

FINANCIAL REPORT FOR THE SIX MONTHS ENDED JUNE 30, 2019  
The Bank of N.T. Butterfield & Son Limited

WHERE WE STAND



Butterfield

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**The Bank of N.T. Butterfield & Son Limited**  
**Consolidated Balance Sheets (unaudited)**  
(In thousands of US dollars, except share and per share data)

	As at	
	June 30, 2019	December 31, 2018
<b>Assets</b>		
Cash and demand deposits with banks - Non-interest bearing	195,858	124,182
Demand deposits with banks - Interest bearing	564,075	487,588
Cash equivalents - Interest bearing	1,251,047	1,442,113
Cash due from banks	2,010,980	2,053,883
Securities purchased under agreement to resell	166,333	27,341
Short-term investments	163,310	52,336
Investment in securities		
Trading	7,152	6,495
Available-for-sale	2,268,871	2,182,749
Held-to-maturity (fair value: \$2,280,541 (2018: \$2,036,214))	2,248,228	2,066,120
<b>Total investment in securities</b>	<b>4,524,251</b>	<b>4,255,364</b>
Loans		
Loans	4,023,783	4,068,991
Allowance for credit losses	(24,053)	(25,102)
<b>Loans, net of allowance for credit losses</b>	<b>3,999,730</b>	<b>4,043,889</b>
Premises, equipment and computer software	154,862	158,060
Accrued interest	29,967	20,870
Goodwill	23,916	23,991
Intangible assets	48,239	50,751
Equity method investments	14,324	14,660
Other real estate owned	4,687	5,346
Other assets	88,370	66,687
<b>Total assets</b>	<b>11,228,969</b>	<b>10,773,178</b>
<b>Liabilities</b>		
Customer deposits		
Bermuda		
Non-interest bearing	1,538,582	1,378,539
Interest bearing	3,043,078	3,117,063
Non-Bermuda		
Non-interest bearing	742,137	732,957
Interest bearing	4,493,718	4,189,860
<b>Total customer deposits</b>	<b>9,817,515</b>	<b>9,418,419</b>
Bank deposits		
Bermuda	11,959	8,100
Non-Bermuda	22,777	25,722
<b>Total deposits</b>	<b>9,852,251</b>	<b>9,452,241</b>
Employee benefit plans	117,407	117,203
Accrued interest	7,211	5,072
Other liabilities	180,008	172,997
<b>Total other liabilities</b>	<b>304,626</b>	<b>295,272</b>
Long-term debt	143,411	143,322
<b>Total liabilities</b>	<b>10,300,288</b>	<b>9,890,835</b>
<b>Commitments, contingencies and guarantees (Note 10)</b>		
<b>Shareholders' equity</b>		
Common share capital (BMD 0.01 par; authorized voting ordinary shares 2,000,000,000 and non-voting ordinary shares 6,000,000,000 issued and outstanding: 54,606,982 (2018: 55,359,218))	546	554
Additional paid-in capital	1,140,393	1,171,435
Accumulated deficit	(48,855)	(92,676)
Less: treasury common shares, at cost: 1,619,212 (2018: 1,254,212)	(60,324)	(48,443)
Accumulated other comprehensive loss	(103,079)	(148,527)
<b>Total shareholders' equity</b>	<b>928,681</b>	<b>882,343</b>
<b>Total liabilities and shareholders' equity</b>	<b>11,228,969</b>	<b>10,773,178</b>

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

**The Bank of N.T. Butterfield & Son Limited**  
**Consolidated Statements of Operations (unaudited)**  
*(In thousands of US dollars, except per share data)*

	Three months ended		Six months ended	
	June 30, 2019	June 30, 2018	June 30, 2019	June 30, 2018
<b>Non-interest income</b>				
Asset management	6,853	6,188	13,591	12,567
Banking	12,070	10,769	23,221	21,629
Foreign exchange revenue	8,369	8,265	17,129	16,459
Trust	12,964	13,248	25,571	24,102
Custody and other administration services	3,066	2,412	5,747	4,637
Other non-interest income	917	1,057	2,360	2,306
<b>Total non-interest income</b>	<b>44,239</b>	<b>41,939</b>	<b>87,619</b>	<b>81,700</b>
<b>Interest income</b>				
Interest and fees on loans	56,727	53,722	113,454	104,272
<i>Investments (none of the investment securities are intrinsically tax-exempt)</i>				
Available-for-sale	15,113	18,077	30,569	35,395
Held-to-maturity	17,285	12,947	34,323	24,257
Deposits with banks	8,247	7,947	18,177	12,960
<b>Total interest income</b>	<b>97,372</b>	<b>92,693</b>	<b>196,523</b>	<b>176,884</b>
<b>Interest expense</b>				
Deposits	10,228	3,583	19,383	6,525
Long-term debt	1,988	1,705	4,006	3,050
Securities sold under repurchase agreements	—	9	—	18
<b>Total interest expense</b>	<b>12,216</b>	<b>5,297</b>	<b>23,389</b>	<b>9,593</b>
<b>Net interest income before provision for credit losses</b>	<b>85,156</b>	<b>87,396</b>	<b>173,134</b>	<b>167,291</b>
Provision for credit recoveries (losses)	924	524	963	2,466
<b>Net interest income after provision for credit losses</b>	<b>86,080</b>	<b>87,920</b>	<b>174,097</b>	<b>169,757</b>
Net trading gains (losses)	209	34	656	(37)
Net realized gains (losses) on available-for-sale investments	—	44	972	894
Net gains (losses) on other real estate owned	—	79	128	(260)
Net other gains (losses)	(16)	(1,734)	188	(1,821)
<b>Total other gains (losses)</b>	<b>193</b>	<b>(1,577)</b>	<b>1,944</b>	<b>(1,224)</b>
<b>Total net revenue</b>	<b>130,512</b>	<b>128,282</b>	<b>263,660</b>	<b>250,233</b>
<b>Non-interest expense</b>				
Salaries and other employee benefits	50,769	39,560	92,231	75,210
Technology and communications	15,189	15,054	29,799	29,799
Professional and outside services	6,199	5,133	11,799	14,817
Property	5,732	5,303	11,109	10,428
Indirect taxes	5,321	4,964	10,543	9,912
Non-service employee benefits expense	1,332	1,325	2,660	2,638
Marketing	1,661	1,436	3,335	2,378
Amortization of intangible assets	1,165	1,322	2,503	2,393
Other expenses	4,332	4,134	8,636	8,058
<b>Total non-interest expense</b>	<b>91,700</b>	<b>78,231</b>	<b>172,615</b>	<b>155,633</b>
<b>Net income before income taxes</b>	<b>38,812</b>	<b>50,051</b>	<b>91,045</b>	<b>94,600</b>
Income tax expense	(170)	(339)	(296)	(691)
<b>Net income</b>	<b>38,642</b>	<b>49,712</b>	<b>90,749</b>	<b>93,909</b>
<b>Earnings per common share</b>				
Basic earnings per share	0.73	0.90	1.70	1.71
Diluted earnings per share	0.72	0.89	1.68	1.68

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

**The Bank of N.T. Butterfield & Son Limited**  
**Consolidated Statements of Comprehensive Income (unaudited)**  
*(In thousands of US dollars)*

	Three months ended		Six months ended	
	<b>June 30, 2019</b>	June 30, 2018	<b>June 30, 2019</b>	June 30, 2018
<b>Net income</b>	<b>38,642</b>	49,712	<b>90,749</b>	93,909
<b>Other comprehensive income (loss), net of taxes</b>				
Net change in unrealized gains and losses on translation of net investment in foreign operations	(1,077)	(2,206)	(263)	(1,022)
Accretion of net unrealized (gains) losses on held-to-maturity investments transferred from available-for-sale investments	19	2	26	24
Net change in unrealized gains and losses on available-for-sale investments	22,785	(5,740)	44,069	(34,461)
Employee benefit plans adjustments	1,112	370	1,616	1,072
Other comprehensive income (loss), net of taxes	22,839	(7,574)	45,448	(34,387)
<b>Total comprehensive income</b>	<b>61,481</b>	42,138	<b>136,197</b>	59,522

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

**The Bank of N.T. Butterfield & Son Limited**  
**Consolidated Statements of Changes in Shareholders' Equity (unaudited)**

