,384)**	$ 300
Adjustments:				
Expected credit losses	**(17)**	23	**330**	65
Goodwill impairment	**—**	—	**91**	—
Precious metal loans	**9**	(1)	**9**	13
Loan origination	**5**	3	**9**	6
Deposit incentives	**1**	4	**3**	9
Leases	**(11)**	(2)	**(9)**	(7)
Pension and other postretirement benefit costs	**(5)**	3	**(10)**	1
Other	**9**	3	**10**	6
Profit (loss) before tax – Group Reporting Basis	**$ 47**	$ 189	**$ (951)**	$ 393

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 our 2019 Form 10-K. In addition, see Note 15, "Business Segments," in the accompanying consolidated financial statements for a discussion of significant changes since December 31, 2019 in the differences between U.S. GAAP and the Group Reporting Basis impacting our results. Differences in reported profit before tax in the table above that were individually significant for the periods presented are explained below.

During the six months ended June 30, 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 commercial 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. As a result of the different approaches, the impact of 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 provisions for downgrades reflecting weakness in the financial condition of certain clients and loan growth as clients drew on their available lines of credit, was more pronounced under U.S. GAAP.

During the six months ended June 30, 2020, 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 a lower carrying amount of goodwill and, therefore, a lower impairment charge under the Group Reporting Basis.

During the three and six months ended June 30, 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, partially offset by a release in credit loss reserves under U.S. GAAP for risk factors associated with fraud. In addition, expected credit losses under the Group Reporting Basis in the year-to-date period 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).

Critical Accounting Policies and Estimates

Of the significant accounting policies used in the preparation of our consolidated financial statements, we have identified certain items as critical accounting estimates based on the associated degree of judgment and complexity. See "Critical Accounting Policies and Estimates" in MD&A in our 2019 Form 10-K for further discussion.

Determining the allowance for credit losses on loans has historically been identified as a critical accounting estimate. 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. Previously, an allowance for credit losses on loans was recognized based on probable incurred losses. See Note 6, "Allowance for Credit Losses" 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.

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

- Changes in the provision for credit losses can materially affect our financial results;
- Estimates relating 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; and
- The allowance for credit losses is 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 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 6, "Allowance for Credit Losses," in the accompanying consolidated financial statements, we use three forward-looking economic scenarios to estimate lifetime ECL. 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". During the second quarter of 2020, economic conditions remained weak and economic uncertainty caused by the COVID-19 pandemic continued to remain high. Given the high level of economic uncertainty in the current environment, we developed and utilized a fourth scenario for estimating lifetime ECL at June 30, 2020, 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. 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.

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 as described above at June 30, 2020 would have resulted in a combined increase to our allowance for credit losses and liability for off-balance sheet credit exposures of approximately $1,040 million. This illustration only represents the effect of changes in the weighting of these scenarios on our existing portfolios and does not consider changes in the allowance related to management judgment that might occur.

Balance Sheet Review

The following table provides balance sheet totals at June 30, 2020 and increases (decreases) since December 31, 2019:

	June 30, 2020	Increase (Decrease) From December 31, 2019 Amount	%
		(dollars are in millions)	
Period end assets:			
Short-term investments	**$ 48,255**	$ 26,635	*
Loans, net	**71,276**	3,360	4.9
Loans held for sale	**147**	(142)	(49.1)
Trading assets	**32,409**	3,957	13.9
Securities	**53,303**	4,347	8.9
All other assets	**7,472**	(670)	(8.2)
	$ 212,862	$ 37,487	21.4%
Period end liabilities and equity:			
Total deposits	**$ 156,033**	$ 36,340	30.4%
Trading liabilities	**3,218**	(17)	(.5)
Short-term borrowings	**6,102**	2,443	66.8
Long-term debt	**25,746**	(951)	(3.6)
Interest, taxes and other liabilities	**3,619**	(216)	(5.6)
Total equity	**18,144**	(112)	(.6)
	$ 212,862	$ 37,487	21.4%

* 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 June 30, 2020 and increases (decreases) since December 31, 2019:

	June 30, 2020	Increase (Decrease) From December 31, 2019 Amount	%
		(dollars are in millions)	
Commercial loans:			
Real estate, including construction	**$ 11,420**	$ (81)	(.7)%
Business and corporate banking	**17,345**	3,866	28.7
Global banking[1]	**18,668**	753	4.2
Other commercial[2]	**4,480**	(836)	(15.7)
Total commercial	**51,913**	3,702	7.7
Consumer loans:			
Residential mortgages	**18,281**	480	2.7
Home equity mortgages	**792**	(61)	(7.2)
Credit cards	**1,175**	(230)	(16.4)
Other consumer	**307**	24	8.5
Total consumer	**20,555**	213	1.0
Total loans	**72,468**	3,915	5.7
Allowance for credit losses[3]	**1,192**	555	87.1
Loans, net	**$ 71,276**	$ 3,360	4.9 %

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

(2) Includes loans to HSBC affiliates which totaled $1,565 million and $2,343 million at June 30, 2020 and December 31, 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 increased compared with December 31, 2019 due to elevated demand driven by the deterioration in economic conditions caused by the COVID-19 pandemic as clients drew on their available lines of credit and we funded new loans largely associated with the Paycheck Protection Program. The increase in commercial non-affiliate loans was primarily in the consumer services, automobiles, retailing, capital goods, and consumer durables and apparel industries, partially offset by a decline in the diversified financials industry.

Consumer loans increased modestly compared with December 31, 2019 as higher residential mortgage loans 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]			
	June 30, 2020		December 31, 2019	
	First Lien	Second Lien	First Lien	Second Lien
LTV < 80%	**97.9%**	**96.9%**	98.1%	96.4%
80% ≤ LTV < 90%	**1.8**	**2.5**	1.6	2.8
90% ≤ LTV < 100%	**.2**	**.5**	.2	.7
LTV ≥ 100%	**.1**	**.1**	.1	.1
Average LTV for portfolio	**51.1**	**46.4**	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 pricing index ("HPI") at either a Core Based Statistical Area or state level. The estimated value of the homes could differ from actual fair values due to changes in condition of the underlying property, variations in housing

price changes within metropolitan statistical areas and other factors. As a result, actual property values associated with loans that end in foreclosure may be significantly lower than the estimates used for purposes of this disclosure.

(2) Current estimated property values are calculated using the most current HPIs available and applied on an individual loan basis, which results in an approximate three month delay in the production of reportable statistics. Therefore, the information in the table above reflects current estimated property values using HPIs at March 31, 2020 and September 30, 2019, respectively.

Loans Held for Sale The following table summarizes loans held for sale at June 30, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From December 31, 2019	
	June 30, 2020	**Amount**	**%**
		(dollars are in millions)	
Commercial loans:			
Real estate, including construction	**$ —**	$ (83)	(100.0)%
Business and corporate banking	**—**	(35)	(100.0)
Global banking	**103**	9	9.6
Total commercial	**103**	(109)	(51.4)
Consumer loans:			
Residential mortgages	**44**	(33)	(42.9)
Total consumer	**44**	(33)	(42.9)
Total loans held for sale	**$ 147**	$ (142)	(49.1)%

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 $45 million and $178 million at June 30, 2020 and December 31, 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 $58 million and $34 million at June 30, 2020 and December 31, 2019, respectively.

Consumer loans held for sale decreased 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 (loss) 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 $1 million and $2 million at June 30, 2020 and December 31, 2019, respectively. The valuation allowance on commercial loans held for sale was $1 million and nil at June 30, 2020 and December 31, 2019, respectively.

Trading Assets and Liabilities The following table summarizes trading assets and liabilities at June 30, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From December 31, 2019	
	June 30, 2020	**Amount**	**%**
	(dollars are in millions)		
Trading assets:			
Securities[1]	**$ 18,987**	$ (4,501)	(19.2)%
Precious metals	**10,139**	8,230	*
Derivatives, net	**3,283**	228	7.5
	$ 32,409	$ 3,957	13.9 %
Trading liabilities:			
Securities sold, not yet purchased	**$ 637**	$ (545)	(46.1)%
Payables for precious metals	**19**	(105)	(84.7)
Derivatives, net	**2,562**	633	32.8
	$ 3,218	$ (17)	(0.5)%

* Percentage change is greater than 100 percent.

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

Trading securities balances decreased compared with December 31, 2019 due primarily to decreases in equity and foreign sovereign 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. 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 reflecting a redeployment of liquidity in the short term which is economically hedged with derivative positions to protect against changes in market pricing and an increase in positions held as economic hedges for client derivative activity as well as higher spot prices. Payables for precious metals were lower compared with December 31, 2019 reflecting a decline in borrowing of gold inventory to support client activity levels. Precious metal positions may not represent our net underlying exposure as we may use derivatives contracts to reduce our risk associated with these positions, the fair value of which would appear in derivatives in the table above.

Derivative asset and liability balances both increased compared with December 31, 2019 mainly from market movements, partially offset by a reduction in positions driven by the exit of certain derivative contracts as part of our restructuring plan. Market movements resulted in higher valuations of interest rate, foreign exchange and commodity derivatives, partially offset by lower valuations of credit and equity 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. Treasury, 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 and, to a lesser extent, favorable market valuations due to decreasing yields. These increases were partially offset by the sale of $340 million of LIBOR-linked variable rate securities out of our held-to-maturity portfolio during the second quarter of 2020. See Note 5, "Securities," in the accompanying consolidated financial statements for further discussion.

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 previously allocated to our Retail Banking and Wealth Management and our Private Banking reporting units, and lower deferred tax assets. 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. For additional discussion of the results of our interim goodwill impairment testing, see Note 8, "Goodwill," in the accompanying consolidated financial statements. These decreases were partially offset by higher outstanding settlement balances related to security sales and increased investments in Federal Home Loan Bank ("FHLB") stock.

Deposits The following table summarizes deposit balances by major depositor categories at June 30, 2020 and increases (decreases) since December 31, 2019:

		Increase (Decrease) From December 31, 2019	
	June 30, 2020	Amount	%
	(dollars are in millions)		
Individuals, partnerships and corporations	**$ 137,055**	$ 29,030	26.9%
Domestic and foreign banks	**14,924**	6,220	71.5
U.S. government and states and political subdivisions	**605**	244	67.6
Foreign governments and official institutions	**3,449**	846	32.5
Total deposits	**$ 156,033**	$ 36,340	30.4%
Total core deposits[(1)]	**$ 128,198**	$ 32,945	34.6%

(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 to support elevated client demand for loans 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 $3.0 billion of long-term debt obligations issued to HSBC North America that were recharacterized as time deposits during the first quarter of 2020 as discussed below. These increases were partially offset by a decline in time deposits due in part to early client withdrawals.

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, fair value movements on fair value option debt and $3.0 billion of long-term debt obligations issued to HSBC North America that were recharacterized as time deposits during the first quarter of 2020. See Note 14, "Related Party Transactions," for additional information. Debt issuances during the three and six months ended June 30, 2020 totaled $506 million and $6,350 million, respectively, of which $31 million and $4,916 million, respectively, was issued by HSBC Bank USA.

Incremental issuances from our shelf registration statement with the SEC totaled $1,434 million of senior structured notes during the six months ended June 30, 2020. Total long-term debt outstanding under this shelf was $11,117 million and $13,295 million at June 30, 2020 and December 31, 2019, respectively.

Incremental issuances from the HSBC Bank USA Global Bank Note Program totaled $166 million during the six months ended June 30, 2020. Total debt outstanding under this program was $3,043 million and $2,908 million at June 30, 2020 and December 31, 2019, respectively.

Borrowings from the FHLB totaled $5,750 million and $1,000 million at June 30, 2020 and December 31, 2019, respectively.