	Three months ended				Six months ended			
	June 30, 2019		June 30, 2018		June 30, 2019		June 30, 2018	
	Number of shares	In thousands of US dollars	Number of shares	In thousands of US dollars	Number of shares	In thousands of US dollars	Number of shares	In thousands of US dollars
<b>Common share capital issued and outstanding</b>								
Balance at beginning of period	54,936,833	549	55,146,840	551	55,359,218	554	54,692,630	547
Retirement of shares	(340,000)	(3)	—	—	(1,120,000)	(11)	—	—
Issuance of common shares	10,149	—	25,455	1	367,764	3	479,665	5
<b>Balance at end of period</b>	<b>54,606,982</b>	<b>546</b>	<b>55,172,295</b>	<b>552</b>	<b>54,606,982</b>	<b>546</b>	<b>55,172,295</b>	<b>552</b>
<b>Additional paid-in capital</b>								
Balance at beginning of period		1,146,182		1,160,441		1,171,435		1,155,542
Share-based compensation		6,638		2,739		10,548		5,276
Share-based settlements		240		270		240		918
Retirement of common shares		(12,669)		—		(41,837)		—
Issuance of common shares, net of underwriting discounts and commissions		2		223		7		1,937
<b>Balance at end of period</b>		<b>1,140,393</b>		<b>1,163,673</b>		<b>1,140,393</b>		<b>1,163,673</b>
<b>Accumulated deficit</b>								
Balance at beginning of period		(64,187)		(180,900)		(92,676)		(204,156)
Net income for period		38,642		49,712		90,749		93,909
Common share cash dividends declared and paid, \$0.44 and \$0.88 per share (2018: \$0.38 and \$0.76 per share)		(23,310)		(20,960)		(46,928)		(41,901)
<b>Balance at end of period</b>		<b>(48,855)</b>		<b>(152,148)</b>		<b>(48,855)</b>		<b>(152,148)</b>
<b>Treasury common shares</b>								
Balance at beginning of period	1,619,212	(60,444)	—	—	1,254,212	(48,443)	—	—
Purchase of treasury common shares	340,000	(12,552)	—	—	1,485,000	(53,729)	—	—
Retirement of shares	(340,000)	12,672	—	—	(1,120,000)	41,848	—	—
<b>Balance at end of period</b>	<b>1,619,212</b>	<b>(60,324)</b>	<b>—</b>	<b>—</b>	<b>1,619,212</b>	<b>(60,324)</b>	<b>—</b>	<b>—</b>
<b>Accumulated other comprehensive income (loss)</b>								
Balance at beginning of period		(125,918)		(155,865)		(148,527)		(129,052)
Other comprehensive income (loss), net of taxes		22,839		(7,574)		45,448		(34,387)
<b>Balance at end of period</b>		<b>(103,079)</b>		<b>(163,439)</b>		<b>(103,079)</b>		<b>(163,439)</b>
<b>Total shareholders' equity</b>		<b>928,681</b>		<b>848,638</b>		<b>928,681</b>		<b>848,638</b>

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

**The Bank of N.T. Butterfield & Son Limited**  
**Consolidated Statements of Cash Flows (unaudited)**  
*(In thousands of US dollars)*

	Six months ended	
	June 30, 2019	June 30, 2018
<b>Cash flows from operating activities</b>		
Net income	90,749	93,909
<b>Adjustments to reconcile net income to operating cash flows</b>		
Depreciation and amortization	22,628	24,769
Provision for credit (recovery) losses	(963)	(2,466)
Share-based payments and settlements	10,789	6,194
Net realized (gains) losses on available-for-sale investments	(972)	(894)
Net (gains) losses on other real estate owned	(128)	260
(Increase) decrease in carrying value of equity method investments	(124)	(49)
Dividends received from equity method investments	460	48
<b>Changes in operating assets and liabilities</b>		
(Increase) decrease in accrued interest receivable	(8,668)	(3,066)
(Increase) decrease in other assets	(21,827)	(23,907)
Increase (decrease) in accrued interest payable	2,190	97
Increase (decrease) in employee benefit plans and other liabilities	8,273	49,517
<b>Cash provided by (used in) operating activities</b>	<b>102,407</b>	<b>144,412</b>
<b>Cash flows from investing activities</b>		
(Increase) decrease in securities purchased under agreement to resell	(138,992)	89,979
Short-term investments other than restricted cash: purchases	(286,339)	(57,448)
Short-term investments other than restricted cash: proceeds from maturities and sales	178,549	221,813
Net change in trading investments	(656)	37
Available-for-sale investments: proceeds from sale	972	345,400
Available-for-sale investments: proceeds from maturities and pay downs	151,065	310,103
Available-for-sale investments: purchases	(199,372)	(242,087)
Held-to-maturity investments: proceeds from maturities and pay downs	109,084	69,863
Held-to-maturity investments: purchases	(292,708)	(600,295)
Net (increase) decrease in loans	40,295	(228,118)
Additions to premises, equipment and computer software	(9,650)	(7,662)
Proceeds from sale of other real estate owned	787	266
Net cash disbursed for business acquisitions	—	(20,800)
<b>Cash provided by (used in) investing activities</b>	<b>(446,965)</b>	<b>(118,949)</b>
<b>Cash flows from financing activities</b>		
Net increase (decrease) in demand and term deposit liabilities	413,522	203,656
Issuance of subordinated capital, net of underwriting fees	—	73,233
Repayment of long-term debt	—	(47,000)
Common shares repurchased	(53,729)	—
Proceeds from stock option exercises	10	1,941
Cash dividends paid on common shares	(46,928)	(41,901)
<b>Cash provided by (used in) financing activities</b>	<b>312,875</b>	<b>189,929</b>
Net effect of exchange rates on cash, cash equivalent and restricted cash	(7,894)	(447)
<b>Net increase (decrease) in cash, cash equivalent and restricted cash</b>	<b>(39,577)</b>	<b>214,945</b>
<b>Cash, cash equivalent and restricted cash: beginning of period</b>	<b>2,070,120</b>	<b>1,557,733</b>
<b>Cash, cash equivalent and restricted cash: end of period</b>	<b>2,030,543</b>	<b>1,772,678</b>
<b>Components of cash, cash equivalent and restricted cash at end of period</b>		
Cash due from banks	2,010,980	1,755,905
Restricted cash included in short-term investments on the consolidated balance sheets	19,563	16,773
<b>Total cash, cash equivalent and restricted cash at end of period</b>	<b>2,030,543</b>	<b>1,772,678</b>

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

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited)**  
*(In thousands of US dollars, unless otherwise stated)*

**Note 1: Nature of business**

The Bank of N.T. Butterfield & Son Limited ("Butterfield", the "Bank" or the "Company") is incorporated under the laws of Bermuda and has a banking license under the Banks and Deposit Companies Act, 1999 ("the Act"). Butterfield is regulated by the Bermuda Monetary Authority ("BMA"), which operates in accordance with Basel principles.

Butterfield is a full service bank and wealth manager headquartered in Hamilton, Bermuda. The Bank operates its business through three geographic segments: Bermuda, the Cayman Islands, and the Channel Islands and the United Kingdom ("UK"), where its principal banking operations are located and where it offers specialized financial services. Butterfield offers banking services, comprised of retail and corporate banking, and wealth management, which consists of trust, private banking, and asset management. In the Bermuda and Cayman Islands segments, Butterfield offers both banking and wealth management. In the Channel Islands and the UK segment, the Bank offers wealth management and residential property lending.

On September 16, 2016, the Bank's common shares began to trade on the New York Stock Exchange under the symbol "NTB". On September 21, 2016, the Bank completed its offering of 5,957,447 common shares, at \$23.50 per share. The proceeds, net of the underwriting discounts and commissions, were \$131.6 million.

**Note 2: Significant accounting policies**

The accompanying unaudited interim consolidated financial statements of the Bank have been prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP") for interim financial information and should be read in conjunction with the Bank's audited financial statements for the year ended December 31, 2018.

In the opinion of Management, these unaudited interim consolidated financial statements reflect all adjustments (consisting principally of normal recurring accruals) considered necessary for a fair statement of the Bank's financial position and results of operations as at the end of and for the periods presented. The Bank's results for interim periods are not necessarily indicative of results for the full year.

The preparation of financial statements in conformity with US GAAP requires Management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. While Management believes that the amounts included in the unaudited interim consolidated financial statements reflect its best estimates and assumptions, actual results could differ from those estimates. The Bank's principal estimates include:

- Allowance for credit losses
- Fair value and impairment of financial instruments
- Impairment of long-lived assets
- Impairment of goodwill
- Employee benefit plans
- Share-based payments

**Leases**

In the normal course of operation, the Bank enters into leasing agreements either as the lessee or the lessor. Starting on January 1, 2019 (the adoption date of the new lease accounting guidance ASU 2016-02 Leases (Topic 842)), the Bank recognizes a right-of-use asset and a lease liability for operating leases and for finance leases. Lease liabilities are measured as the present value of future lease payments, including term renewals that are reasonably certain to occur, discounted using the Bank's incremental borrowing interest rate. Right-of-use assets are measured as the carrying amount of the related lease liabilities adjusted for: prepaid or accrued lease payments, unamortized lease incentive received, unamortized initial direct costs and any impairment of the right-of-use asset.

On January 1, 2019 the Bank elected the practical expedient: 1) not to reassess whether any expired or existing contracts are or contain leases; 2) not to reassess the lease classification for any expired or existing leases and 3) not to reassess initial direct costs for any existing leases.

The Bank also elected the practical expedient not to separate lease components from non-lease components for all classes of underlying assets.

The Bank also elected the practical expedient not to recognize a right-of-use asset and a lease liability for leases with a term at inception of 12 months or less, including renewal options that are reasonably certain to be exercised (referred to as "short term leases").

**New Accounting Pronouncements**

The following accounting developments were issued during the six months ended June 30, 2019 or are accounting standards pending adoption:

In June 2016, the FASB published Accounting Standards Update No. 2016-13 Financial Instruments – Credit Losses. The amendments in this update provide a new impairment model, known as the current expected credit loss model that is based on expected losses rather than incurred losses. The amendments in this update are also intended to reduce the complexity and reduce the number of impairment models entities use to account for debt instruments. For public business entities that meet the GAAP definition of an SEC filer, the effective date for this update for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The Bank is evaluating ASU No. 2016-13 and has initiated a working group with multiple members from applicable departments to evaluate the requirements of the new standard, planning for loss modeling requirements consistent with lifetime expected loss estimates, and assessing the impact it will have on current processes. The extent of the impact upon adoption will likely depend on the characteristics of the Bank's loan portfolio and economic conditions at that date, as well as forecasted conditions thereafter.

In April 2019, the FASB published Accounting Standards Update No. 2019-04 Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments. The amendments in this update clarify, correct and improve various aspects of the guidance in the following ASU's related to financial instruments: ASU 2016-01 Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Liabilities, ASU 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, and ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities. The amendments in this ASU relating to ASU 2016-01 are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, early adoption is permitted and it should be applied on a modified-retrospective transition basis. The amendments in this ASU relating to ASU 2016-13 are effective as noted in ASU 2016-13. The amendments in this ASU relating to ASU 2017-12 are effective as noted in ASU 2017-12. The Bank is assessing the impact of the adoption of this guidance but does not expect it to be material.



**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

In May 2019, the FASB published Accounting Standards Update No. 2019-05 Financial Instruments - Credit Losses (Topic 326) - Targeted Transition Relief. The amendments in this update provide targeted transition relief that is an option for, and will be available to, all reporting entities within the scope of Topic 326. It provides entities with an option to irrevocably elect the fair value option in Subtopic 825-10, applied on an instrument-by-instrument basis for eligible instruments, that are within the scope of Subtopic 326-20 upon adoption of Topic 326. The fair value option election does not apply to held-to-maturity debt securities. The effective date and transition methodology for the amendments in this update are the same as in ASU 2016-13. The Bank is assessing the impact of the adoption of this guidance but does not expect it to be material.

In March 2019, the FASB published Accounting Standards Update No. 2019-01 Leases (Topic 842) - Codification Improvements. The amendments in this update provide clarification on three issues relating to ASU 2016-02 Leases (Topic 842): 1) determining the fair value of the underlying asset by lessors that are not manufacturers or dealers; 2) presentation on the statement of cash flows - sales-type and direct financing leases for all lessors that are depository and lending entities within the scope of Topic 942; and 3) transition disclosures related to Topic 250, Accounting Changes and Error Corrections. The transition and effective date provisions for this update apply to Issue 1 and Issue 2 and are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, for public business entities. Issue 3 amendments are to the original transition requirements in Topic 842 to clarify that the transition disclosures for Topic 250, paragraphs 250-10-50-1(b)(2) and paragraph 250-10-50-3 are excluded from interim disclosure requirements for Topic 842. The Bank does not anticipate this ASU to have an impact on the Bank.

**Note 3: Cash due from banks**

	June 30, 2019			December 31, 2018		
	Bermuda	Non-Bermuda	Total	Bermuda	Non-Bermuda	Total
<b>Non-interest bearing</b>						
Cash and demand deposits with banks	27,045	168,813	195,858	21,677	102,505	124,182
<b>Interest bearing<sup>1</sup></b>						
Demand deposits with banks	422,359	141,716	564,075	335,841	151,747	487,588
Cash equivalents	273,911	977,136	1,251,047	364,714	1,077,399	1,442,113
<b>Sub-total - Interest bearing</b>	<b>696,270</b>	<b>1,118,852</b>	<b>1,815,122</b>	<b>700,555</b>	<b>1,229,146</b>	<b>1,929,701</b>
<b>Total cash due from banks</b>	<b>723,315</b>	<b>1,287,665</b>	<b>2,010,980</b>	<b>722,232</b>	<b>1,331,651</b>	<b>2,053,883</b>

<sup>1</sup> Interest bearing cash due from banks includes certain demand deposits with banks as at June 30, 2019 in the amount of \$232.0 million (December 31, 2018: \$204.2 million) that are earning interest at a negligible rate.

**Note 4: Short-term investments**

	June 30, 2019			December 31, 2018		
	Bermuda	Non-Bermuda	Total	Bermuda	Non-Bermuda	Total
<b>Unrestricted</b>						
Maturing within three months	—	63,424	63,424	—	25,459	25,459
Maturing between three to six months	—	75,432	75,432	—	9,641	9,641
Maturing between six to twelve months	—	4,891	4,891	—	—	—
<b>Total unrestricted short-term investments</b>	<b>—</b>	<b>143,747</b>	<b>143,747</b>	<b>—</b>	<b>35,100</b>	<b>35,100</b>
<b>Affected by drawing restrictions related to minimum reserve and derivative margin requirements</b>						
Non-interest earning demand deposits	—	7,292	7,292	—	2,401	2,401
Interest earning demand and term deposits	10,963	1,308	12,271	13,836	999	14,835
<b>Total restricted short-term investments</b>	<b>10,963</b>	<b>8,600</b>	<b>19,563</b>	<b>13,836</b>	<b>3,400</b>	<b>17,236</b>
<b>Total short-term investments</b>	<b>10,963</b>	<b>152,347</b>	<b>163,310</b>	<b>13,836</b>	<b>38,500</b>	<b>52,336</b>

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**Note 5: Investment in securities**

**Amortized Cost, Carrying Amount and Fair Value**

On the consolidated balance sheets, trading and available-for-sale ("AFS") investments are carried at fair value and held-to-maturity ("HTM") investments are carried at amortized cost.

	June 30, 2019				December 31, 2018			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
<b>Trading</b>								
Mutual funds	5,724	1,861	(433)	7,152	5,724	1,176	(405)	6,495
<b>Total trading</b>	<b>5,724</b>	<b>1,861</b>	<b>(433)</b>	<b>7,152</b>	<b>5,724</b>	<b>1,176</b>	<b>(405)</b>	<b>6,495</b>
<b>Available-for-sale</b>								
US government and federal agencies	1,888,766	12,102	(11,117)	1,889,751	1,820,808	3,355	(37,656)	1,786,507
Non-US governments debt securities	25,781	16	(518)	25,279	25,804	19	(398)	25,425
Corporate debt securities	64,929	40	(208)	64,761	80,177	—	(1,464)	78,713
Asset-backed securities - Student loans	13,290	—	(532)	12,758	13,290	—	(664)	12,626
Commercial mortgage-backed securities	125,157	1,110	(248)	126,019	125,806	6	(2,603)	123,209
Residential mortgage-backed securities	150,507	476	(680)	150,303	160,492	—	(4,223)	156,269
<b>Total available-for-sale</b>	<b>2,268,430</b>	<b>13,744</b>	<b>(13,303)</b>	<b>2,268,871</b>	<b>2,226,377</b>	<b>3,380</b>	<b>(47,008)</b>	<b>2,182,749</b>
<b>Held-to-maturity<sup>1</sup></b>								
US government and federal agencies	2,248,228	34,393	(2,080)	2,280,541	2,066,120	5,012	(34,918)	2,036,214
<b>Total held-to-maturity</b>	<b>2,248,228</b>	<b>34,393</b>	<b>(2,080)</b>	<b>2,280,541</b>	<b>2,066,120</b>	<b>5,012</b>	<b>(34,918)</b>	<b>2,036,214</b>

<sup>1</sup> For the six months ended June 30, 2019 and the year ended December 31, 2018, non-credit impairments recognized in accumulated other comprehensive loss ("AOCL") for HTM investments were nil.

**Investments with Unrealized Loss Positions**

The Bank does not believe that the AFS and HTM investment securities that were in an unrealized loss position as of June 30, 2019 (and December 31, 2018), which were composed of 99 securities representing 34% of the AFS and HTM portfolios' fair value (December 31, 2018: 198 and 75%, respectively), represent an other-than-temporary impairment ("OTTI"). Total gross unrealized losses were 1.0% of the fair value of affected securities (December 31, 2018: 2.6%) and were attributable primarily to changes in market interest rates, relative to when the investment securities were purchased, and not due to the credit quality of the investment securities. The following describes the processes for identifying credit impairment in security types with the most significant unrealized losses as shown in the preceding tables.

Management believes that all the **US government and federal agencies securities** do not have any credit losses, given the explicit and implicit guarantees provided by the US federal government.

Management believes that all the **Non-US governments debt securities** do not have any credit losses, given the explicit guarantee provided by the issuing government.

The unrealized losses in **Corporate debt securities** relate primarily to four debt securities that are all of investment grade with ratings of A. Management believes that the value of these securities will recover and the current unrealized loss positions are a result of interest rate movements.

Investments in **Asset-backed securities - Student loans** are composed primarily of securities collateralized by Federal Family Education Loan Program loans ("FFELP loans"). FFELP loans benefit from a US federal government guarantee of at least 97% of defaulted principal and accrued interest, with additional credit support provided in the form of over-collateralization, subordination and excess spread, which collectively total in excess of 100%. Accordingly, the vast majority of FFELP loan-backed securities are not exposed to traditional consumer credit risk.

Investments in **Commercial mortgage-backed securities** relate to three senior securities rated AAA or AA+ that possess significant subordination, a form of credit enhancement expressed hereafter as the percentage of pool losses that can occur before the senior securities held by the Bank will incur its first dollar of principal loss. No credit losses were recognized as for one of these securities, the weighted average credit support is 26% and the weighted average loan-to-value ratios ("LTV") is 46%. In respect of the two remaining securities, one is fully defeased with the other having an LTV of less than 30%.

Investments in **Residential mortgage-backed securities** relate to nine securities which are rated AAA or AA+ and possess similar significant credit enhancement as described above. No credit losses were recognized on these securities as the weighted average credit support and the weighted average LTV ratios range from 6% - 21% and 55% - 64%, respectively. Current credit support is significantly greater than any delinquencies experienced on the underlying mortgages.

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In the following tables, debt securities with unrealized losses that are not deemed to be OTTI are categorized as being in a loss position for "less than 12 months" or "12 months or more" based on the point in time that the fair value most recently declined below the amortized cost basis.