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

Results of Operations

Net Interest Income Net interest income is the total interest income on earning assets less the total interest expense on deposits and borrowed funds. 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:

Three Months Ended June 30,	2020	2020 Compared to 2019 Increase (Decrease) Volume	Rate	2019
		(dollars are in millions)		
Interest income:				
Short-term investments	**$ 23**	$ 82	$ (232)	$ 173
Trading securities	**48**	(9)	(10)	67
Securities	**262**	33	(69)	298
Commercial loans	**400**	61	(213)	552
Consumer loans	**180**	8	(19)	191
Other	**5**	11	(26)	20
Total interest income	**918**	186	(569)	1,301
Interest expense:				
Deposits	**200**	100	(280)	380
Short-term borrowings	**15**	25	(78)	68
Long-term debt	**162**	(50)	(94)	306
Tax liabilities and other	**3**	(5)	1	7
Total interest expense	**380**	70	(451)	761
Net interest income	**$ 538**	$ 116	$ (118)	$ 540
Yield on total interest earning assets	**1.88%**			3.17%
Cost of total interest bearing liabilities	**.98**			2.37
Interest rate spread	**.90**			.80
Benefit from net non-interest paying funds[1]	**.20**			.52
Net interest margin on average earning assets	**1.10%**			1.32%

Six Months Ended June 30,	2020	2020 Compared with 2019 Increase (Decrease) Volume	Rate	2019
		(dollars are in millions)		
Interest income:				
Short-term investments	**$ 110**	$ 103	$ (342)	$ 349
Trading securities	**128**	11	(13)	130
Securities	**505**	66	(163)	602
Commercial loans	**848**	67	(293)	1,074
Consumer loans	**370**	15	(30)	385
Other	**24**	22	(36)	38
Total interest income	**1,985**	284	(877)	2,578
Interest expense:				
Deposits	**521**	154	(346)	713
Short-term borrowings	**55**	43	(118)	130
Long-term debt	**360**	(106)	(152)	618
Tax liabilities and other	**7**	(6)	(2)	15
Total interest expense	**943**	85	(618)	1,476
Net interest income	**$ 1,042**	$ 199	$ (259)	$ 1,102
Yield on total interest earning assets	**2.14%**			3.19%
Cost of total interest bearing liabilities	**1.30**			2.34
Interest rate spread	**.84**			.85
Benefit from net non-interest paying funds[1]	**.28**			.52
Net interest margin on average earning assets	**1.12%**			1.37%

[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 was relatively flat during the three months ended June 30, 2020 and decreased in the year-to-date period as the unfavorable net impact of lower market rates and the unfavorable impact of higher average interest bearing liability balances, primarily deposits, was largely offset in the three-month period and partially offset in the year-to-date period by the favorable impact of higher average interest earning asset balances, primarily short-term investments, loans and securities.

Short-term investments Interest income decreased during the three and six months ended June 30, 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 during the three months ended June 30, 2020 due to lower yields reflecting the impact of lower market rates and lower average balances driven by decreases in foreign sovereign and U.S. Treasury positions. In the year-to-date period, interest income was relatively flat as the impact of lower yields was largely offset by higher average balances due primarily to an increase in 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 the three and six months ended June 30, 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. Government agency mortgage-backed, U.S. Treasury and foreign sovereign securities, partially offset by a decline in U.S. Government sponsored mortgage-backed securities.

Commercial loans Interest income was lower during the three and six months ended June 30, 2020 due to lower yields reflecting the impact of lower market rates on variable rate loans, partially offset by higher average balances driven by elevated demand as clients drew on their available lines of credit in March during the deterioration in economic conditions caused by the COVID-19 pandemic. A significant portion of the commercial lines of credit that were drawn in March were repaid during the second quarter of 2020.

Consumer loans Interest income decreased during the three and six months ended June 30, 2020 due to lower yields reflecting the impact of lower market rates, partially offset by higher average balances due to growth in residential mortgage loans and credit card receivables.

Other Lower interest income during the three and six months ended June 30, 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 the three and six months ended June 30, 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 to support elevated client demand for loans 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.

Short-term borrowings Lower interest expense during the three and six months ended June 30, 2020 was due to lower rates paid reflecting the impact of lower market rates, partially offset by higher average borrowings primarily in securities sold under repurchase agreements.

Long-term debt Interest expense decreased during the three and six months ended June 30, 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 the three and six months ended June 30, 2020 driven by lower average borrowings in securities sold, not yet repurchased.

Provision for Credit Losses As discussed further in Note 21, "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 period. The following table summarizes the components of the provision for credit losses:

			Increase (Decrease)	
Three Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
		(dollars are in millions)		
Commercial loans:				
Real estate, including construction	**$ 28**	$ 30	$ (2)	(6.7)%
Business and corporate banking	**106**	13	93	*
Global banking	**176**	(9)	185	*
Other commercial	**(1)**	(6)	5	83.3
Total commercial loans	**309**	28	281	*
Consumer loans:				
Residential mortgages	**20**	1	19	*
Home equity mortgages	**(1)**	(1)	—	—
Credit cards	**3**	19	(16)	(84.2)
Other consumer	**6**	(1)	7	*
Total consumer loans	**28**	18	10	55.6
Total loans	**$ 337**	$ 46	$ 291	*
Other financial assets measured at amortized cost	**(1)**	—	(1)	*
Securities available-for-sale	**1**	—	1	*
Off-balance sheet credit exposures[1]	**(118)**	—	(118)	*
Total provision for credit losses	**$ 219**	$ 46	$ 173	*

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
		(dollars are in millions)		
Loans:				
Commercial loans:				
Real estate, including construction	**$ 79**	$ 33	$ 46	*
Business and corporate banking	**319**	35	284	*
Global banking	**286**	5	281	*
Other commercial	**—**	(6)	6	100.0
Total commercial loans	**684**	67	617	*
Consumer loans:				
Residential mortgages	**50**	—	50	*
Home equity mortgages	**2**	—	2	*
Credit cards	**98**	35	63	*
Other consumer	**15**	2	13	*
Total consumer loans	**165**	37	128	*
Total loans	**849**	104	745	*
Other financial assets measured at amortized cost	**1**	—	1	*
Securities available-for-sale	**—**	—	—	—
Off-balance sheet credit exposures[(1)]	**95**	—	95	*
Total provision for credit losses	**$ 945**	$ 104	$ 841	*

* Percentage change is greater than 100 percent.

(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 $173 million during the three months ended June 30, 2020 due primarily 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, partially offset by a release in the provision for credit losses on off-balance sheet credit exposures recorded in the second quarter of 2020. In the year-to-date period, our provision for credit losses increased $841 million 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 the first half of 2020.

The provision for credit losses on our commercial loan portfolio increased $281 million and $617 million during the three and six months ended June 30, 2020, respectively. The loss provisions in the current year periods were 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 in 2020 and provisions for downgrades reflecting weakness in the financial condition of certain clients and risk factors associated with large loan exposures. While a loss provision associated with loan growth as clients drew on their available lines of credit contributed to the loss provision in the 2020 year-to-date period, a significant portion of commercial lines of credit that were drawn in March were repaid during the second quarter of 2020 resulting in a release of credit loss reserves, partially offsetting the loss provision in the three months ended June 30, 2020. In the prior year periods, the loss provisions were driven by downgrades reflecting weakness in the financial condition of certain client relationships, loan growth and an update to the loss emergence period factors which were partially offset by a release in credit loss reserves for risk factors associated with fraud as well as releases in credit loss reserves due to paydowns.

The provision for credit losses on our consumer loan portfolio was higher by $10 million and $128 million during the three and six months ended June 30, 2020, respectively. The loss provisions in the current year periods were 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 in 2020 and higher dollars of delinquency. Also contributing to the loss provisions in the current year periods was growth in personal loan balances due to new product promotions. While loss provisions were recorded for credit cards in the current year periods, the provision in the second quarter of 2020 was not as significant due to lower customer spending and changes in underwriting criteria driven by the current economic environment which resulted in a decline in credit card balances. In the prior year periods, the loss provisions were due primarily to provisions for credit losses on credit cards reflecting growth in balances due to increased customer activity and new product promotions, including higher dollars of delinquency.

The provision for credit losses on off-balance sheet credit exposures reflects a release in credit loss reserves during the three months ended June 30, 2020 as lower outstanding exposure and a lower estimate of expected future draws more than offset the impact of the deterioration of economic conditions caused by the COVID-19 pandemic consistent with commercial loans as discussed above. In the year-to-date period, the provision for credit losses on off-balance sheet credit exposures reflects a loss provision resulting from the deterioration of economic conditions caused by the COVID-19 pandemic consistent with commercial loans as discussed above, partially offset by the impact of lower outstanding exposure.

See "Credit Quality" in this MD&A for additional discussion on the allowance for credit losses and the liability for off-balance sheet credit exposures.

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

			Increase (Decrease)	
Three Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
		(dollars are in millions)		
Credit card fees, net	**$ 9**	$ 18	$ (9)	(50.0)%
Trust and investment management fees	**33**	31	2	6.5
Other fees and commissions	**137**	162	(25)	(15.4)
Trading revenue	**192**	123	69	56.1
Other securities gains, net	**31**	23	8	34.8
Servicing and other fees from HSBC affiliates	**81**	88	(7)	(8.0)
Gain (loss) on instruments designated at fair value and related derivatives	**22**	(17)	39	*
Other income (loss):				
Valuation of loans held for sale	**(9)**	—	(9)	*
Residential mortgage banking revenue	**4**	2	2	100.0
Insurance	**2**	4	(2)	(50.0)
Miscellaneous income (loss)	**(38)**	2	(40)	*
Total other income (loss)	**(41)**	8	(49)	*
Total other revenues	**$ 464**	$ 436	$ 28	6.4 %

			Increase (Decrease)	
Six Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
		(in millions)		
Credit card fees, net	**$ 20**	$ 30	$ (10)	(33.3)%
Trust and investment management fees	**64**	61	3	4.9
Other fees and commissions	**288**	309	(21)	(6.8)
Trading revenue	**206**	256	(50)	(19.5)
Other securities gains, net	**59**	30	29	96.7
Servicing and other fees from HSBC affiliates	**169**	169	—	—
Gain (loss) on instruments designated at fair value and related derivatives	**—**	(26)	26	100.0
Other income (loss):				
Valuation of loans held for sale	**(8)**	—	(8)	*
Residential mortgage banking revenue	**2**	—	2	*
Insurance	**4**	6	(2)	(33.3)
Miscellaneous income (loss)	**47**	(9)	56	*
Total other income (loss)	**45**	(3)	48	*
Total other revenues	**$ 851**	$ 826	$ 25	3.0 %

* Percentage change is greater than 100 percent.

Credit card fees, net Credit card fees, net declined during the three and six months ended June 30, 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 increased modestly during the three and six months ended June 30, 2020 due to higher average assets under management.

Other fees and commissions Other fees and commissions decreased during the three and six months ended June 30, 2020 due primarily to lower fees from loan syndication, loan commitments, wire transfers and other account services. See Note 13, "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 (loss).

			Increase (Decrease)	
Three Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
		(dollars are in millions)		
Business Activities:				
Derivatives[1][2]	**$ 71**	$ 58	$ 13	22.4 %
Foreign Exchange	**45**	39	6	15.4
Metals	**57**	15	42	*
Balance Sheet Management	**—**	9	(9)	(100.0)
Global Banking	**4**	—	4	*
Other trading	**15**	2	13	*
Total trading revenue	**$ 192**	$ 123	$ 69	56.1 %

			Increase (Decrease)	
Six Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
		(in millions)		
Business Activities:				
Derivatives[1][2]	**$ 31**	$ 86	$ (55)	(64.0)%
Foreign Exchange	**151**	83	68	81.9
Metals	**56**	53	3	5.7
Balance Sheet Management	**(14)**	20	(34)	*
Global Banking	**(5)**	—	(5)	*
Other trading	**(13)**	14	(27)	*
Total trading revenue	**$ 206**	$ 256	$ (50)	(19.5)%

(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 Balance Sheet Management, 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.

Trading revenue increased during the three months ended June 30, 2020 as valuation losses of approximately $70 million that were recorded in March 2020 due to market volatility caused by the COVID-19 pandemic largely recovered during the second quarter resulting in higher trading revenue primarily in Derivatives and Metals. The recovery of valuation losses in Derivatives was largely attributed to legacy structured credit products. Also contributing to the increase was higher revenue in Metals from a higher redeployment of liquidity to Metals and increased trading activity. These increases were partially offset by lower revenue in Derivatives from emerging markets rate products and $10 million of trading losses recorded during the second quarter of 2020 associated with the exit of certain derivative contracts as part of our restructuring plan as well as lower Balance Sheet Management revenue due to the unfavorable performance of economic hedge positions used to manage interest rate risk.

In the year-to-date period, trading revenue decreased due primarily to lower Derivatives revenue driven by lower revenue from rate products and interest rate swaps, unfavorable valuation adjustments on legacy structured credit products and $10 million of trading losses recorded during the second quarter of 2020 associated with the exit of certain derivative contracts as part of our restructuring plan. Also contributing to the decrease was lower Balance Sheet Management revenue due to the unfavorable performance of economic hedge positions used to manage interest rate risk as well as lower other trading revenue due primarily to unfavorable funding spread adjustments. These decreases were partially offset by higher Foreign Exchange revenue as higher market volatility driven by the COVID-19 pandemic resulted in increased trading activity in both emerging markets and G10 currencies, higher revenue from credit derivative products due to increased client activity, and the non-recurrence of a loss of approximately $39 million recorded during the first quarter of 2019 related to the unwind of one of our unconsolidated variable interest entities ("VIEs").

Other securities gains, net We maintain securities portfolios as part of our balance sheet diversification and risk management strategies. During the three and six months ended June 30, 2020, we sold $3,609 million and $8,239 million, respectively, of primarily U.S. Treasury, U.S. Government agency mortgage-backed and U.S. Government sponsored mortgage-backed securities compared with sales of $2,044 million and $4,189 million during the prior year periods as part of a continuing strategy to maximize returns while balancing the securities portfolio for risk management purposes. Other securities gains, net increased during the three and six months ended June 30, 2020 reflecting the impact of higher sales activity compared with 2019. 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 4, "Securities," in the accompanying consolidated financial statements.