June 30, 2019	<u>Less than 12 months</u>		<u>12 months or more</u>		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
<b>Available-for-sale securities with unrealized losses</b>						
US government and federal agencies	292,612	(1,435)	864,842	(9,682)	1,157,454	(11,117)
Non-US governments debt securities	—	—	22,246	(518)	22,246	(518)
Corporate debt securities	—	—	49,703	(208)	49,703	(208)
Asset-backed securities - Student loans	—	—	12,758	(532)	12,758	(532)
Commercial mortgage-backed securities	795	(2)	20,482	(246)	21,277	(248)
Residential mortgage-backed securities	—	—	83,673	(680)	83,673	(680)
<b>Total available-for-sale securities with unrealized losses</b>	<b>293,407</b>	<b>(1,437)</b>	<b>1,053,704</b>	<b>(11,866)</b>	<b>1,347,111</b>	<b>(13,303)</b>
<b>Held-to-maturity securities with unrealized losses</b>						
US government and federal agencies	—	—	198,818	(2,080)	198,818	(2,080)

December 31, 2018	<u>Less than 12 months</u>		<u>12 months or more</u>		Total fair value	Total gross unrealized losses
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
<b>Available-for-sale securities with unrealized losses</b>						
US government and federal agencies	372,283	(1,586)	1,027,638	(36,070)	1,399,921	(37,656)
Non-US governments debt securities	—	—	22,360	(398)	22,360	(398)
Corporate debt securities	14,914	(114)	63,799	(1,350)	78,713	(1,464)
Asset-backed securities - Student loans	—	—	12,626	(664)	12,626	(664)
Commercial mortgage-backed securities	812	—	117,379	(2,603)	118,191	(2,603)
Residential mortgage-backed securities	49,804	(1,313)	106,465	(2,910)	156,269	(4,223)
<b>Total available-for-sale securities with unrealized losses</b>	<b>437,813</b>	<b>(3,013)</b>	<b>1,350,267</b>	<b>(43,995)</b>	<b>1,788,080</b>	<b>(47,008)</b>
<b>Held-to-maturity securities with unrealized losses</b>						
US government and federal agencies	647,484	(11,468)	724,974	(23,450)	1,372,458	(34,918)

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**Investment Maturities**

The following table presents the remaining term to contractual maturity of the Bank's securities. The actual maturities may differ as certain securities offer prepayment options to the borrowers.

June 30, 2019	Remaining term to maturity				No specific or single maturity	Carrying amount
	Within 3 months	3 to 12 months	1 to 5 years	5 to 10 years		
<b>Trading</b>						
Mutual funds	—	—	—	—	7,152	7,152
<b>Available-for-sale</b>						
US government and federal agencies	—	—	34,889	—	1,854,862	1,889,751
Non-US governments debt securities	—	3,033	22,246	—	—	25,279
Corporate debt securities	—	15,059	49,702	—	—	64,761
Asset-backed securities - Student loans	—	—	—	—	12,758	12,758
Commercial mortgage-backed securities	—	—	—	—	126,019	126,019
Residential mortgage-backed securities	—	—	—	—	150,303	150,303
<b>Total available-for-sale</b>	<b>—</b>	<b>18,092</b>	<b>106,837</b>	<b>—</b>	<b>2,143,942</b>	<b>2,268,871</b>
<b>Held-to-maturity</b>						
US government and federal agencies	—	—	—	—	2,248,228	2,248,228
<b>Total investments</b>	<b>—</b>	<b>18,092</b>	<b>106,837</b>	<b>—</b>	<b>4,399,322</b>	<b>4,524,251</b>
<b>Total by currency</b>						
US dollars	—	18,092	106,837	—	4,399,030	4,523,959
Other	—	—	—	—	292	292
<b>Total investments</b>	<b>—</b>	<b>18,092</b>	<b>106,837</b>	<b>—</b>	<b>4,399,322</b>	<b>4,524,251</b>

**Pledged Investments**

The Bank pledges certain US government and federal agencies investment securities to further secure the Bank's issued customer deposit products. The secured party does not have the right to sell or repledge the collateral.

Pledged Investments	June 30, 2019		December 31, 2018	
	Amortized cost	Fair value	Amortized cost	Fair value
Available-for-sale	34,978	35,483	42,531	42,400
Held-to-maturity	61,900	62,818	70,818	69,030

**Sale Proceeds and Realized Gains and Losses of AFS Securities**

	Six months ended June 30, 2019			Six months ended June 30, 2018		
	Sale proceeds	Gross realized gains	Gross realized (losses)	Sale proceeds	Gross realized gains	Gross realized (losses)
US government and federal agencies	—	—	—	320,470	767	(826)
Corporate debt securities	—	—	—	24,975	—	(87)
Pass-through note	972	972	—	1,040	1,040	—
<b>Total</b>	<b>972</b>	<b>972</b>	<b>—</b>	<b>346,485</b>	<b>1,807</b>	<b>(913)</b>

**Taxability of Interest Income**

None of the investments' interest income have received a specific preferential income tax treatment in any of the jurisdictions in which the Bank owns investments.

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**Note 6: Loans**

The "Bermuda" and "Non-Bermuda" classifications purpose is to reflect management segment reporting as described in Note 12: Segmented information.

The principal means of securing residential mortgages, personal, credit card and business loans are entitlements over assets and guarantees. Mortgage loans are generally repayable over periods of up to thirty years and personal, business and government loans are generally repayable over terms not exceeding five years. Amounts owing on credit cards are revolving and typically a minimum amount is due within 30 days from billing. The effective yield on total loans as at June 30, 2019 is 5.41% (December 31, 2018: 5.53%).

	June 30, 2019			December 31, 2018		
	Bermuda	Non-Bermuda	Total	Bermuda	Non-Bermuda	Total
<b>Commercial loans</b>						
Government	100,812	12,298	113,110	92,994	12,670	105,664
Commercial and industrial	295,077	137,313	432,390	291,470	222,393	513,863
Commercial overdrafts	21,349	15,092	36,441	16,342	16,752	33,094
Total gross commercial loans	417,238	164,703	581,941	400,806	251,815	652,621
Less specific allowance for credit losses	(3,452)	(1,687)	(5,139)	(2,766)	(1,687)	(4,453)
<b>Net commercial loans</b>	<b>413,786</b>	<b>163,016</b>	<b>576,802</b>	<b>398,040</b>	<b>250,128</b>	<b>648,168</b>
<b>Commercial real estate loans</b>						
Commercial mortgage	291,869	182,958	474,827	304,519	192,456	496,975
Construction	30,000	38,455	68,455	29,760	48,909	78,669
Total gross commercial real estate loans	321,869	221,413	543,282	334,279	241,365	575,644
Less specific allowance for credit losses	(515)	—	(515)	(600)	—	(600)
<b>Net commercial real estate loans</b>	<b>321,354</b>	<b>221,413</b>	<b>542,767</b>	<b>333,679</b>	<b>241,365</b>	<b>575,044</b>
<b>Consumer loans</b>						
Automobile financing	12,892	7,054	19,946	13,249	6,975	20,224
Credit card	58,856	23,804	82,660	60,466	23,623	84,089
Overdrafts	2,220	2,578	4,798	10,511	2,375	12,886
Other consumer	32,390	34,284	66,674	28,415	35,076	63,491
Total gross consumer loans	106,358	67,720	174,078	112,641	68,049	180,690
Less specific allowance for credit losses	(274)	—	(274)	(274)	—	(274)
<b>Net consumer loans</b>	<b>106,084</b>	<b>67,720</b>	<b>173,804</b>	<b>112,367</b>	<b>68,049</b>	<b>180,416</b>
<b>Residential mortgage loans</b>						
Less specific allowance for credit losses	(9,589)	(1,219)	(10,808)	(8,575)	(1,013)	(9,588)
<b>Net residential mortgage loans</b>	<b>1,109,680</b>	<b>1,603,994</b>	<b>2,713,674</b>	<b>1,112,713</b>	<b>1,537,735</b>	<b>2,650,448</b>
<b>Total gross loans</b>						
Less specific allowance for credit losses	(13,830)	(2,906)	(16,736)	(12,215)	(2,700)	(14,915)
Less general allowance for credit losses	(5,982)	(1,335)	(7,317)	(7,098)	(3,089)	(10,187)
<b>Net loans</b>	<b>1,944,922</b>	<b>2,054,808</b>	<b>3,999,730</b>	<b>1,949,701</b>	<b>2,094,188</b>	<b>4,043,889</b>

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**Age Analysis of Past Due Loans (Including Non-Accrual Loans)**

The following tables summarize the past due status of the loans as at June 30, 2019 and December 31, 2018. The aging of past due amounts are determined based on the contractual delinquency status of payments under the loan and this aging may be affected by the timing of the last business day at period end. Loans less than 30 days past due are included in current loans.