Servicing and other fees from HSBC affiliates Servicing and other fees from HSBC affiliates were lower during the three months ended June 30, 2020 and were relatively flat in the year-to-date period as lower cost reimbursements associated with shared services performed on behalf of other HSBC affiliates, including internal audit, was partially offset in the three-month period and offset in the year-to-date period by higher cost reimbursements associated with trading activities performed on behalf of HSBC Bank plc and higher sales commissions paid by 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 increased during the three months ended June 30, 2020 attributable primarily to favorable movements related to the economic hedging of interest rate and other risks within our own debt and structured notes. In the year-to-date period, gain (loss) on instruments designated at fair value and related derivatives increased 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 10, "Fair Value Option," in the accompanying consolidated financial statements for additional information including a breakout of these amounts by individual component.

Other income (loss) Other income (loss) was lower during the three months ended June 30, 2020 due primarily to higher losses associated with credit default swap protection which largely reflects the hedging of a few client relationships and a valuation loss on a loan held for sale in the current year period. In the year-to-date period, other income (loss) was higher due primarily to a gain in the current year period associated with credit default swap protection which largely reflects the hedging of a few client relationships compared with a loss in the prior year period, as well as miscellaneous gains recorded during the first quarter of 2020, including a $12 million gain on extinguishment of time deposits reflecting early client withdrawals and a $9 million gain on the sale of one of our owned retail branch properties. These increases were partially offset by a valuation loss on a loan held for sale in the current year period.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	Increase (Decrease) %
		(dollars are in millions)		
Salaries and employee benefits	**$ 190**	$ 221	$ (31)	(14.0)%
Support services from HSBC affiliates:				
Fees paid to HSBC Technology & Services (USA) ("HTSU")	**272**	298	(26)	(8.7)
Fees paid to HSBC Markets (USA) Inc. ("HMUS")	**19**	23	(4)	(17.4)
Fees paid to other HSBC affiliates	**98**	90	8	8.9
Total support services from HSBC affiliates	**389**	411	(22)	(5.4)
Occupancy expense, net	**38**	48	(10)	(20.8)
Other expenses:				
Equipment and software	**27**	21	6	28.6
Marketing	**16**	32	(16)	(50.0)
Outside services	**14**	12	2	16.7
Professional fees	**21**	18	3	16.7
Off-balance sheet credit reserves[1]	**—**	1	(1)	(100.0)
Federal Deposit Insurance Corporation ("FDIC") assessment fees	**26**	(3)	29	*
Miscellaneous	**6**	13	(7)	(53.8)
Total other expenses	**110**	94	16	17.0
Total operating expenses	**$ 727**	$ 774	$ (47)	(6.1)%
Personnel - average number	**4,523**	4,708		
Efficiency ratio	**72.6%**	79.3%		

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	Increase (Decrease) %
		(dollars are in millions)		
Salaries and employee benefits	**$ 397**	$ 431	$ (34)	(7.9)%
Support services from HSBC affiliates:				
Fees paid to HTSU	**535**	575	(40)	(7.0)
Fees paid to HMUS	**46**	50	(4)	(8.0)
Fees paid to other HSBC affiliates	**190**	166	24	14.5
Total support services from HSBC affiliates	**771**	791	(20)	(2.5)
Occupancy expense, net	**178**	93	85	91.4
Goodwill impairment	**784**	—	784	*
Other expenses:				
Equipment and software	**48**	40	8	20.0
Marketing	**33**	68	(35)	(51.5)
Outside services	**28**	28	—	—
Professional fees	**38**	29	9	31.0
Off-balance sheet credit reserves[1]	**—**	(6)	6	100.0
FDIC assessment fees	**33**	5	28	*
Miscellaneous	**22**	45	(23)	(51.1)
Total other expenses	**202**	209	(7)	(3.3)
Total operating expenses	**$ 2,332**	$ 1,524	$ 808	53.0 %
Personnel - average number	**4,544**	4,715		
Efficiency ratio	**123.2%**	79.0%		

* Percentage change is greater than 100 percent.

(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 the three and six months ended June 30, 2020 driven by lower incentive compensation expense and lower pension expense, partially offset by higher severance costs. While continued cost management efforts, including targeted staff reductions to optimize staffing and improve efficiency throughout 2019 as well as reductions in staff related to the consolidation of our retail branch network and restructuring plan, resulted in a decline in the average number of personnel, salaries expense was flat as the impact of these reductions was offset by the addition of higher cost personnel associated with growth initiatives in certain businesses.

Support services from HSBC affiliates Servicing and other fees from HSBC affiliates decreased during the three and six months ended June 30, 2020 due primarily to lower cost allocations from our technology, risk, compliance and finance support service functions. These decreases were partially offset by higher allocated costs driven by the execution of our restructuring plan, primarily severance costs and, in the year-to-date period, contract cancellation and equipment removal charges associated with the branch exits discussed above. A summary of the services received from various HSBC affiliates is included in Note 14, "Related Party Transactions," in the accompanying consolidated financial statements.

Occupancy expense, net Occupancy expense, net was lower during the three months ended June 30, 2020 due primarily to lower operating lease costs driven by the consolidation of our retail branch network. In the year-to-date period, occupancy expense, net increased due to lease impairment and other related costs of $86 million recorded during the first half of 2020 related to the consolidation of our retail branch network. See Note 2, "Strategic Initiatives," in the accompanying consolidated financial statements for additional information.

Goodwill impairment Reflects a goodwill impairment charge of $784 million recorded during the first quarter of 2020, representing the entire amount of goodwill previously allocated to our Retail Banking and Wealth Management and our Private Banking 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. For additional discussion of the results of our interim goodwill impairment testing, see Note 8, "Goodwill," in the accompanying consolidated financial statements.

Other expenses Excluding the impact of off-balance sheet credit reserves recorded in the prior year periods, other expenses remained higher during the three months ended June 30, 2020 and remained lower in the year-to-date period as higher deposit insurance assessment fees were partially offset in the three-month period and more than offset in the year-to-date period by lower marketing expense. Also contributing to the decrease in the year-to-date period was lower losses associated with card fraud.

Efficiency ratio Our efficiency ratio improved during the three months ended June 30, 2020 due to lower operating expenses and higher other revenues as discussed in detail above. In the year-to-date period, our efficiency ratio increased due primarily to higher operating expenses driven by a goodwill impairment charge recorded during the first quarter of 2020 as discussed in detail above.

Income tax expense (benefit) 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:

Three Months Ended June 30,		2020			2019	
		(dollars are in millions)				
Tax expense at the U.S. Federal statutory income tax rate	**$**	**12**	**21.0 %**	$	33	21.0%
Increase (decrease) in rate resulting from:						
State and local taxes, net of Federal benefit		**4**	**7.1**		7	4.5
Non-deductible FDIC assessment fees		**5**	**8.9**		—	—
Low income housing and other tax credit investments		**(4)**	**(7.1)**		(3)	(1.9)
Other[(2)]		**32**	**57.6**		(2)	(1.2)
Provision for income taxes	**$**	**49**	**87.5 %**	$	35	22.4%

Six Months Ended June 30,		2020			2019	
		(dollars are in millions)				
Tax expense (benefit) at the U.S. Federal statutory income tax rate	**$**	**(291)**	**(21.0)%**	$	63	21.0%
Increase (decrease) in rate resulting from:						
State and local taxes, net of Federal benefit		**(15)**	**(1.1)**		12	4.0
Non-deductible FDIC assessment fees		**7**	**.5**		2	.7
Non-deductible goodwill impairment[(1)]		**165**	**11.9**		—	—
Low income housing and other tax credit investments		**(6)**	**(.4)**		(6)	(2.0)
Other[(2)]		**32**	**2.3**		(1)	(.4)
Provision for income taxes	**$**	**(108)**	**(7.8)%**	$	70	23.3%

(1) Represents non-deductible goodwill impairment related to our previously separate Retail Banking and Wealth Management and Private Banking businesses during the first quarter of 2020.

(2) For 2020, the amounts include $25 million related to the tax benefit limitation on interim period ordinary losses.

The provision for income taxes for the six months ended June 30, 2020 has been computed based on tax reporting guidance under ASC 740 for interim period ordinary losses. The year to date tax benefit reported above has been limited to not exceed the anticipated full year tax benefit from the ordinary losses. The provision for income taxes for the three months ended June 30, 2020 represents the difference between the provision for income taxes for the six months ended June 30, 2020 and the three months ended March 31, 2020. All material tax rate adjustment items are disclosed in the reconciliation table above.

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 the second quarter of 2020 and is discussed further below, Commercial Banking ("CMB"), Global Banking and Markets ("GB&M") and a Corporate Center ("CC"). See Item 1, "Business," in our 2019 Form 10-K for a description of our segments at December 31, 2019, 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 the second quarter of 2020, we implemented a change to our internal management reporting to begin reporting 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 the second quarter of 2020, we also decided to implement a change to our internal management reporting to begin allocating Balance Sheet Management ("BSM"), which was historically reported within the CC segment, to the WPB, CMB and GB&M 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.

See Note 15, "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 three months and six months ended June 30, 2019. 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 BSM. BSM 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 IFRS issued by the IASB and endorsed by the EU, and, as a result, our segment results are prepared and presented using financial information prepared on the Group Reporting Basis as operating results are monitored and reviewed, trends are evaluated and decisions about allocating resources, such as employees, are primarily made on this basis. We continue, however, to monitor capital adequacy and report to regulatory agencies on a U.S. GAAP basis.

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 our 2019 Form 10-K. In addition, see Note 15, "Business Segments," in the accompanying consolidated financial statements for a discussion of significant changes since December 31, 2019 in the differences between U.S. GAAP and the Group Reporting Basis impacting our results.

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

			Increase (Decrease)	
Three Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
	(dollars are in millions)			
Net interest income	**$ 197**	$ 265	$ (68)	(25.7)%
Other operating income	**99**	104	(5)	(4.8)
Total operating income[1]	**296**	369	(73)	(19.8)
Expected credit losses	**36**	13	23	*
Net operating income	**260**	356	(96)	(27.0)
Operating expenses	**326**	364	(38)	(10.4)
Loss before tax	**$ (66)**	$ (8)	$ (58)	*

			Increase (Decrease)	
Six Months Ended June 30,	**2020**	**2019**	**Amount**	**%**
	(dollars are in millions)			
Net interest income	**$ 429**	$ 538	$ (109)	(20.3)%
Other operating income	**173**	194	(21)	(10.8)
Total operating income[1]	**602**	732	(130)	(17.8)
Expected credit losses	**176**	34	142	*
Net operating income	**426**	698	(272)	(39.0)
Operating expenses	**1,361**	732	629	85.9
Loss before tax	**$ (935)**	$ (34)	$ (901)	*

* Percentage change is greater than 100 percent.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Retail banking current accounts, savings and deposits	**$ 119**	$ 168	$ (49)	(29.2)%
Retail banking mortgages, credit cards and other personal lending	**74**	63	11	17.5
Wealth and asset management products	**25**	24	1	4.2
Private banking	**41**	54	(13)	(24.1)%
Retail business banking and other[2]	**37**	60	(23)	(38.3)
Total operating income	**$ 296**	$ 369	$ (73)	(19.8)%

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Retail banking current accounts, savings and deposits	**$ 267**	$ 341	$ (74)	(21.7)%
Retail banking mortgages, credit cards and other personal lending	**141**	115	26	22.6
Wealth and asset management products	**48**	47	1	2.1
Private banking	**88**	107	(19)	(17.8)
Retail business banking and other[2]	**58**	122	(64)	(52.5)
Total operating income	**$ 602**	$ 732	$ (130)	(17.8)%

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

Our WPB segment reported a higher loss before tax during the three months ended June 30, 2020 due primarily to lower net interest income and higher expected credit losses, partially offset by lower operating expenses. In the year-to-date period, our WPB segment reported a higher loss before tax due to higher operating expenses driven by a goodwill impairment charge of $693 million recorded during the first quarter of 2020, representing the entire amount of remaining goodwill previously recorded, as well as higher expected credit losses, lower net interest income and lower other operating income. See Note 8, "Goodwill," in the accompanying consolidated financial statements for additional discussion regarding the factors which led to the impairment.

Net interest income decreased during the three and six months ended June 30, 2020 due primarily to lower deposit spreads reflecting the impact of lower market rates, partially offset by improved loan spreads and higher loan balances in residential mortgages and credit cards.

Other operating income decreased during the three and six months ended June 30, 2020 driven by lower credit card fees due to lower customer spending and, in the year-to-date period, a loss of $7 million recorded during the first quarter of 2020 related to extending the maturity of the total return swap position used to economically hedge the periodic payments made under the swap agreements entered into in conjunction with the sales of Visa Inc. Class B common shares.

Expected credit losses were higher during the three and six months ended June 30, 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. Also contributing to the increases was growth in personal loan balances due to new product promotions. While ECL in credit cards was higher and contributed to the increase in the year-to-date period, lower customer spending and changes in underwriting criteria driven by the current economic environment resulted in a decline in credit card balances and lower ECL in the three-month period.

Excluding the goodwill impairment as discussed above, operating expenses decreased during the three and six months ended June 30, 2020 due to lower marketing expense, lower incentive compensation expense, lower cost allocations from our technology and risk support service functions and, in the year-to-date period, lower losses associated with card fraud. These decreases were partially offset by higher severance costs and higher deposit insurance assessment fees.

Client Assets The following table provides information regarding private banking client assets during the six months ended June 30, 2020 and 2019:

Six Months Ended June 30,	2020	2019
	(in millions)	
Client assets at beginning of period	**$ 39,295**	$ 36,017
Net new money (outflows)	**(1,437)**	(286)
Client transfers to UBS Wealth Management Americas ("UBS")[1]	**—**	(25)
Value change	**232**	2,316
Client assets at end of period	**$ 38,090**	$ 38,022

(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:

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	Increase (Decrease) %
		(dollars are in millions)		
Net interest income	**$ 204**	$ 206	$ (2)	(1.0)%
Other operating income	**52**	60	(8)	(13.3)
Total operating income[1]	**256**	266	(10)	(3.8)
Expected credit losses	**181**	9	172	*
Net operating income	**75**	257	(182)	(70.8)
Operating expenses	**142**	143	(1)	(.7)
Profit (loss) before tax	**$ (67)**	$ 114	$ (181)	*

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	Increase (Decrease) %
		(dollars are in millions)		
Net interest income	**$ 414**	$ 412	$ 2	.5 %
Other operating income	**110**	121	(11)	(9.1)
Total operating income[1]	**524**	533	(9)	(1.7)
Expected credit losses	**304**	15	289	*
Net operating income	**220**	518	(298)	(57.5)
Operating expenses	**289**	282	7	2.5
Profit (loss) before tax	**$ (69)**	$ 236	$ (305)	*

* Percentage change is greater than 100 percent.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Lending and Transaction Management	**$ 101**	$ 108	$ (7)	(6.5)%
Global Liquidity and Cash Management, current accounts and savings deposits	**113**	112	1	.9
Global Trade and Receivables Finance	**13**	13	—	—
Investment banking products and other(2)	**29**	33	(4)	(12.1)
Total operating	**$ 256**	$ 266	$ (10)	(3.8)%

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Lending and Transaction Management	**$ 219**	$ 218	$ 1	.5 %
Global Liquidity and Cash Management, current accounts and savings deposits	**223**	228	(5)	(2.2)
Global Trade and Receivables Finance	**27**	25	2	8.0
Investment banking products and other(2)	**55**	62	(7)	(11.3)
Total operating	**$ 524**	$ 533	$ (9)	(1.7)%

(2) Includes allocated BSM revenue.

Our CMB segment reported a loss before tax during the three and six months ended June 30, 2020 compared with a profit before tax in the prior year periods due primarily to higher expected credit losses and, to a lesser extent, lower other operating income.

Net interest income was relatively flat during the three and six months ended June 30, 2020 as the favorable impact of higher loan and deposit balances was partially offset in the year-to-date period and more than offset in the three-month period by lower deposit spreads reflecting the impact of lower market rates, lower loan spreads reflecting compression and higher liquidity recharges.

Other operating income decreased during the three and six months ended June 30, 2020 due primarily to a loss on sale of a loan and lower fees from loan commitments.

Expected credit losses were higher during the three and six months ended June 30, 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 loss estimates for downgrades reflecting weakness in the financial condition of certain clients. Also contributing to the increase in the year-to-date period was a higher loss estimate for loan growth as clients drew on their available lines of credit.

Operating expenses were relatively flat during the three months ended June 30, 2020 as lower incentive compensation expense, lower marketing expense and lower cost allocations from our technology and finance support service functions was largely offset by higher deposit insurance assessment fees. In the year-to-date period, operating expenses increased as lower incentive compensation expense and lower marketing expense was more than offset by higher deposit insurance assessment fees and higher cost allocations from our compliance support service function.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Net interest income	**$ 122**	$ 156	$ (34)	(21.8)%
Other operating income	**263**	189	74	39.2
Total operating income(1)	**385**	345	40	11.6
Expected credit losses	**19**	3	16	*
Net operating income	**366**	342	24	7.0
Operating expenses	**201**	216	(15)	(6.9)
Profit before tax	**$ 165**	$ 126	$ 39	31.0 %

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Net interest income	**$ 212**	$ 329	$ (117)	(35.6)%
Other operating income	**526**	379	147	38.8
Total operating income(1)	**738**	708	30	4.2
Expected credit losses	**135**	(14)	149	*
Net operating income	**603**	722	(119)	(16.5)
Operating expenses	**393**	427	(34)	(8.0)
Profit before tax	**$ 210**	$ 295	$ (85)	(28.8)%

* Percentage change is greater than 100 percent.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Credit	**$ 5**	$ 6	$ (1)	(16.7)%
Rates	**46**	14	32	*
Foreign Exchange and Metals	**121**	35	86	*
Equities	**9**	10	(1)	(10.0)
Total Global Markets	**181**	65	116	*
Global Banking(2)	**39**	107	(68)	(63.6)
Global Liquidity and Cash Management	**102**	121	(19)	(15.7)
Securities Services(2)	**7**	6	1	16.7
Global Trade and Receivables Finance	**15**	12	3	25.0
Credit and funding valuation adjustments	**9**	3	6	*
Other(3)	**32**	31	1	3.2
Total operating income	**$ 385**	$ 345	$ 40	11.6 %

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Credit	**$ 5**	$ 15	$ (10)	(66.7)%
Rates	**60**	34	26	76.5
Foreign Exchange and Metals	**238**	100	138	*
Equities	**23**	13	10	76.9
Total Global Markets	**326**	162	164	*
Global Banking(2)	**154**	189	(35)	(18.5)
Global Liquidity and Cash Management	**211**	247	(36)	(14.6)
Securities Services(2)	**14**	13	1	7.7
Global Trade and Receivables Finance	**30**	27	3	11.1
Credit and funding valuation adjustments	**(31)**	16	(47)	*
Other(3)	**34**	54	(20)	(37.0)
Total operating income	**$ 738**	$ 708	$ 30	4.2 %

(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 $9 million and $18 million of operating income from Securities Services to Global Banking during the three and six months ended June 30, 2019, respectively, to conform to the current year presentation.

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

Our GB&M segment reported a higher profit before tax during the three months ended June 30, 2020 due to higher other operating income and lower operating expenses, partially offset by lower net interest income and higher expected losses. In the year-to-date period, our GB&M segment reported a lower profit before tax due to higher expected credit losses and lower net interest income, partially offset by higher other operating income and lower operating expenses.

Credit revenue was relatively flat during the three months ended June 30, 2020 and decreased in the year-to-date period due to lower revenue from structuring and collateralized financing related activity.

Rates revenue increased during the three and six months ended June 30, 2020 due to higher revenue from emerging markets rate products and interest rate swaps, partially offset by $10 million of trading losses recorded during the second quarter of 2020 associated with the exit of certain derivative contracts as part of our restructuring plan. In addition, while hedging activities resulted in higher revenue and contributed to the increase in the three-month period, they resulted in lower revenue and partially offset the increase in the year-to-date period.

Foreign Exchange and Metals revenue increased during the three months ended June 30, 2020 due primarily to higher Metals revenue as valuation losses that were recorded in March 2020 due to market volatility caused by the COVID-19 pandemic largely recovered during the second quarter. In the year-to-date period, Foreign Exchange and Metals revenue increased due to higher Foreign Exchange revenue as market volatility driven by the COVID-19 pandemic resulted in increased trading activity in both emerging market and G10 currencies. Also contributing to the increase in both periods was higher revenue in Metals from a higher redeployment of liquidity to Metals and increased trading activity.

Equities revenue was relatively flat during the three months ended June 30, 2020 and increased in the year-to-date period due to increased client activity in prime brokerage.

Global Banking revenue decreased during the three months ended June 30, 2020 due primarily to lower net interest income from spread compression, lower fees from loan syndication and loan commitments and higher losses associated with credit default swap protection which largely reflects the hedging of a few client relationships. In the year to date period, Global Banking revenue decreased due primarily to lower net interest income from spread compression and lower fees from loan syndication and loan commitments, partially offset by a gain in the current year period associated with credit default swap protection which largely reflects the hedging of a few client relationships compared with a loss in the prior year period.

Global Liquidity and Cash Management revenue decreased during the three and six months ended June 30, 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 the three and six months ended June 30, 2020.

Global Trade and Receivables Finance revenue was higher during the three and six months ended June 30, 2020 due to higher fees from standby letters of credit.

Credit and funding valuation adjustments resulted in gains during the three months ended June 30, 2020 as valuation losses recovered as market volatility improved during the second quarter. In the year-to-date period, credit and funding valuation adjustments resulted in losses attributable primarily to unfavorable credit valuation adjustments on derivative assets due to deteriorating credit spreads driven by market volatility caused by the COVID-19 pandemic as well as the impact of lower market rates. In the prior year periods, credit and funding valuation adjustments resulted in gains attributable primarily to favorable movements in our own credit spreads within our derivative liability balances.

Other revenue was relatively flat during the three months ended June 30, 2020 and decreased in the year-to-date period due to higher liquidity charges, lower cost reimbursements and lower allocated BSM revenue which were partially offset by lower corporate funding charges.

Expected credit losses were higher during the three and six months ended June 30, 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 loss estimates for risk factors associated with oil and gas industry loan exposures and downgrades reflecting weakness in the financial condition of certain clients.

Operating expenses were lower during the three and six months ended June 30, 2020 due to lower incentive compensation expense and lower cost allocations from our technology, finance, legal, risk and compliance support service functions, partially offset by higher severance costs and higher deposit insurance assessment fees.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Net interest expense	**$ (7)**	$ (17)	$ 10	58.8 %
Other operating income	**85**	12	73	*
Total operating income (expense)[1]	**78**	(5)	83	*
Expected credit losses	**—**	—	—	—
Net operating income (expense)	**78**	(5)	83	*
Operating expenses	**63**	38	25	65.8
Profit (loss) before tax	**$ 15**	$ (43)	$ 58	*

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Net interest expense	**$ (20)**	$ (45)	$ 25	55.6 %
Other operating income	**61**	9	52	*
Total operating income (expense)[1]	**41**	(36)	77	*
Expected credit losses	**—**	—	—	—
Net operating income (expense)	**41**	(36)	77	*
Operating expenses	**198**	68	130	*
Profit (loss) before tax	**$ (157)**	$ (104)	$ (53)	(51.0)%

* Percentage change is greater than 100 percent.

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

Three Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Legacy structured credit products	**$ 61**	$ (5)	$ 66	*
Other	**17**	—	17	*
Total operating income	**$ 78**	$ (5)	$ 83	*

Six Months Ended June 30,	2020	2019	Increase (Decrease) Amount	%
	(dollars are in millions)			
Legacy structured credit products	**$ (13)**	$ (36)	$ 23	63.9%
Other	**54**	—	54	*
Total operating income	**$ 41**	$ (36)	$ 77	*

Our CC segment reported a profit before tax during the three months ended June 30, 2020 compared with a loss before tax in the prior year period due to higher other operating income and lower net interest expense, partially offset by higher operating expenses. In the year-to-date period, our CC segment reported a higher loss before tax due to higher operating expenses, partially offset by higher other operating income and lower net interest expense.

Net interest expense was lower during the three and six months ended June 30, 2020 driven by improved net interest income from legacy structured credit products and lower retained liquidity charges.

Other operating income increased during the three months ended June 30, 2020 due to favorable valuation adjustments on legacy structured credit products as valuation losses that were recorded in March 2020 due to market volatility caused by the COVID-19 pandemic largely recovered during the second quarter as well as favorable movements related to the economic hedging of interest rate risk within our own debt. In the year-to-date period, other operating income was higher due to favorable movements related to the economic hedging of interest rate risk within our own debt, the non-recurrence of a loss of approximately $39 million recorded during the first quarter of 2019 related to the unwind of one of our unconsolidated VIEs and, in the year-to-date period, a $9 million gain recorded during the first quarter of 2020 on the sale of one of our owned retail branch properties. These increases were partially offset by unfavorable valuation adjustments on legacy structured credit products.

Operating expenses were higher during the three and six months ended June 30, 2020 due to higher allocated costs driven by the execution of our restructuring plan, primarily severance costs and, in the year-to-date period, contract cancellation and equipment removal charges associated with the branch exits. The increase in the year-to-date period also reflects costs recorded during the first quarter of 2020 related to the consolidation of our retail branch network, including lease impairment and other related costs of $97 million. These increases in both periods were partially offset by lower cost allocations from our technology, risk, compliance and finance support service functions.

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 COVID-19. Substantially all of the loans under these programs are not classified as TDR Loans at June 30, 2020 due to 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 impacted 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 payment deferral is for six months or less. For consumer loans, when a borrower requests and is provided with extended relief in the form of a payment deferral of more than six months, the loan will generally be placed on nonaccrual status and assessed for TDR Loan classification. We have not modified our commercial loan nonaccrual policies as a result of this guidance. See "Executive Overview," in this MD&A for additional information.