June 30, 2019	30 - 59 days	60 - 89 days	More than 90 days	Total past due loans	Total current	Total loans
<b>Commercial loans</b>						
Government	—	—	3,750	3,750	109,360	113,110
Commercial and industrial	204	—	7,371	7,575	424,815	432,390
Commercial overdrafts	—	—	1	1	36,440	36,441
<b>Total commercial loans</b>	<b>204</b>	<b>—</b>	<b>11,122</b>	<b>11,326</b>	<b>570,615</b>	<b>581,941</b>
<b>Commercial real estate loans</b>						
Commercial mortgage	3,201	—	3,293	6,494	468,333	474,827
Construction	—	—	—	—	68,455	68,455
<b>Total commercial real estate loans</b>	<b>3,201</b>	<b>—</b>	<b>3,293</b>	<b>6,494</b>	<b>536,788</b>	<b>543,282</b>
<b>Consumer loans</b>						
Automobile financing	41	14	162	217	19,729	19,946
Credit card	677	376	566	1,619	81,041	82,660
Overdrafts	—	—	13	13	4,785	4,798
Other consumer	166	445	436	1,047	65,627	66,674
<b>Total consumer loans</b>	<b>884</b>	<b>835</b>	<b>1,177</b>	<b>2,896</b>	<b>171,182</b>	<b>174,078</b>
<b>Residential mortgage loans</b>	<b>20,787</b>	<b>7,758</b>	<b>39,346</b>	<b>67,891</b>	<b>2,656,591</b>	<b>2,724,482</b>
<b>Total gross loans</b>	<b>25,076</b>	<b>8,593</b>	<b>54,938</b>	<b>88,607</b>	<b>3,935,176</b>	<b>4,023,783</b>

December 31, 2018	30 - 59 days	60 - 89 days	More than 90 days	Total past due loans	Total current	Total loans
<b>Commercial loans</b>						
Government	—	—	3,750	3,750	101,914	105,664
Commercial and industrial	231	—	7,379	7,610	506,253	513,863
Commercial overdrafts	—	—	2	2	33,092	33,094
<b>Total commercial loans</b>	<b>231</b>	<b>—</b>	<b>11,131</b>	<b>11,362</b>	<b>641,259</b>	<b>652,621</b>
<b>Commercial real estate loans</b>						
Commercial mortgage	837	1,282	4,062	6,181	490,794	496,975
Construction	—	—	—	—	78,669	78,669
<b>Total commercial real estate loans</b>	<b>837</b>	<b>1,282</b>	<b>4,062</b>	<b>6,181</b>	<b>569,463</b>	<b>575,644</b>
<b>Consumer loans</b>						
Automobile financing	125	29	162	316	19,908	20,224
Credit card	351	313	126	790	83,299	84,089
Overdrafts	—	—	4	4	12,882	12,886
Other consumer	456	183	577	1,216	62,275	63,491
<b>Total consumer loans</b>	<b>932</b>	<b>525</b>	<b>869</b>	<b>2,326</b>	<b>178,364</b>	<b>180,690</b>
<b>Residential mortgage loans</b>	<b>31,015</b>	<b>8,859</b>	<b>36,394</b>	<b>76,268</b>	<b>2,583,768</b>	<b>2,660,036</b>
<b>Total gross loans</b>	<b>33,015</b>	<b>10,666</b>	<b>52,456</b>	<b>96,137</b>	<b>3,972,854</b>	<b>4,068,991</b>

**Loans' Credit Quality**

The four credit quality classifications set out in the following tables (which exclude purchased credit-impaired loans) are defined below and describe the credit quality of the Bank's lending portfolio. These classifications each encompass a range of more granular, internal credit rating grades assigned.

A **pass loan** shall mean a loan that is expected to be repaid as agreed. A loan is classified as pass where the Bank is not expected to face repayment difficulties because the present and projected cash flows are sufficient to repay the debt and the repayment schedule as established by the agreement is being followed.

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A **special mention** loan shall mean a loan under close monitoring by the Bank's management. Loans in this category are currently protected and still performing (current with respect to interest and principal payments), but are potentially weak and present an undue credit risk exposure, but not to the point of justifying a classification of substandard.

A **substandard** loan shall mean a loan whose evident unreliability makes repayment doubtful and there is a threat of loss to the Bank unless the unreliability is averted.

A **non-accrual** loan shall mean either management is of the opinion full payment of principal or interest is in doubt or when principal or interest is 90 days past due and for residential mortgage loans which are not well secured and in the process of collection.

June 30, 2019	Pass	Special mention	Substandard	Non-accrual	Total gross recorded investments
<b>Commercial loans</b>					
Government	109,360	—	—	3,750	113,110
Commercial and industrial	419,640	4,137	1,132	7,481	432,390
Commercial overdrafts	32,492	3,396	552	1	36,441
<b>Total commercial loans</b>	<b>561,492</b>	<b>7,533</b>	<b>1,684</b>	<b>11,232</b>	<b>581,941</b>
<b>Commercial real estate loans</b>					
Commercial mortgage	394,341	74,210	1,722	4,554	474,827
Construction	68,455	—	—	—	68,455
<b>Total commercial real estate loans</b>	<b>462,796</b>	<b>74,210</b>	<b>1,722</b>	<b>4,554</b>	<b>543,282</b>
<b>Consumer loans</b>					
Automobile financing	19,638	114	13	181	19,946
Credit card	82,094	—	566	—	82,660
Overdrafts	4,337	448	—	13	4,798
Other consumer	64,002	1,721	406	545	66,674
<b>Total consumer loans</b>	<b>170,071</b>	<b>2,283</b>	<b>985</b>	<b>739</b>	<b>174,078</b>
<b>Residential mortgage loans</b>	<b>2,560,184</b>	<b>46,504</b>	<b>78,452</b>	<b>39,342</b>	<b>2,724,482</b>
<b>Total gross recorded loans</b>	<b>3,754,543</b>	<b>130,530</b>	<b>82,843</b>	<b>55,867</b>	<b>4,023,783</b>

December 31, 2018	Pass	Special mention	Substandard	Non-accrual	Total gross recorded investments
<b>Commercial loans</b>					
Government	101,914	—	—	3,750	105,664
Commercial and industrial	501,241	4,097	1,146	7,379	513,863
Commercial overdrafts	29,896	2,705	491	2	33,094
<b>Total commercial loans</b>	<b>633,051</b>	<b>6,802</b>	<b>1,637</b>	<b>11,131</b>	<b>652,621</b>
<b>Commercial real estate loans</b>					
Commercial mortgage	444,397	45,390	3,126	4,062	496,975
Construction	78,669	—	—	—	78,669
<b>Total commercial real estate loans</b>	<b>523,066</b>	<b>45,390</b>	<b>3,126</b>	<b>4,062</b>	<b>575,644</b>
<b>Consumer loans</b>					
Automobile financing	19,927	119	16	162	20,224
Credit card	83,963	—	126	—	84,089
Overdrafts	12,650	232	—	4	12,886
Other consumer	60,766	1,869	10	846	63,491
<b>Total consumer loans</b>	<b>177,306</b>	<b>2,220</b>	<b>152</b>	<b>1,012</b>	<b>180,690</b>
<b>Residential mortgage loans</b>	<b>2,501,814</b>	<b>47,039</b>	<b>78,697</b>	<b>32,486</b>	<b>2,660,036</b>
<b>Total gross recorded loans</b>	<b>3,835,237</b>	<b>101,451</b>	<b>83,612</b>	<b>48,691</b>	<b>4,068,991</b>

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**Evaluation of Loans For Impairment**

	June 30, 2019		December 31, 2018	
	Individually evaluated	Collectively evaluated	Individually evaluated	Collectively evaluated
Commercial	12,183	569,758	12,096	640,525
Commercial real estate	6,275	537,007	7,188	568,456
Consumer	749	173,329	1,023	179,667
Residential mortgage	107,201	2,617,281	102,127	2,557,909
<b>Total gross loans</b>	<b>126,408</b>	<b>3,897,375</b>	<b>122,434</b>	<b>3,946,557</b>

**Changes in General and Specific Allowances For Credit Losses**

	Six months ended June 30, 2019				
	Commercial	Commercial real estate	Consumer	Residential mortgage	Total
Allowances at beginning of period	6,913	4,092	802	13,295	25,102
Provision taken (released)	(535)	(389)	433	(472)	(963)
Recoveries	19	2	630	276	927
Charge-offs	(14)	—	(984)	(30)	(1,028)
Other	—	1	—	14	15
<b>Allowances at end of period</b>	<b>6,383</b>	<b>3,706</b>	<b>881</b>	<b>13,083</b>	<b>24,053</b>
Allowances at end of period: individually evaluated for impairment	5,139	515	274	10,808	16,736
Allowances at end of period: collectively evaluated for impairment	1,244	3,191	607	2,275	7,317

	Six months ended June 30, 2018				
	Commercial	Commercial real estate	Consumer	Residential mortgage	Total
Allowances at beginning of period	6,309	10,360	888	17,910	35,467
Provision taken (released)	1,637	(2,377)	208	(1,934)	(2,466)
Recoveries	4	27	292	79	402
Charge-offs	—	—	(437)	(1,466)	(1,903)
Other	(6)	(2)	—	(14)	(22)
<b>Allowances at end of period</b>	<b>7,944</b>	<b>8,008</b>	<b>951</b>	<b>14,575</b>	<b>31,478</b>
Allowances at end of period: individually evaluated for impairment	4,521	600	274	8,210	13,605
Allowances at end of period: collectively evaluated for impairment	3,423	7,408	677	6,365	17,873



**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

Non-Performing Loans (excluding purchased credit-impaired loans)	June 30, 2019			December 31, 2018		
	Non-accrual	Past due more than 90 days and accruing	Total non-performing loans	Non-accrual	Past due more than 90 days and accruing	Total non-performing loans
<b>Commercial loans</b>						
Government	3,750	—	3,750	3,750	—	3,750
Commercial and industrial	7,481	—	7,481	7,379	—	7,379
Commercial overdrafts	1	—	1	2	—	2
<b>Total commercial loans</b>	<b>11,232</b>	<b>—</b>	<b>11,232</b>	<b>11,131</b>	<b>—</b>	<b>11,131</b>
<b>Commercial real estate loans</b>						
Commercial mortgage	4,554	—	4,554	4,062	—	4,062
<b>Consumer loans</b>						
Automobile financing	181	—	181	162	—	162
Credit card	—	566	566	—	126	126
Overdrafts	13	—	13	4	—	4
Other consumer	545	132	677	846	—	846
<b>Total consumer loans</b>	<b>739</b>	<b>698</b>	<b>1,437</b>	<b>1,012</b>	<b>126</b>	<b>1,138</b>
<b>Residential mortgage loans</b>	<b>39,342</b>	<b>4,309</b>	<b>43,651</b>	<b>32,486</b>	<b>6,332</b>	<b>38,818</b>
<b>Total non-performing loans</b>	<b>55,867</b>	<b>5,007</b>	<b>60,874</b>	<b>48,691</b>	<b>6,458</b>	<b>55,149</b>

**Impaired Loans (excluding purchased credit-impaired loans)**

A loan is considered to be impaired when, based on current information and events, the Bank determines that it will not be able to collect all amounts due according to the original loan contract, including scheduled interest payments. Impaired loans include all non-accrual loans and all loans modified in a troubled debt restructuring ("TDR") even if full collectability is expected following the restructuring. During the six months ended June 30, 2019, the amount of gross interest income that would have been recorded had impaired loans been current was \$1.8 million (June 30, 2018: \$1.1 million).