Allowance for Credit Losses / Liability for Off-Balance Sheet Credit Exposures As discussed further in Note 21, "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. See Note 6, "Allowance for Credit Losses," in the accompanying consolidated financial statements for a full discussion of our accounting policies and methodologies used to estimate ECL beginning in 2020. There have been no additional significant changes to our policies or methodologies during the first half of 2020.

Our accounting policies and methodologies related to the allowance for credit losses and liability for off-balance sheet credit exposures in prior periods are presented under the caption "Critical Accounting Policies and Estimates" in MD&A and in Note 2, "Summary of Significant Accounting Policies and New Accounting Pronouncements," in our 2019 Form 10-K. Our approach toward credit risk management is summarized under the caption "Risk Management" in MD&A in our 2019 Form 10-K.

Comparative credit information at January 1, 2020, reflecting the adoption of the new accounting guidance, has been included in the tables below where available. Comparative credit information at December 31, 2019, which is not comparable 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:

	June 30, 2020	March 31, 2020	January 1, 2020	December 31, 2019
	(in millions)			
Allowance for credit losses:				
Loans:				
Commercial loans	**$ 983**	$ 727	$ 381	$ 507
Consumer loans	**209**	204	86	130
Total loans	**1,192**	931	467	637
Securities held-to-maturity	**2**	2	2	—
Other financial assets measured at amortized cost[1]	**4**	5	3	—
Securities available-for-sale	**3**	2	3	—
Total allowance for credit losses	**$ 1,201**	$ 940	$ 475	$ 637
Liability for off-balance sheet credit exposures	**$ 253**	$ 371	$ 158	$ 104

(1) Primarily includes accrued interest receivables and customer acceptances

See Note 21, "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 June 30, 2020 increased $261 million or 28 percent as compared with March 31, 2020 and increased $726 million or 153 percent as compared with January 1, 2020 due primarily 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 June 30, 2020 increased $256 million or 35 percent as compared with March 31, 2020 and increased $602 million or 158 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 in 2020 and higher loss estimates for downgrades reflecting weakness in the financial condition of certain clients and risk factors associated with large loan exposures. While higher loss estimates associated with loan growth as clients drew on their available lines of credit contributed to the increase as compared with January 1, 2020, a significant portion of commercial lines of credit that were drawn in March were repaid during the second quarter of 2020 resulting in a release of credit loss reserves, partially offsetting the increase as compared with March 31, 2020.

Our consumer allowance for credit losses at June 30, 2020 increased $5 million or 2 percent as compared with March 31, 2020 and increased $123 million or 143 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 in 2020 and higher dollars of delinquency. Also contributing to the increases was a higher allowance for credit losses on other consumer loans reflecting growth in personal loan balances due to new product promotion. While a higher allowance for credit losses on credit cards contributed to the increase as compared with January 1, 2020, lower customer spending and changes in underwriting criteria driven by the current economic environment resulted in a decline in credit card balances and a lower allowance for credit losses on credit cards as compared with March 31, 2020.

The liability for off-balance sheet credit exposures at June 30, 2020 decreased $118 million or 32 percent as compared with March 31, 2020 as a lower estimate of expected future draws more than offset the impact of the deterioration of economic conditions caused by the COVID-19 pandemic consistent with commercial loans as discussed above. As compared with January 1, 2020, the liability for off-balance sheet credit exposures increased $95 million or 60 percent resulting from the deterioration of economic conditions caused by the COVID-19 pandemic consistent with commercial loans as discussed above, partially offset by the impact of lower outstanding exposure.

Summary of Credit Loss Experience for Loans

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

	June 30, 2020 Amount	June 30, 2020 % of Loans to Total Loans	March 31, 2020 Amount	March 31, 2020 % of Loans to Total Loans	January 1, 2020 Amount	January 1, 2020 % of Loans to Total Loans	December 31, 2019 Amount	December 31, 2019 % of Loans to Total Loans
	(dollars are in millions)							
Commercial[1]	**$ 983**	**71.6%**	$ 727	74.9%	$ 381	70.3%	$ 507	70.3%
Consumer:								
Residential mortgages	**(19)**	**25.2**	(41)	22.1	(74)	26.0	12	26.0
Home equity mortgages	**16**	**1.1**	16	1.0	13	1.2	6	1.2
Credit cards	**190**	**1.6**	212	1.6	137	2.0	105	2.0
Other consumer	**22**	**.5**	17	.4	10	.5	7	.5
Total consumer	**209**	**28.4**	204	25.1	86	29.7	130	29.7
Total	**$ 1,192**	**100.0%**	$ 931	100.0%	$ 467	100.0%	$ 637	100.0%

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

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

	June 30, 2020	March 31, 2020	January 1, 2020	December 31, 2019
Ratio of Allowance for credit losses to:				
Loans:[1]				
Commercial:				
Non-affiliates	**1.95%**	1.25%	.83%	1.11%
Affiliates	**—**	—	—	—
Total commercial	**1.89**	1.19	.79	1.05
Consumer:				
Residential mortgages	**(.10)**	(.23)	(.42)	.07
Home equity mortgages	**2.02**	1.97	1.52	.70
Credit cards	**16.17**	16.31	9.75	7.47
Other consumer	**7.17**	5.09	3.53	2.47
Total consumer	**1.02**	1.00	.42	.64
Total loans	**1.64**	1.14	.68	.93
Net charge-offs:[2]				
Commercial[3]	**596%**	621%	847%	1,127%
Consumer	**249**	268	159	241
Total net charge-offs	**479**	482	472	643
Nonperforming loans:[1][4]				
Commercial	**150%**	283%	160%	213%
Consumer	**42**	47	19	29
Total nonperforming loans	**103**	134	67	92

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

(2) Ratios at June 30, 2020 and March 31, 2020 reflect year-to-date net charge-offs, annualized. Ratios at January 1, 2020 and December 31, 2019 reflect full year net charge-offs for 2019.

(3) Our commercial net charge-off coverage ratio for the year-to-date periods ended June 30, 2020 and March 31, 2020 and year ended December 31, 2019 was 71 months, 75 months and 135 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, 2019 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.

See Note 6, "Allowance for Credit Losses," in the accompanying consolidated financial statements for a rollforward of credit losses by general loan categories for the three and six months ended June 30, 2020 and 2019.

The allowance for credit losses as a percentage of total loans held for investment at June 30, 2020 increased as compared with March 31, 2020 due to the increase in our allowance for credit losses for the reasons discussed above and a decrease in total loans held for investment driven primarily by lower commercial loans as a significant portion of commercial lines of credit that were drawn in March were repaid during the second quarter of 2020. As compared with January 1, 2020, the allowance for credit losses as a percentage of total loans held for investment increased as the increase in our allowance for credit losses for the reasons discussed above outpaced an increase in total loans held for investment driven primarily by higher commercial loans.

The allowance for credit losses as a percentage of net charge-offs at June 30, 2020 was relatively flat as compared with both March 31, 2020 and January 1, 2020 as the increase in our allowance for credit losses for the reasons discussed above was offset by an increase in dollars of net charge-offs driven by higher charge-offs in our commercial loan portfolio and, to a lesser extent, our consumer loan portfolio.

The allowance for credit losses as a percentage of nonperforming loans held for investment at June 30, 2020 decreased as compared with March 31, 2020 as an increase in nonperforming loans driven by higher nonperforming loans in our commercial loan portfolio, and to a lesser extent, our consumer loan portfolio outpaced the increase in our allowance for credit losses for the reasons discussed above. As compared with January 1, 2020, the allowance for credit losses as a percentage of nonperforming loans held for investment increased as the increase in our allowance for credit losses for the reasons discussed above outpaced an increase in nonperforming loans driven by higher nonperforming loans in our commercial loan portfolio, and to a lesser extent, our consumer 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"):

	June 30, 2020		March 31, 2020		December 31, 2019	
	Delinquent Loans	**Delinquency Ratio**	**Delinquent Loans**	**Delinquency Ratio**	**Delinquent Loans**	**Delinquency Ratio**
	(dollars are in millions)					
Commercial	**$ 43**	**.08%**	$ 27	.04 %	$ 41	.08%
Consumer:						
Residential mortgages(1)(2)	**413**	**2.26**	364	2.02	350	1.96
Home equity mortgages(1)(2)	**27**	**3.41**	26	3.19	25	2.93
Credit cards	**38**	**3.23**	39	3.00	34	2.42
Other consumer	**8**	**2.61**	7	2.10	7	2.47
Total consumer	**486**	**2.36**	436	2.13	416	2.04
Total	**$ 529**	**.73**	$ 463	.57	$ 457	.66

(1) At June 30, 2020, March 31, 2020 and December 31, 2019, consumer mortgage loan delinquency includes $243 million, $249 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:

	June 30, 2020		March 31, 2020		December 31, 2019	
	Delinquent Loan	**Delinquency Ratio**	**Delinquent Loan**	**Delinquency Ratio**	**Delinquent Loan**	**Delinquency Ratio**
	(dollars are in millions)					
Interest-only loans	**$ 34**	**1.00%**	$ 33	.99%	$ 32	.95%
ARM loans	**191**	**1.48**	149	1.17	142	1.14

Compared with March 31, 2020 and December 31, 2019, our two-months-and-over contractual delinquency ratio increased 16 basis points and 7 basis points, respectively, due primarily to higher dollars of delinquency in our consumer loan portfolio. While dollars of delinquency in our commercial loan portfolio were higher and contributed to the increase compared with March 31, 2020, they were relatively flat compared with December 31, 2019.

Our commercial loan two-months-and-over contractual delinquency ratio increased 4 basis points compared with March 31, 2020 and was flat compared with December 31, 2019. The increase compared with March 31, 2020 was due primarily to higher dollars of delinquency driven by the deterioration of economic conditions caused by the COVID-19 pandemic and, to a lesser extent, lower outstanding loan balances as a significant portion of lines of credit that were drawn in March were repaid during the second quarter of 2020.

Compared with March 31, 2020 and December 31, 2019, our consumer loan two-months-and-over contractual delinquency ratio increased 23 basis points and 32 basis points, respectively, 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.

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

	Three Months Ended June 30,				Six Months Ended June 30,			
	2020		2019		2020		2019	
	Net Charge-off Dollars	Net Charge-off Ratio	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:								
Business and corporate banking	**$ 54**	**1.10%**	$ 1	.03%	**$ 64**	**.75%**	$ 3	.04%
Global banking	**—**	**—**	3	.06	**19**	**.19**	3	.03
Other commercial	**(1)**	**(.08)**	—	—	**(1)**	**(.04)**	—	—
Total commercial	**53**	**.37**	4	.03	**82**	**.31**	6	.02
Consumer:								
Residential mortgages	**(2)**	**(.04)**	—	—	**(5)**	**(.06)**	2	.02
Home equity mortgages	**(1)**	**(.50)**	—	—	**(1)**	**(.25)**	—	—
Credit cards	**25**	**8.30**	11	4.06	**45**	**6.99**	22	4.18
Other consumer	**1**	**1.40**	1	1.53	**3**	**2.20**	2	1.65
Total consumer	**23**	**.45**	12	.24	**42**	**.41**	26	.26
Total	**$ 76**	**.39**	$ 16	.09	**$ 124**	**.33**	$ 32	.09

Our net charge-off ratio as a percentage of average loans increased 30 basis points and 24 basis points during the three and six months ended June 30, 2019, respectively, due primarily to higher levels of net charge-offs in our commercial loan portfolio driven by the deterioration of two corporate banking loans and, in the year-to-date period, the sale of a global banking loan during the first quarter of 2020. Also contributing to the increases was higher levels of net charge-offs in our consumer loan portfolio due primarily to higher charge-offs in credit cards reflecting growth in average balances due to increased customer activity and 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"):

	June 30, 2020		March 31, 2020		December 31, 2019	
	Nonperforming Loans[1]	Nonperforming Ratio	Nonperforming Loans[1]	Nonperforming Ratio	Nonperforming Loans[1]	Nonperforming Ratio
	(dollars are in millions)					
Commercial	**$ 656**	**1.26%**	$ 257	.42%	$ 238	.49%
Consumer:						
Residential mortgages[2][3][4]	**428**	**2.34**	370	2.05	381	2.14
Home equity mortgages[2][3]	**38**	**4.80**	38	4.67	46	5.39
Credit Cards	**28**	**2.38**	28	2.15	24	1.71
Other consumer	**3**	**.98**	2	.60	5	1.77
Total consumer	**497**	**2.42**	438	2.14	456	2.24
Total	**$ 1,153**	**1.59**	$ 695	.85	$ 694	1.01
Other real estate owned[5]	**$ 4**		$ 6		$ 10	

(1) See Note 5, "Loans," in the accompanying consolidated financial statements for a breakout of nonaccrual loans and accruing loans contractually 90 days or more past due. At June 30, 2020, March 31, 2020 and December 31, 2019, total nonperforming loans include $34 million, $32 million and $30 million, respectively, of accruing loans contractually 90 days or more past due, primarily credit cards.