June 30, 2019	Impaired loans with an allowance			Gross recorded investment of impaired loans without an allowance	Total impaired loans		
	Gross recorded investment	Specific allowance	Net loans		Gross recorded investment	Specific allowance	Net loans
<b>Commercial loans</b>							
Government	3,750	(1,688)	2,062	—	3,750	(1,688)	2,062
Commercial and industrial	7,367	(3,451)	3,916	1,065	8,432	(3,451)	4,981
Commercial overdrafts	—	—	—	1	1	—	1
<b>Total commercial loans</b>	<b>11,117</b>	<b>(5,139)</b>	<b>5,978</b>	<b>1,066</b>	<b>12,183</b>	<b>(5,139)</b>	<b>7,044</b>
<b>Commercial real estate loans</b>							
Commercial mortgage	1,042	(515)	527	5,234	6,276	(515)	5,761
<b>Consumer loans</b>							
Automobile financing	127	(75)	52	54	181	(75)	106
Overdrafts	—	—	—	13	13	—	13
Other consumer	199	(199)	—	346	545	(199)	346
<b>Total consumer loans</b>	<b>326</b>	<b>(274)</b>	<b>52</b>	<b>413</b>	<b>739</b>	<b>(274)</b>	<b>465</b>
<b>Residential mortgage loans</b>	<b>51,531</b>	<b>(10,612)</b>	<b>40,919</b>	<b>52,890</b>	<b>104,421</b>	<b>(10,612)</b>	<b>93,809</b>
<b>Total impaired loans</b>	<b>64,016</b>	<b>(16,540)</b>	<b>47,476</b>	<b>59,603</b>	<b>123,619</b>	<b>(16,540)</b>	<b>107,079</b>

Specific allowance excludes \$0.2 million recognized relating to purchased credit-impaired loans.

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

December 31, 2018	Impaired loans with an allowance			Gross recorded investment of impaired loans without an allowance	Total impaired loans		
	Gross recorded investment	Specific allowance	Net loans		Gross recorded investment	Specific allowance	Net loans
<b>Commercial loans</b>							
Government	3,750	(1,687)	2,063	—	3,750	(1,687)	2,063
Commercial and industrial	7,379	(2,766)	4,613	965	8,344	(2,766)	5,578
Commercial overdrafts	—	—	—	2	2	—	2
<b>Total commercial loans</b>	<b>11,129</b>	<b>(4,453)</b>	<b>6,676</b>	<b>967</b>	<b>12,096</b>	<b>(4,453)</b>	<b>7,643</b>
<b>Commercial real estate loans</b>							
Commercial mortgage	1,081	(600)	481	6,108	7,189	(600)	6,589
<b>Consumer loans</b>							
Automobile financing	130	(75)	55	32	162	(75)	87
Overdrafts	—	—	—	4	4	—	4
Other consumer	199	(199)	—	647	846	(199)	647
<b>Total consumer loans</b>	<b>329</b>	<b>(274)</b>	<b>55</b>	<b>683</b>	<b>1,012</b>	<b>(274)</b>	<b>738</b>
<b>Residential mortgage loans</b>	<b>49,431</b>	<b>(9,422)</b>	<b>40,009</b>	<b>49,571</b>	<b>99,002</b>	<b>(9,422)</b>	<b>89,580</b>
<b>Total impaired loans</b>	<b>61,970</b>	<b>(14,749)</b>	<b>47,221</b>	<b>57,329</b>	<b>119,299</b>	<b>(14,749)</b>	<b>104,550</b>

Specific allowance excludes \$0.2 million recognized relating to purchased credit-impaired loans.

**Average Impaired Loan Balances and Related Recognized Interest Income**

	June 30, 2019		December 31, 2018	
	Average gross recorded investment	Interest income recognized <sup>1</sup>	Average gross recorded investment	Interest income recognized <sup>1</sup>
<b>Commercial loans</b>				
Government	3,750	—	3,750	—
Commercial and industrial	8,388	36	8,415	68
Commercial overdrafts	2	—	2	—
<b>Total commercial loans</b>	<b>12,140</b>	<b>36</b>	<b>12,167</b>	<b>68</b>
<b>Commercial real estate loans</b>				
Commercial mortgage	6,733	122	7,539	287
<b>Consumer loans</b>				
Automobile financing	172	—	194	—
Overdrafts	9	—	4	—
Other consumer	696	—	665	—
<b>Total consumer loans</b>	<b>877</b>	<b>—</b>	<b>863</b>	<b>—</b>
<b>Residential mortgage loans</b>	<b>101,712</b>	<b>2,311</b>	<b>97,378</b>	<b>4,568</b>
<b>Total impaired loans</b>	<b>121,462</b>	<b>2,469</b>	<b>117,947</b>	<b>4,923</b>

<sup>1</sup> All interest income recognized on impaired loans relate to loans previously modified in a TDR.

**Loans Modified in a TDR**

As at June 30, 2019, the Bank had no loans that were modified in a TDR during the preceding 12 months that subsequently defaulted (i.e. 90 days or more past due following a modification). As at December 31, 2018, the Bank had two loans which were formerly residential mortgages that were modified in a TDR during the preceding 12 months that subsequently defaulted with a combined recorded investment of \$0.8 million.

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

**TDRs entered into during the period**

For the six months ended June 30, 2019, the Bank did not enter into any new TDRs.

	Six months ended June 30, 2018			
	Number of contracts	Pre-modification recorded investment	Modification: interest capitalization	Post-modification recorded investment
Residential mortgage loans	13	5,729	528	6,257
<b>Total loans modified in a TDR</b>	<b>13</b>	<b>5,729</b>	<b>528</b>	<b>6,257</b>

TDRs outstanding	June 30, 2019		December 31, 2018	
	Accrual	Non-accrual	Accrual	Non-accrual
Commercial loans	951	—	965	—
Commercial real estate loans	1,722	2,594	3,127	1,336
Residential mortgage loans	65,079	9,378	66,516	8,154
<b>Total TDRs outstanding</b>	<b>67,752</b>	<b>11,972</b>	<b>70,608</b>	<b>9,490</b>

**Purchased Credit-Impaired Loans**

The Bank acquired certain credit-impaired loans as part of the November 7, 2014 acquisition of substantially all retail loans of HSBC Bank (Cayman) Limited. The accretable difference (or "accretable yield") represents the excess of a loan's cash flows expected to be collected over the loan's carrying amount.

	Six months ended June 30, 2019			
	Contractual principal	Non-accretable difference	Accretable difference	Carrying amount
Balance at beginning of period	4,531	(901)	(661)	2,969
Advances and increases in cash flows expected to be collected	60	(8)	8	60
Reduction resulting from repayments	(571)	96	165	(310)
Increase (reduction) resulting from changes in allowances for credit losses	—	(30)	—	(30)
Reduction resulting from charge-offs	(96)	—	—	(96)
<b>Balance at end of period</b>	<b>3,924</b>	<b>(843)</b>	<b>(488)</b>	<b>2,593</b>

	Year ended December 31, 2018			
	Contractual principal	Non-accretable difference	Accretable difference	Carrying amount
Balance at beginning of period	6,001	(1,239)	(711)	4,051
Advances and increases in cash flows expected to be collected	25	42	(42)	25
Reduction resulting from repayments	(1,495)	191	92	(1,212)
Increase (reduction) resulting from changes in allowances for credit losses	—	105	—	105
<b>Balance at end of period</b>	<b>4,531</b>	<b>(901)</b>	<b>(661)</b>	<b>2,969</b>

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

**Note 7: Credit risk concentrations**

Concentrations of credit risk in the lending and off-balance sheet credit-related arrangements portfolios arise when a number of customers are engaged in similar business activities, are in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions. The Bank regularly monitors various segments of its credit risk portfolio to assess potential concentrations of risks and to obtain collateral when deemed necessary. In the Bank's commercial portfolio, risk concentrations are evaluated primarily by industry and by geographic region of loan origination. In the consumer portfolio, concentrations are evaluated primarily by products. Credit exposures include loans, guarantees and acceptances, letters of credit and commitments for undrawn lines of credit. Unconditionally cancellable credit cards and overdraft lines of credit are excluded from the tables below.

The following tables summarize the credit exposure of the Bank by business sector and by geographic region. The on-balance sheet exposure amounts disclosed are net of specific allowances and the off-balance sheet exposure amounts disclosed are gross of collateral held.

Business sector	June 30, 2019			December 31, 2018		
	Loans	Off-balance sheet	Total credit exposure	Loans	Off-balance sheet	Total credit exposure
Banks and financial services	653,789	369,110	1,022,899	611,404	415,124	1,026,528
Commercial and merchandising	208,471	171,174	379,645	316,349	182,440	498,789
Governments	112,614	7,259	119,873	104,857	—	104,857
Individuals	2,356,707	127,631	2,484,338	2,339,854	89,931	2,429,785
Primary industry and manufacturing	121,248	870	122,118	120,088	1,003	121,091
Real estate	374,282	724	375,006	395,086	1,547	396,633
Hospitality industry	174,102	1,182	175,284	160,680	3,497	164,177
Transport and communication	5,834	75	5,909	5,758	75	5,833
Sub-total	4,007,047	678,025	4,685,072	4,054,076	693,617	4,747,693
General allowance	(7,317)	—	(7,317)	(10,187)	—	(10,187)
<b>Total</b>	<b>3,999,730</b>	<b>678,025</b>	<b>4,677,755</b>	<b>4,043,889</b>	<b>693,617</b>	<b>4,737,506</b>

Geographic region	June 30, 2019			December 31, 2018				
	Cash due from banks, resell agreements and short-term investments	Loans	Off-balance sheet	Total credit exposure	Cash due from banks, resell agreements and short-term investments	Loans	Off-balance sheet	Total credit exposure
Australia	232,978	—	—	232,978	145,675	—	—	145,675
Belgium	2,357	—	—	2,357	3,007	—	—	3,007
Bermuda	26,927	2,128,162	297,423	2,452,512	36,827	2,133,859	333,845	2,504,531
Canada	577,871	—	—	577,871	759,437	—	—	759,437
Cayman	20,778	729,334	202,812	952,924	18,138	730,418	222,189	970,745
Guernsey	1	265,152	38,771	303,924	6	290,578	22,619	313,203
Japan	17,451	—	—	17,451	14,271	—	—	14,271
Jersey	—	12,687	11,843	24,530	—	9,083	449	9,532
New Zealand	9,516	—	—	9,516	1,082	—	—	1,082
Norway	8,252	—	—	8,252	8,750	—	—	8,750
Saint Lucia	—	29,550	—	29,550	—	90,000	—	90,000
Switzerland	8,566	—	—	8,566	6,637	—	—	6,637
The Bahamas	1,672	13,665	—	15,337	1,534	14,367	—	15,901
United Kingdom	618,965	826,434	127,176	1,572,575	725,634	783,708	114,515	1,623,857
United States	812,557	—	—	812,557	411,248	—	—	411,248
Other	2,732	2,063	—	4,795	1,314	2,063	—	3,377
Sub-total	2,340,623	4,007,047	678,025	7,025,695	2,133,560	4,054,076	693,617	6,881,253
General allowance	—	(7,317)	—	(7,317)	—	(10,187)	—	(10,187)
<b>Total</b>	<b>2,340,623</b>	<b>3,999,730</b>	<b>678,025</b>	<b>7,018,378</b>	<b>2,133,560</b>	<b>4,043,889</b>	<b>693,617</b>	<b>6,871,066</b>

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

**Note 8: Customer deposits and deposits from banks**

**By Maturity**

June 30, 2019	Demand		Total demand deposits	Term				Total term deposits	Total deposits
	Non-interest bearing	Interest bearing		Within 3 months	3 to 6 months	6 to 12 months	After 12 months		
<b>Customers</b>									
<b>Bermuda</b>									
Demand or less than \$100k <sup>1</sup>	1,538,582	1,989,898	3,528,480	10,771	4,617	9,356	14,992	39,736	3,568,216
Term - \$100k or more	N/A	N/A	—	761,945	112,454	87,709	51,336	1,013,444	1,013,444
<b>Total Bermuda</b>	<b>1,538,582</b>	<b>1,989,898</b>	<b>3,528,480</b>	<b>772,716</b>	<b>117,071</b>	<b>97,065</b>	<b>66,328</b>	<b>1,053,180</b>	<b>4,581,660</b>
<b>Non-Bermuda</b>									
Demand or less than \$100k <sup>1</sup>	742,137	3,176,214	3,918,351	19,741	5,342	5,558	791	31,432	3,949,783
Term and \$100k or more	N/A	N/A	—	833,737	132,465	311,086	8,784	1,286,072	1,286,072
<b>Total non-Bermuda</b>	<b>742,137</b>	<b>3,176,214</b>	<b>3,918,351</b>	<b>853,478</b>	<b>137,807</b>	<b>316,644</b>	<b>9,575</b>	<b>1,317,504</b>	<b>5,235,855</b>
<b>Total customer deposits</b>	<b>2,280,719</b>	<b>5,166,112</b>	<b>7,446,831</b>	<b>1,626,194</b>	<b>254,878</b>	<b>413,709</b>	<b>75,903</b>	<b>2,370,684</b>	<b>9,817,515</b>
<b>Banks</b>									
<b>Bermuda</b>									
Demand or less than \$100k	11,959	—	11,959	—	—	—	—	—	11,959
<b>Non-Bermuda</b>									
Demand or less than \$100k	—	18,665	18,665	—	—	—	—	—	18,665
Term and \$100k or more	N/A	N/A	—	4,112	—	—	—	4,112	4,112
<b>Total non-Bermuda</b>	<b>—</b>	<b>18,665</b>	<b>18,665</b>	<b>4,112</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>4,112</b>	<b>22,777</b>
<b>Total bank deposits</b>	<b>11,959</b>	<b>18,665</b>	<b>30,624</b>	<b>4,112</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>4,112</b>	<b>34,736</b>
<b>Total deposits</b>	<b>2,292,678</b>	<b>5,184,777</b>	<b>7,477,455</b>	<b>1,630,306</b>	<b>254,878</b>	<b>413,709</b>	<b>75,903</b>	<b>2,374,796</b>	<b>9,852,251</b>

December 31, 2018	Demand		Total demand deposits	Term				Total term deposits	Total deposits
	Non-interest bearing	Interest bearing		Within 3 months	3 to 6 months	6 to 12 months	After 12 months		
<b>Customers</b>									
<b>Bermuda</b>									
Demand or less than \$100k <sup>1</sup>	1,378,539	2,158,971	3,537,510	12,387	4,306	8,049	14,644	39,386	3,576,896
Term - \$100k or more	N/A	N/A	—	598,528	92,427	184,337	43,414	918,706	918,706
<b>Total Bermuda</b>	<b>1,378,539</b>	<b>2,158,971</b>	<b>3,537,510</b>	<b>610,915</b>	<b>96,733</b>	<b>192,386</b>	<b>58,058</b>	<b>958,092</b>	<b>4,495,602</b>
<b>Non-Bermuda</b>									
Demand or less than \$100k <sup>1</sup>	732,957	3,179,376	3,912,333	18,714	5,386	4,705	507	29,312	3,941,645
Term and \$100k or more	N/A	N/A	—	608,390	126,022	235,278	11,482	981,172	981,172
<b>Total non-Bermuda</b>	<b>732,957</b>	<b>3,179,376</b>	<b>3,912,333</b>	<b>627,104</b>	<b>131,408</b>	<b>239,983</b>	<b>11,989</b>	<b>1,010,484</b>	<b>4,922,817</b>
<b>Total customer deposits</b>	<b>2,111,496</b>	<b>5,338,347</b>	<b>7,449,843</b>	<b>1,238,019</b>	<b>228,141</b>	<b>432,369</b>	<b>70,047</b>	<b>1,968,576</b>	<b>9,418,419</b>
<b>Banks</b>									
<b>Bermuda</b>									
Demand or less than \$100k	8,100	—	8,100	—	—	—	—	—	8,100
<b>Non-Bermuda</b>									
Demand or less than \$100k	—	18,965	18,965	—	—	—	—	—	18,965
Term and \$100k or more	N/A	N/A	—	6,656	—	101	—	6,757	6,757
<b>Total non-Bermuda</b>	<b>—</b>	<b>18,965</b>	<b>18,965</b>	<b>6,656</b>	<b>—</b>	<b>101</b>	<b>—</b>	<b>6,757</b>	<b>25,722</b>
<b>Total bank deposits</b>	<b>8,100</b>	<b>18,965</b>	<b>27,065</b>	<b>6,656</b>	<b>—</b>	<b>101</b>	<b>—</b>	<b>6,757</b>	<b>33,822</b>
<b>Total deposits</b>	<b>2,119,596</b>	<b>5,357,312</b>	<b>7,476,908</b>	<b>1,244,675</b>	<b>228,141</b>	<b>432,470</b>	<b>70,047</b>	<b>1,975,333</b>	<b>9,452,241</b>

<sup>1</sup> The weighted-average interest rate on interest-bearing demand deposits as at June 30, 2019 is 0.07% (December 31, 2018: 0.13%).

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

By Type and Segment	June 30, 2019			December 31, 2018		
	Payable on demand	Payable on a fixed date	Total	Payable on demand	Payable on a fixed date	Total
<b>Bermuda</b>						
Customers	3,528,480	1,053,180	4,581,660	3,537,510	958,092	4,495,602
Banks	11,959	—	11,959	8,100	—	8,100
<b>Cayman</b>						
Customers	2,901,257	536,840	3,438,097	2,847,793	472,442	3,320,235
Banks	18,665	4,112	22,777	17,564	6,757	24,321
<b>Channel Islands and the UK</b>						
Customers	1,017,094	780,664	1,797,758	1,064,540	538,042	1,602,582
Banks	—	—	—	1,401	—	1,401
<b>Total Customers</b>	<b>7,446,831</b>	<b>2,370,684</b>	<b>9,817,515</b>	<b>7,449,843</b>	<b>1,968,576</b>	<b>9,418,419</b>
<b>Total Banks</b>	<b>30,624</b>	<b>4,112</b>	<b>34,736</b>	<b>27,065</b>	<b>6,757</b>	<b>33,822</b>
<b>Total deposits</b>	<b>7,477,455</b>	<b>2,374,796</b>	<b>9,852,251</b>	<b>7,476,908</b>	<b>1,975,333</b>	<b>9,452,241</b>

**Note 9: Employee benefit plans**

The Bank maintains trustee pension plans including non-contributory defined benefit plans and a number of defined contribution plans, and provides post-retirement medical benefits to its qualifying retirees. The defined benefit provisions under the pension plans are generally based upon years of service and average salary during the relevant years of employment. The defined benefit and post-retirement medical plans are not open to new participants and are non-contributory and the funding required is provided by the Bank, based upon the advice of independent actuaries. The defined benefit pension plans are in the Bermuda, Guernsey and United Kingdom jurisdictions and the defined benefit post-retirement medical plan is in Bermuda.