(2) At June 30, 2020, March 31, 2020 and December 31, 2019, nonperforming consumer mortgage loans include $293 million, $286 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.

(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 June 30, 2020, March 31, 2020 and December 31, 2019.

Our nonperforming loan ratio increased 74 basis points and 58 basis points compared with March 31, 2020 and December 31, 2019, respectively, due primarily to higher nonperforming loans driven by higher nonperforming loans in our commercial loan portfolio, and to a lesser extent, our consumer loan portfolio.

Compared with March 31, 2020 and December 31, 2019, our commercial nonperforming loan ratio increased 84 basis points and 77 basis points, respectively, due primarily to higher nonperforming loans reflecting downgrades driven by the deterioration of economic conditions caused by the COVID-19 pandemic. While outstanding loan balances were lower as a significant portion of lines of credit that were drawn in March were repaid during the second quarter of 2020 and contributed to the increase compared with March 31, 2020, they were higher and partially offset the increase compared with December 31, 2019.

Our consumer nonperforming loan ratio increased 28 basis points and 18 basis points compared with March 31, 2020 and December 31, 2019, respectively, due primarily to higher nonperforming loans 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 were placed on nonaccrual status prior to seeking forbearance relief.

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 our 2019 Form 10-K, as updated for COVID-19 related loan modifications in Note 5, "Loans," in the accompanying consolidated financial statements.

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

Our consumer loan portfolio includes the following types of loans:

- Interest-only loans – A loan which allows a customer to pay the interest-only portion of the monthly payment for a period of time which results in lower payments during the initial loan period.

- Adjustable rate mortgage ("ARM") loans – A loan which allows us to adjust pricing on the loan in line with market movements.

The following table summarizes the balances of interest-only and ARM loans in our loan portfolios at June 30, 2020 and December 31, 2019. Each category is not mutually exclusive and loans may appear in more than one category below.

	June 30, 2020	December 31, 2019
	(in millions)	
Interest-only residential mortgage and home equity mortgage loans	**$ 3,448**	$ 3,362
ARM loans[1]	**12,915**	12,487

[1] During the remainder of 2020 and during 2021, approximately $201 million and $851 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 $44 million and $77 million at June 30, 2020 and December 31, 2019, respectively.

	June 30, 2020	December 31, 2019
	(in millions)	
Closed end:		
First lien	**$ 18,281**	$ 17,801
Second lien	**32**	35
Revolving[1]	**760**	818
Total	**$ 19,073**	$ 18,654

[1] A majority of revolving are second lien mortgages.

Geographic Concentrations The following table reflects regional exposure at June 30, 2020 and December 31, 2019 for our real estate secured loan portfolios:

	Commercial Real Estate, including Construction Loans	Residential Mortgages and Home Equity Mortgages
June 30, 2020		
New York State	**27.7%**	**30.5%**
California	**23.2**	**45.6**
North Central United States	**3.6**	**1.6**
North Eastern United States, excluding New York State	**7.6**	**7.7**
Southern United States	**31.2**	**9.6**
Western United States, excluding California	**6.7**	**5.0**
Total	**100.0%**	**100.0%**
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	100.0 %	100.0 %

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:

	June 30, 2020		December 31, 2019	
	Commercial Utilized	Unused Commercial Commitments	Commercial Utilized	Unused Commercial Commitments
	(in millions)			
Real estate	**$ 9,586**	**$ 2,457**	$ 9,200	$ 3,115
Diversified financials	**8,360**	**12,070**	9,247	12,562
Consumer services	**5,349**	**3,551**	4,601	3,347
Retailing	**2,970**	**4,758**	2,413	4,143
Energy	**2,804**	**6,567**	2,560	6,337
Capital goods	**2,663**	**5,898**	2,189	9,579
Commercial and professional services	**2,548**	**4,669**	2,101	5,072
Chemicals	**2,175**	**3,632**	2,197	3,879
Consumer durables and apparel	**2,111**	**2,539**	1,649	3,367
Technology hardware and equipment	**1,581**	**6,270**	1,531	6,520
Software and services	**1,185**	**1,505**	910	1,861
Health care equipment and services	**1,035**	**1,684**	898	1,780
Automobiles and components	**1,023**	**465**	454	1,183
Semiconductors and semiconductor equipment	**925**	**1,387**	991	1,506
Construction materials	**809**	**436**	442	1,070
Utilities	**776**	**1,475**	607	812
Food and staples retailing	**766**	**2,344**	654	2,322
Transportation	**711**	**607**	447	935
Food, beverage and tobacco	**667**	**2,755**	565	2,884
Metals and mining	**662**	**903**	517	1,185
Total commercial credit exposure in top 20 industries[1]	**48,706**	**65,972**	44,173	73,459
All other industries	**1,642**	**13,052**	1,695	13,430
Total commercial credit exposure[2]	**$ 50,348**	**$ 79,024**	$ 45,868	$ 86,889

(1) Based on utilization at June 30, 2020.

(2) Excludes commercial credit exposures with affiliates.

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.

	June 30, 2020	December 31, 2019
	(in millions)	
Risk associated with derivative contracts:		
Total credit risk exposure	**$ 29,160**	$ 33,076
Less: collateral held against exposure	**6,903**	7,704
Net credit risk exposure	**$ 22,257**	$ 25,372

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.

During the first half of 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. 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. 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, a significant portion of the commercial lines of credit that were drawn in March were repaid during the second quarter of 2020. 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.

Interest Bearing Deposits with Banks totaled $17,734 million and $2,038 million at June 30, 2020 and December 31, 2019, respectively, of which $17,440 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 $29,255 million and $17,838 million at June 30, 2020 and December 31, 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 $18,987 million and $23,488 million at June 30, 2020 and December 31, 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 $53,303 million and $48,956 million at June 30, 2020 and December 31, 2019, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on trends.

Short-Term Borrowings totaled $6,102 million and $3,659 million at June 30, 2020 and December 31, 2019, respectively. See "Balance Sheet Review" in this MD&A for further analysis and discussion on short-term borrowing trends.

Deposits totaled $156,033 million and $119,693 million at June 30, 2020 and December 31, 2019, respectively, which included $128,198 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 $25,746 million at June 30, 2020 from $26,697 million at December 31, 2019. The following table presents the maturities of long-term debt at June 30, 2020:

	(in millions)
2020	**$ 4,413**
2021	**6,072**
2022	**5,276**
2023	**1,272**
2024	**1,395**
Thereafter	**7,318**
Total	**$ 25,746**

The following table summarizes issuances and retirements of long-term debt during the six months ended June 30, 2020 and 2019:

Six Months Ended June 30,	2020	2019
	(in millions)	
Long-term debt issued	**$ 6,350**	$ 2,928
Long-term debt repaid	**(3,656)**	(4,294)
Net long-term debt issued (repaid)	**$ 2,694**	$ (1,366)

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 the six months ended June 30, 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 the first half of 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 $13,883 million was available at June 30, 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 $13,127 million was available at June 30, 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 June 30, 2020, long-term debt included $5,750 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 $8,448 million.

Preferred Equity See Note 18, "Preferred Stock," in our 2019 Form 10-K for information regarding all outstanding preferred share issues.

Common Equity During the six months ended June 30, 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 June 30, 2020 and December 31, 2019:

	June 30, 2020	December 31, 2019
Common equity Tier 1 capital to risk-weighted assets	**13.1%**	13.1%
Tier 1 capital to risk-weighted assets	**14.2**	14.1
Total capital to risk-weighted assets	**17.4**	16.3
Tier 1 leverage ratio[1]	**8.1**	9.9
Supplementary leverage ratio[2]	**7.6**	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, in March 2020, the federal banking agencies issued an interim 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 interim 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.

In addition, in April 2020, the FRB issued an interim final rule adopting a temporary change to the calculation of the SLR that permits bank holding companies such as HSBC North America and HSBC USA, 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 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. In May 2020, the federal banking agencies issued an interim final rule that permits depository institutions such as HSBC Bank USA to exclude 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.

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"). 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. 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 ("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 beginning January 1, 2020 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. 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, effective beginning with March 31, 2020 reporting.

Category III firms and their depository institution subsidiaries will 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 and became effective beginning April 1, 2020 although firms may choose to apply the simplifications as early as January 1, 2020. As such, 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.

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 recent regulatory developments and their expected impact see Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in our 2019 Form 10-K and also below under the caption, "Other Regulatory Developments." 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 IHCs and BHCs, 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"), as amended by the Relief Act. Under the Tailoring Rules, HSBC North America as a Category III firm, is no longer subject to a mid-cycle stress testing requirement beginning January 1, 2020 and is now required to disclose its company-run stress test results 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 bank-holding company over a nine quarter planning horizon.

In March 2020, the FRB adopted a final rule on the stress capital buffer ("SCB") which will, among other things, replace the current fixed 2.5 percent capital conservation buffer with a dynamic, institution-specific risk-based SCB. It is expected that the SCB will vary in size throughout the economic cycle depending on a firm’s risk exposures and the severity of its stress scenarios. Under the final rule, the SCB would be recalibrated annually based on the sum of: (i) a firm’s projected losses under the severely adverse scenario in supervisory stress tests and (ii) four quarters of a firm’s planned future dividends. If HSBC North America's risk-based capital ratios were to fall to levels within the SCB, it would become subject to increasing restrictions on their capital distributions and discretionary bonus payments. The final rule also eliminates the quantitative objection component of CCAR, and instead relies on the capital rule’s automatic restrictions on capital distributions that are triggered if a firm breaches its buffer requirements. The SCB will be officially set for each CCAR firm by August 31, 2020 based on 2020 supervisory stress testing results conducted as part of CCAR, and will become effective October 1, 2020. HSBC North America already utilizes an internal capital assessment approach that is analogous to the SCB and will continue 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.

For further discussion on capital planning and stress testing, including detail regarding the FRB's supervisory assessment as part of the CCAR process, as well as further discussion of the Tailoring Rules and other recent regulatory developments and their expected impact see Part I, "Regulation and Competition - Regulatory Capital and Liquidity Requirements," in our 2019 Form 10-K and also below under the caption, "Other Regulatory Developments."

HSBC North America submitted its latest CCAR capital plan and its latest annual company-run DFAST results in April 2020. In July 2020, HSBC North America publicly disclosed its latest 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. The FRB also announced it will prohibit stock repurchases by CCAR firms and will require all CCAR firms to limit their common stock dividends to the lesser of (a) the firm's common stock dividends last quarter and (b) the average of the firm's net income for the four proceeding calendar quarters. These restrictions will continue at least through September 30, 2020 and could be extended by the FRB quarter-by-quarter. In addition, each CCAR firm, including HSBC North America, is required to resubmit its capital plan later this year based on additional economic scenarios provided by the FRB. 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 bank holding company regulatory capital compliance is generally performed at the HSBC North America level, and also separately for HSBC Bank USA, as a bank holding company we are required to meet minimum capital requirements imposed by the FRB. We present our capital ratios, together with HSBC Bank USA's in Note 16, "Retained Earnings and Regulatory Capital Requirements," in the accompanying consolidated financial statements.

Other Regulatory Developments

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 currently not utilized any of these facilities.

The Volcker Rule 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 Part I, "Regulation and Competition - The "Volcker Rule"," in our 2019 Form 10-K. In June 2020, the five regulatory agencies responsible for implementing the Volcker Rule approved a final rule that makes significant revisions to the "covered funds" provisions of the current implementing regulations. These revisions include (i) new exclusions for credit funds, venture capital funds, family wealth management vehicles, and client facilitation vehicles, and an expanded scope for the public welfare fund exclusion; and (ii) revisions to address practical obstacles to reliance on the existing exclusions for loan securitizations, foreign public funds, and small business investment companies. These amendments to the Volcker Rule will become effective October 1, 2020. We continue to assess the impact of the amendments on our operations.

Uncleared Swap Margin Also in June 2020, the U.S. banking regulators approved a final rule that makes significant amendments to their margin requirements 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") (the "Margin Rules"). The final rule (1) mostly exempts Swap Entities from needing to collect initial margin ("IM") for swaps with affiliates; (2) 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; (3) clarifies the time at which IM trading documentation must be in place; and (4) adds a new compliance phase for IM requirements. The final rule will take effect August 31, 2020. We are continuing to assess the amendments and their impact on our operations.

2020 Funding Strategy Our current estimate for funding needs and sources for 2020 are summarized in the following table:

	Actual January 1 through June 30, 2020	Estimated July 1 through December 31, 2020	Estimated Full Year 2020
		(in billions)	
Increase (decrease) in funding needs:			
Net change in loans	$ 3	$ (5)	$ (2)
Net change in short-term investments and securities	31	17	48
Net change in trading and other assets	3	(22)	(19)
Total funding needs	$ 37	$ (10)	$ 27
Increase (decrease) in funding sources:			
Net change in deposits	$ 36	$ (7)	$ 29
Net change in trading and other short-term liabilities	2	3	5
Net change in long-term debt	(1)	(6)	(7)
Total funding sources	$ 37	$ (10)	$ 27

Reductions to trading assets estimated during the July 1 through December 31, 2020 period are mainly related to select Fixed Income activities which will be consolidated in and operated from Europe to better utilize HSBC's global scale, which allows us to record revenue as a business introducer and hold fewer assets on our balance sheet. In addition, we will also exit certain derivative contracts as part of our restructuring plan. As previously discussed, the timing of our strategic actions may be re-sequenced or delayed. In light of COVID-19, we continue to reassess our strategic plan and may take additional actions in future periods.

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 our 2019 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.

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 Business Update" in our 2019 Form 10-K) 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.

	Balance at June 30, 2020				
	One Year or less	**Over One through Five Years**	**Over Five Years**	**Total**	**Balance at December 31, 2019**
			(in millions)		
Standby letters of credit, net of participations[1]	**$ 6,661**	**$ 2,369**	**$ 121**	**$ 9,151**	$ 9,436
Commercial letters of credit	**192**	**21**	**10**	**223**	126
Credit derivatives[2]	**5,003**	**29,411**	**1,146**	**35,560**	38,739
Other commitments to extend credit:					
Commercial[3]	**20,330**	**59,096**	**2,023**	**81,449**	88,191
Consumer	**8,288**	**—**	**—**	**8,288**	7,906
Total	**$ 40,474**	**$ 90,897**	**$ 3,300**	**$ 134,671**	$ 144,398

(1) Includes $1,698 million and $1,623 million issued for the benefit of HSBC affiliates at June 30, 2020 and December 31, 2019, respectively.

(2) Includes $16,444 million and $18,391 million issued for the benefit of HSBC affiliates at June 30, 2020 and December 31, 2019, respectively.

(3) Includes $2,425 million and $1,302 million issued for the benefit of HSBC affiliates at June 30, 2020 and December 31, 2019, respectively.

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

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

Fair Value

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 June 30, 2020 and December 31, 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 corporate debt securities, 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. See Note 19, "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 June 30, 2020 and December 31, 2019:

	June 30, 2020	**December 31, 2019**
	(dollars are in millions)	
Level 3 assets[(1)(2)]	**$ 1,547**	$ 1,349
Total assets measured at fair value[(1)(3)]	**115,422**	98,322
Level 3 liabilities[(1)]	**1,432**	1,350
Total liabilities measured at fair value[(1)]	**60,421**	55,224
Level 3 assets as a percent of total assets measured at fair value	**1.3%**	1.4%
Level 3 liabilities as a percent of total liabilities measured at fair value	**2.4%**	2.4%

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

(2) Includes $1,167 million of recurring Level 3 assets and $380 million of non-recurring Level 3 assets at June 30, 2020. Includes $925 million of recurring Level 3 assets and $424 million of non-recurring Level 3 assets at December 31, 2019.

(3) Includes $114,712 million of assets measured on a recurring basis and $710 million of assets measured on a non-recurring basis at June 30, 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 See Note 19, "Fair Value Measurements," in the accompanying consolidated financial statements for information on additions to and transfers into (out of) Level 3 measurements during the three and six months ended June 30, 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 $28 million or a decrease of the overall fair value measurement of approximately $11 million at June 30, 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.

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 Board of Directors has the ultimate responsibility for effective management of risk. It is advised on risk matters by the Risk Committee of the Board of Directors and the Compliance and Conduct Committee. 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.

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;

- *Capital and liquidity risk* is the risk of having insufficient capital, liquidity or funding resources to meet financial obligations and satisfy regulatory requirements, including pension risk;
- *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 and fraud risk* is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity, including both internal and external fraud;
- *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;
- *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.

In the course of our regular risk management activities, we use models to help quantify the risk we are taking. 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. 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.

See "Risk Management" in MD&A in our 2019 Form 10-K for a more complete discussion of the objectives of our risk management system as well as our risk management policies and practices. There have been no material changes to our approach to risk management since December 31, 2019. However, during the first half of 2020, we continued to enhance our risk management by further simplifying our approach and articulation of risk management through combining our Enterprise Risk Management Framework and our Operational Risk Management Framework to create a single simplified Risk Management Framework.

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. Our credit risk management procedures are designed for all stages of economic and financial cycles, including challenging periods of market volatility and economic uncertainty. 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. See "Risk Management" in MD&A in our 2019 Form 10-K for a more complete discussion of our approach to credit risk.

ASU 2016-13 process 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 2013-16 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 calculated, 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* - A Management Review Committee has been established in order to review and approve the results of the lifetime ECL calculation. The Management Review Committee has representatives from Credit Risk and Finance and is responsible for final approval of our lifetime ECL for the period. 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 various loan and other portfolios carried at amortized cost.

Capital and Liquidity Risk Management Although our overall approach to capital and liquidity risk management has not changed, we continuously monitor our capital ratios and the impact of market events on our liquidity positions and will continue to adapt our frameworks as necessary to reflect market events and the evolving regulatory landscape and view as to best practices. See "Risk Management" in MD&A in our 2019 Form 10-K for a more complete discussion of our approach to capital and liquidity risk.

Capital risk See "Liquidity and Capital Resources" in this MD&A for a discussion of our approach to capital risk, including our capital ratios and regulatory capital requirements.

Liquidity and funding risk 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 June 30, 2020 and December 31, 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 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 and their depository institution subsidiaries, including HSBC North America and 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 liquidity needs for a 30 calendar day liquidity stress scenario. During the six months ended June 30, 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 June 30, 2020 and December 31, 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 April 2016, U.S. regulators issued for public comment a proposal to implement the NSFR in the United States, applicable to certain large banking organizations, including HSBC North America and HSBC Bank USA. The Tailoring Rules also indicate that an 85 percent NSFR requirement will apply to Category III firms with weighted short-term wholesale funding under $75 billion and their depository institution subsidiaries, including HSBC North America and HSBC Bank USA, once the NSFR is finalized. As a result, under the proposed 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 the required amount of funding for assets and off-balance sheet exposures. At both June 30, 2020 and December 31, 2019, HSBC Bank USA's estimated NSFR, based on our current interpretation and understanding of the proposed 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 adjusted their liquidity profiles to support compliance with these rules. HSBC North America and HSBC Bank USA may need to make further changes to their liquidity profiles to support compliance with any future rules.

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 June 30, 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 the 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 the long-term credit rating for HSBC USA. Concurrently, Fitch upgraded the 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 the 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. In conjunction with these downgrades, S&P revised their 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 June 30, 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.

See "Liquidity and Capital Resources" in this MD&A for further discussion of our liquidity position, including information regarding our outstanding borrowings, the remaining availability of our debt issuance programs and our funding strategy.

Market Risk Management Exposure to market risk is separated into two portfolios:

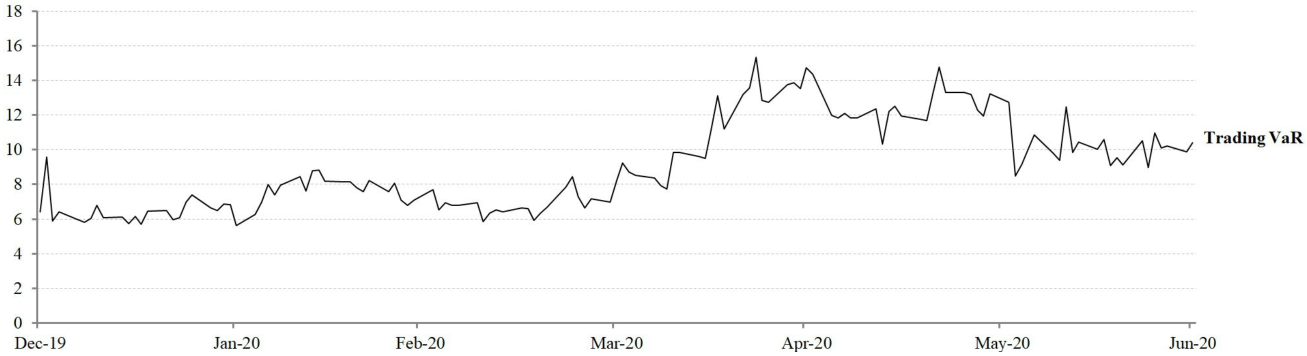
- *Trading portfolios* comprise positions arising from market-making and warehousing of client-derived positions.
- *Non-trading portfolios* comprise positions that primarily arise from the interest rate management of our retail and commercial banking assets and liabilities and financial investments 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. See "Risk Management" in MD&A in our 2019 Form 10-K for a more complete discussion of our approach to market risk.

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. VaR measures are calculated to a 99 percent confidence level and use a one-day holding period.

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

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 the six months ended June 30, 2020:

	Foreign exchange and commodity	Interest rate	Credit Spread	Portfolio Diversification[1]	Total[2]
			(in millions)		
At June 30, 2020	**$ 1**	**$ 9**	**$ 4**	**$ (4)**	**$ 10**
Six Months Ended June 30, 2020					
Average	**2**	**9**	**2**	**(4)**	**9**
Maximum	**5**	**14**	**4**		**15**
Minimum	**1**	**5**	**1**		**6**
At December 31, 2019	$ 1	$ 6	$ 1	$ (2)	$ 6

(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.

During the six months ended June 30, 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 BSM and represents the potential negative changes in the investment portfolio market value (which includes available-for-sale and held-to-maturity assets) and associated hedges. Our investment portfolio holdings are mainly comprised of U.S. Treasury, U.S. Government agency mortgage-backed and U.S. Government sponsored mortgage-backed securities. Our non-trading VaR exposure is driven by interest rates and agency spread volatility.

The following table summarizes our non-trading VaR for the six months ended June 30, 2020:

	Interest rate	Credit Spread	Portfolio Diversification(1)	Total(1)
		(in millions)		
At June 30, 2020	**$ 85**	**$ 71**	**$ (75)**	**$ 81**
Six Months Ended June 30, 2020				
Average	**66**	**63**	**(57)**	**72**
Maximum	**109**	**106**		**108**
Minimum	**29**	**38**		**46**
At December 31, 2019	$ 37	$ 48	$ (18)	$ 67

(1) Refer to the Trading VaR table above for additional information.

The increase in non-trading VaR at June 30, 2020 was due primarily to an increase in volatility of interest rates and U.S. Government agency credit spreads driven by the COVID-19 pandemic.

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 BSM which has the mandate to centrally manage and hedge it. See below for a broader discussion on how interest rate risk is managed.

Interest rate risk Various techniques are utilized to quantify and monitor risks associated with the repricing characteristics of our assets, liabilities and derivative contracts. See "Risk Management" in MD&A in our 2019 Form 10-K for a more complete discussion of our approach to interest rate risk.

<u>Economic value of equity ("EVE")</u> 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 June 30, 2020 and December 31, 2019, our EVE remained within risk appetite for the up 200 and down 200 basis point interest rate shock scenarios.

<u>Net interest income simulation modeling techniques</u> 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:

	June 30, 2020		December 31, 2019	
	Amount	%	Amount	%
	(dollars are in millions)			
Estimated increase (decrease) in projected net interest income (reflects projected rate movements on July 1, 2020 and January 1, 2020, respectively):				
Resulting from a gradual 100 basis point increase in the yield curve	**$ 285**	**12%**	$ (18)	(1)%
Resulting from a gradual 100 basis point decrease in the yield curve	**(102)**	**(4)**	(25)	(1)
Other significant scenarios monitored (reflects projected rate movements on July 1, 2020 and January 1, 2020, respectively):				
Resulting from an immediate 100 basis point increase in the yield curve	**427**	**18**	(70)	(3)
Resulting from an immediate 100 basis point decrease in the yield curve	**(92)**	**(4)**	(57)	(2)

Changes in the sensitivities since December 31, 2019 have been primarily driven by the addition of pay-fixed positions and the acceleration of expected mortgage prepayments as a result of the significant drop in interest rates. In addition, the sensitivities in the 'down-shock' scenarios at June 30, 2020 reflect no floors to the shocked market rates. 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. However, customer product specific rate floors continue to be recognized where appropriate. 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.

CONSOLIDATED AVERAGE BALANCES AND INTEREST RATES

The following table summarizes the quarter-to-date and 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 three and six months ended June 30, 2020 included fees of $19 million and $36 million, respectively, compared with fees of $21 million and $38 million during the three and six months ended June 30, 2019, respectively.

Three Months Ended June 30,	2020			2019		
	Average Balance	Interest	Rate	Average Balance	Interest	Rate
	(dollars are in millions)					
Assets:						
Interest bearing deposits with banks	**$ 28,866**	**$ 8**	**.11%**	$ 15,870	$ 102	2.58%
Federal funds sold and securities purchased under resale agreements	**11,117**	**15**	**.54**	5,743	71	4.96
Trading securities	**17,738**	**48**	**1.09**	20,704	67	1.30
Securities	**53,497**	**262**	**1.97**	47,832	298	2.50
Loans:						
Commercial	**57,944**	**400**	**2.78**	51,675	552	4.28
Consumer:						
Residential mortgages	**18,267**	**150**	**3.30**	17,459	155	3.56
Home equity mortgages	**804**	**5**	**2.50**	925	12	5.20
Credit cards	**1,217**	**18**	**5.95**	1,085	19	7.02
Other consumer	**285**	**7**	**9.88**	261	5	7.68
Total consumer	**20,573**	**180**	**3.52**	19,730	191	3.88
Total loans	**78,517**	**580**	**2.97**	71,405	743	4.17
Other	**6,415**	**5**	**.31**	3,129	20	2.56
Total interest earning assets	**$ 196,150**	**$ 918**	**1.88%**	$ 164,683	$ 1,301	3.17%
Allowance for credit losses	**(1,060)**			(593)		
Cash and due from banks	**1,119**			1,213		
Other assets	**14,390**			12,793		
Total assets	**$ 210,599**			$ 178,096		
Liabilities and Equity:						
Domestic deposits:						
Savings deposits	**$ 62,230**	**$ 71**	**.46%**	$ 46,341	$ 115	1.00%
Time deposits	**30,012**	**121**	**1.62**	27,769	200	2.89
Other interest bearing deposits	**21,223**	**6**	**.11**	10,335	53	2.06
Foreign deposits:						
Foreign banks deposits	**5,137**	**1**	**.08**	4,122	9	.88
Other interest bearing deposits	**691**	**1**	**.58**	805	3	1.49
Deposits held for sale	**—**	**—**	**—**	1	—	.60
Total interest bearing deposits	**119,293**	**200**	**.67**	89,373	380	1.71
Short-term borrowings	**10,795**	**15**	**.56**	6,977	68	3.91
Long-term debt	**25,466**	**162**	**2.56**	31,341	306	3.92
Total interest bearing deposits and debt	**155,554**	**377**	**.97**	127,691	754	2.37
Tax liabilities and other	**496**	**3**	**2.43**	1,329	7	2.11
Total interest bearing liabilities	**$ 156,050**	**$ 380**	**.98%**	$ 129,020	$ 761	2.37%
Net interest income/Interest rate spread		**$ 538**	**.90%**		$ 540	.80%
Noninterest bearing deposits	**28,106**			22,747		
Other liabilities	**8,169**			7,955		
Total equity	**18,274**			18,374		
Total liabilities and equity	**$ 210,599**			$ 178,096		
Net interest margin on average earning assets			**1.10%**			1.32%
Net interest income to average total assets			**1.02%**			1.22%

Six Months Ended June 30,	2020			2019		
	Average Balance	Interest	Rate	Average Balance	Interest	Rate
	(dollars are in millions)					
Assets:						
Interest bearing deposits with banks	**$ 23,277**	**$ 62**	**.54%**	$ 16,489	$ 216	2.64%
Federal funds sold and securities purchased under resale agreements	**8,241**	**48**	**1.17**	5,995	133	4.47
Trading securities	**21,472**	**128**	**1.20**	19,773	130	1.33
Securities	**52,516**	**505**	**1.93**	46,919	602	2.59
Loans:						
Commercial	**54,234**	**848**	**3.14**	50,860	1,074	4.26
Consumer:						
Residential mortgages	**18,143**	**305**	**3.38**	17,454	312	3.60
Home equity mortgages	**813**	**14**	**3.46**	942	24	5.14
Credit cards	**1,288**	**38**	**5.93**	1,053	38	7.28
Other consumer	**273**	**13**	**9.58**	268	11	8.28
Total consumer	**20,517**	**370**	**3.63**	19,717	385	3.94
Total loans	**74,751**	**1,218**	**3.28**	70,577	1,459	4.17
Other	**5,980**	**24**	**.81**	3,009	38	2.55
Total interest earning assets	**$ 186,237**	**$ 1,985**	**2.14%**	$ 162,762	$ 2,578	3.19%
Allowance for credit losses	**(758)**			(567)		
Cash and due from banks	**1,182**			1,255		
Other assets	**13,134**			13,049		
Total assets	**$ 199,795**			$ 176,499		
Liabilities and Equity:						
Domestic deposits:						
Savings deposits	**$ 56,782**	**$ 179**	**.63%**	$ 46,422	$ 217	.94%
Time deposits	**29,992**	**285**	**1.91**	25,709	370	2.90
Other interest bearing deposits	**17,353**	**49**	**.57**	10,230	104	2.05
Foreign deposits:						
Foreign banks deposits	**4,881**	**5**	**.21**	4,125	16	.78
Other interest bearing deposits	**726**	**3**	**.83**	784	6	1.54
Deposits held for sale	**—**	**—**	**—**	3	—	.59
Total interest bearing deposits	**109,734**	**521**	**.95**	87,273	713	1.65
Short-term borrowings	**10,676**	**55**	**1.04**	7,293	130	3.59
Long-term debt	**25,282**	**360**	**2.86**	31,371	618	3.97
Total interest bearing deposits and debt	**145,692**	**936**	**1.29**	125,937	1,461	2.34
Tax liabilities and other	**658**	**7**	**2.14**	1,243	15	2.43
Total interest bearing liabilities	**$ 146,350**	**$ 943**	**1.30%**	$ 127,180	$ 1,476	2.34%
Net interest income/Interest rate spread		**$ 1,042**	**.84%**		$ 1,102	.85%
Noninterest bearing deposits	**26,898**			23,189		
Other liabilities	**8,149**			7,204		
Total equity	**18,398**			18,926		
Total liabilities and equity	**$ 199,795**			$ 176,499		
Net interest margin on average earning assets			**1.12%**			1.37%
Net interest income to average total assets			**1.05%**			1.26%

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Information required by this Item is included within Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations in the Risk Management section under the caption "Market Risk Management."

Item 4. 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 June 30, 2020 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II

Item 1. Legal Proceedings

See Note 20, "Litigation and Regulatory Matters," in the accompanying consolidated financial statements for our legal proceedings disclosure, which is incorporated herein by reference.

Item 1A. Risk Factors

The following discussion supplements the discussion of risk factors affecting us as set forth in Part I, Item 1A. Risk Factors, on pages 15 - 29 of our 2019 Annual Report on Form 10-K. The discussion of risk factors, as so supplemented, provides a description of some of the important risk factors that could affect our actual results and could cause our results to vary materially from those expressed in public statements or documents. However, other factors besides those included in the discussion of risk factors, as so supplemented, or discussed elsewhere in other of our reports filed with or furnished to the SEC could affect our business or results. The readers should not consider any description of such factors to be a complete set of all potential risks that we may face.

Risks relating to the impact of COVID-19

The COVID-19 pandemic has had, and continues to have, a material impact on businesses around the world and the economic environments in which they operate. In March 2020, the United States declared a federal state of emergency in response to the COVID-19 pandemic, which continues to spread 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 circumstances around this pandemic are evolving and 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 respective populations, with a resultant significant impact on 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 which only recently have begun to ease as governments have started to lift restrictions. 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 to provide financial support to parts of the economy most impacted by the COVID-19 pandemic. The details of how these actions will impact our customers and therefore the impact on HUSI continues to remain uncertain. Furthermore, it is unclear how these actions will ultimately 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 ECL driven by a worsening in the economic scenarios used to calculate ECL as well as higher provisions for risk factors associated with large loan exposures, downgrades reflecting weakness in the financial condition of certain clients and loan growth as clients drew on their available lines of credit. See Note 6, "Allowance for Credit Losses," in the accompanying consolidated financial statements for further discussion. In addition, we have provided temporary payment relief to borrowers who are experiencing short-term financial problems as a result of COVID-19, a risk exists that these short-term financial problems may become long-term, increasing our risk of credit losses.

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 additional monitoring and more frequent testing of models, particularly for credit loss models. It also has resulted in the use of mitigants for model limitations, such as adjustments to model outputs to reflect consideration of management judgment. The performance and usage of models has been and will continue to be impacted significantly by the consequences of the COVID-19 pandemic. While it is too early to be entirely 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 replaced. The effectiveness of our 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. This matter has also resulted in valuation losses associated with certain financial instruments due to market volatility, which have largely recovered during the second quarter. See "Management's Discussion and Analysis of Financial Position and Results of Operations." Additionally, in April 2020, Fitch changed the rating outlook for both HSBC USA and HSBC Bank USA to negative from stable, and in May 2020, Standard & Poor's 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 change reflect the economic disruption driven by the COVID-19 pandemic, with Standard & Poor's also noting the 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 and/or widely accepted treatment becomes available, which might not occur for an extended period of time. Should the current economic conditions persist or deteriorate further, we expect that this environment will continue to adversely impact our business which could include, but not be limited to, further impacts on our income due to lower lending and transaction volumes and lower wealth management revenue due to equity markets volatility and weakness as well as 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, among other factors, to 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 LIBOR, the COVID-19 pandemic is affecting 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."

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. In June 2020, the FRB publicly disclosed bank-specific CCAR and DFAST supervisory stress testing results along with aggregated results of a sensitivity analysis aimed at gauging the ongoing economic impact of the COVID-19 pandemic on CCAR firms. The FRB also announced that it will prohibit stock repurchases by CCAR firms and will require all CCAR firms to limit their common stock dividends to the lesser of (a) the firm's common stock dividends last quarter and (b) the average of the firm's net income for the four preceding calendar quarters. These restrictions will continue at least through September 30, 2020 and could be extended by the FRB quarter-by-quarter. In order to make common stock distributions, HSBC North America must maintain capital level in excess of its regulatory capital minimums and its stress capital buffer. In addition, the FRB has also announced that each CCAR firm, including HSBC North America, must resubmit its capital plan later this year based on additional economic scenarios provided by the FRB. It is unclear if the FRB will conduct further stress tests in connection with its review of CCAR firms' resubmitted capital plans or if the FRB would recalculate the SCB applicable to CCAR firms based on such stress tests.

In addition, federal and state legislative and regulatory developments in relation to COVID-19 have 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 reputational harm and has resulted in, and may continue to 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.

Late in the second quarter of 2020, we decided to lift the pause we had put in place in March on the staff reductions relating to our restructuring plan as COVID-19 restrictions have begun to ease and some businesses began to re-open. Our restructuring plan is moving forward as planned, including consolidation of our retail branch network and wholesale and retail middle and back office functions, each under a single operations structure, and the creation of our Wealth and Personal Banking business which was completed in the second quarter. While we remain committed to our multi-year strategic plan to re-profile our business, the timing of the strategic actions as outlined in our 2019 Form 10-K may be re-sequenced or delayed beyond 24 months as the circumstances around the COVID-19 pandemic continue to develop. We continue to re-assess our strategic plan and may take additional actions in future periods.

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 Risk Factors in our 2019 Annual Report on Form 10-K.

Item 5. 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-Q, 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 in support of guarantees issued by Iranian banks as the Iranian beneficiaries of the guarantees required that they be backed directly by Iranian banks. The Iranian banks to which the HSBC Group provided counter indemnities included Bank Tejarat, Bank Melli, and the Bank of Industry and Mine.

There was no measurable gross revenue in the second quarter of 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 the second quarter of 2020 and approximately 16 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 the second quarter of 2020 was approximately $577.

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 the second quarter of 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., EU, or the United Nations Security Council.

There was no measurable gross revenue or net profit generated from these transactions.

Other activity The HSBC Group has an insurance company customer in the United Arab Emirates that, during the second quarter of 2020, made a payment 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 this payment to the hospital made by its customer.

The HSBC Group exited a customer relationship with the Iranian Embassy in the U.K. in 2013. In the second quarter of 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 the second quarter of 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 the second quarter of 2020. There was no measurable gross revenue or net profit to the HSBC Group during the second quarter of 2020 relating to these frozen accounts.

Item 6. 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).
31	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document(1)
101.SCH	XBRL Taxonomy Extension Schema Document(1)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document(1)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document(1)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document(1)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document(1)

(1) Pursuant to Rule 405 of Regulation S-T, includes the following financial information included in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, formatted in eXtensible Business Reporting Language ("XBRL") interactive data files: (i) the Consolidated Statement of Income (Loss) for the three and six months ended June 30, 2020 and 2019, (ii) the Consolidated Statement of Comprehensive Income (Loss) for the three and six months ended June 30, 2020 and 2019, (iii) the Consolidated Balance Sheet at June 30, 2020 and December 31, 2019, (iv) the Consolidated Statement of Changes in Equity for the three and six months ended June 30, 2020 and 2019, (v) the Consolidated Statement of Cash Flows for the six months ended June 30, 2020 and 2019, and (vi) the Notes to Consolidated Financial Statements.

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.

Date: August 3, 2020

HSBC USA INC.

By: /s/ KAVITA MAHTANI

Kavita Mahtani

Senior Executive Vice President and

Chief Financial Officer

EXHIBIT 31

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-Q 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: August 3, 2020

/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-Q 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: August 3, 2020

/s/ KAVITA MAHTANI

Kavita Mahtani
Senior Executive Vice President and
Chief Financial Officer

EXHIBIT 32

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") Quarterly Report on Form 10-Q for the period ending June 30, 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: August 3, 2020

/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") Quarterly Report on Form 10-Q for the period ending June 30, 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: August 3, 2020

/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.