The Bank includes an estimate of the 2019 Bank contribution and estimated benefit payments for the next ten years under the pension and post-retirement plans in its financial statements for the year-ended December 31, 2018. During the six months ended June 30, 2019, there have been no material revisions to these estimates.

Line item in the consolidated statements of operations	Three months ended		Six months ended	
	June 30, 2019	June 30, 2018	June 30, 2019	June 30, 2018
<b>Defined benefit pension expense (income)</b>				
Interest cost	1,259	1,247	2,530	2,518
Expected return on plan assets	(1,891)	(2,187)	(3,800)	(4,411)
Amortization of net actuarial (gains) losses	612	525	1,226	1,051
Amortization of prior service (credit) cost	5	—	10	—
Settlement (gain) loss	—	1,548	—	1,548
<b>Total defined benefit pension expense (income)</b>	<b>(15)</b>	<b>1,133</b>	<b>(34)</b>	<b>706</b>
<b>Post-retirement medical benefit expense (income)</b>				
Service cost	14	15	29	31
Interest cost	1,185	1,077	2,370	2,153
Amortization of net actuarial (gains) losses	68	653	136	1,307
Amortization of prior service (credit) cost	94	10	188	20
<b>Total post-retirement medical benefit expense (income)</b>	<b>1,361</b>	<b>1,755</b>	<b>2,723</b>	<b>3,511</b>

The components of defined benefit pension expense (income) and post-retirement benefit expense (income) other than the service cost component are included in the line item non-service employee benefits expense in the consolidated statements of income.

**Note 10: Credit related arrangements, repurchase agreements and commitments**

**Commitments**

The Bank enters into contractual commitments to extend credit, normally with fixed expiration dates or termination clauses, at specified rates and for specific purposes. Substantially all of the Bank's commitments to extend credit are contingent upon customers maintaining specific credit standards at the time of loan funding. Management assesses the credit risk associated with certain commitments to extend credit in determining the level of the allowance for possible loan losses.

The Bank has a facility by one of its custodians, whereby the Bank may offer up to US\$200 million of standby letters of credit to its customers on a fully secured basis. Under the standard terms of the facility, the custodian has the right to set-off against securities held of 110% of the utilized facility. At June 30, 2019, \$134.5 million (December 31, 2018: \$137.4 million) of standby letters of credit were issued under this facility.

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<b>Outstanding unfunded commitments to extend credit</b>	<b>June 30, 2019</b>	December 31, 2018
Commitments to extend credit	432,099	445,215
Documentary and commercial letters of credit	977	561
<b>Total unfunded commitments to extend credit</b>	<b>433,076</b>	<b>445,776</b>

**Credit-Related Arrangements**

Standby letters of credit and letters of guarantee are issued at the request of a Bank customer in order to secure the customer's payment or performance obligations to a third party. These guarantees represent an irrevocable obligation of the Bank to pay the third party beneficiary upon presentation of the guarantee and satisfaction of the documentary requirements stipulated therein, without investigation as to the validity of the beneficiary's claim against the customer. Generally, the term of the standby letters of credit does not exceed one year, while the term of the letters of guarantee does not exceed four years. The types and amounts of collateral security held by the Bank for these standby letters of credit and letters of guarantee is generally represented by deposits with the Bank or a charge over assets held in mutual funds.

The Bank considers the fees collected in connection with the issuance of standby letters of credit and letters of guarantee to be representative of the fair value of its obligation undertaken in issuing the guarantee. In accordance with applicable accounting standards related to guarantees, the Bank defers fees collected in connection with the issuance of standby letters of credit and letters of guarantee. The fees are then recognized in income proportionately over the life of the credit agreements. The following table presents the outstanding financial guarantees. Collateral is shown at estimated market value less selling cost. Where the collateral is cash, it is shown gross including accrued income.

<b>Outstanding financial guarantees</b>	<b>June 30, 2019</b>			December 31, 2018		
	<b>Gross</b>	<b>Collateral</b>	<b>Net</b>	Gross	Collateral	Net
Standby letters of credit	242,264	235,004	7,260	245,156	237,051	8,105
Letters of guarantee	2,685	2,599	86	2,685	2,599	86
<b>Total</b>	<b>244,949</b>	<b>237,603</b>	<b>7,346</b>	<b>247,841</b>	<b>239,650</b>	<b>8,191</b>

**Repurchase agreements**

The Bank utilizes repurchase agreements and resell agreements (reverse repurchase agreements) to manage liquidity. The risks of these transactions include changes in the fair value in the securities posted or received as collateral and other credit related events. The Bank manages these risks by ensuring that the collaterals involved are appropriate and by monitoring the value of the securities posted or received as collateral on a daily basis.

As at June 30, 2019, the Bank had 12 open positions (December 31, 2018: 2) in resell agreements with a remaining maturity of less than 30 days involving pools of mortgages issued by US federal agencies. The amortized cost of these resell agreements is \$166.3 million (December 31, 2018: \$27.3 million) and are included in securities purchased under agreement to resell on the consolidated balance sheets. As at June 30, 2019, there were no positions (December 31, 2018: no positions) which were offset on the balance sheet to arrive at the carrying value, and there was no collateral amount which was available to offset against the future settlement amount.

**Legal Proceedings**

There are actions and legal proceedings pending against the Bank and its subsidiaries which arose in the normal course of its business. Management, after reviewing all actions and proceedings pending against or involving the Bank and its subsidiaries, considers that the resolution of these matters would in the aggregate not be material to the consolidated financial position of the Bank, except as noted in the following paragraphs.

As publicly announced, in November 2013, the US Attorney's Office for the Southern District of New York applied for and secured the issuance of so-called John Doe Summonses to six US financial institutions with which the Bank had correspondent bank relationships. The Bank has been fully cooperating with the US authorities in their ongoing investigation. Specifically, the Bank has conducted an extensive review and account remediation exercise to determine the US tax compliance status of US person account holders. The review process and results have been shared with the US authorities.

Management believes that as of June 30, 2019, a provision of \$5.5 million (December 31, 2018: \$5.5 million), which has been recorded, is appropriate. As the investigation remains ongoing at this time, the timing and terms of the final resolution, including any fines or penalties, remain uncertain and the financial impact to the Bank could exceed the amount of the provision. In this regard, we note that the US authorities have not approved or commented on the adequacy or reasonableness of the estimate. The provision is included on the consolidated balance sheets under other liabilities.

**Note 11: Leases**

The Bank enters into operating lease agreements either as the lessee or the lessor, mostly for office and parking spaces as well as for small office equipment. The terms of the existing leases, including renewal options that are reasonably certain to be exercised, extend up to the year 2025.

<b>Lease costs</b>	Three months ended	Six months ended
	<b>June 30, 2019</b>	<b>June 30, 2019</b>
Operating lease costs	1,354	2,580
Variable lease costs	—	—
Short-term lease costs	216	412
Sublease (income)	(3)	(8)
<b>Total net lease cost</b>	<b>1,567</b>	<b>2,984</b>
<b>Operating lease income</b>	<b>281</b>	<b>588</b>

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	Three months ended June 30, 2019	Six months ended June 30, 2019
<b>Other information for the period</b>		
Right-of-use assets related to new operating lease liabilities	2,305	2,643
Operating cash flows from operating leases	1,337	2,686
<b>Other information at end of period</b>		
		<b>As at June 30, 2019</b>
Operating leases right-of-use assets (included in other assets on the balance sheets)		21,906
Operating leases liabilities (included in other liabilities on the balance sheets)		21,255
Weighted average remaining lease term for operating leases (in years)		5.04 years
Weighted average discount rate for operating leases		5.25%

The following table summarizes the Bank's commitments for long-term leases as at December 31, 2018:

Year ending December 31	Leases
2019	5,448
2020	5,524
2021	4,696
2022	4,317
2023	3,609
2024 & thereafter	3,583
<b>Total commitments</b>	<b>27,177</b>

**Note 12: Segmented information**

The Bank is managed by the CEO on a geographic basis. In 2017, the Bank presented six segments which included Bermuda, Cayman, Guernsey, Switzerland, The Bahamas and the United Kingdom. In 2018, the Bank reassessed the segment reporting as a result of acquisitions which were announced in 2017 and early 2018 and concluded on the following three geographic segments: Bermuda, Cayman, and Channel Islands and the UK. The Other segment is composed of several non-reportable operating segments that have been aggregated in accordance with US GAAP. Each region has a managing director who reports to the CEO. The CEO and the region managing director have final authority over resource allocation decisions and performance assessment.

The geographic segments reflect this management structure and the manner in which financial information is currently evaluated by the CEO. Segment results are determined based on the Bank's management reporting system, which assigns balance sheet and income statement items to each of the geographic segments. The process is designed around the Bank's organizational and management structure and, accordingly, the results derived are not necessarily comparable with similar information published by other financial institutions. A description of each reportable segment and table of financial results is presented below.

Accounting policies of the reportable segments are the same as those described in Note 2 of the Bank's audited financial statements for the year ended December 31, 2018. Transactions between segments are accounted for on an accrual basis and are all eliminated upon consolidation. The Bank generally does not allocate assets, revenues and expenses among its business segments, with the exception of certain corporate overhead expenses and loan participation revenue and expense. Loan participation revenue and expenses are allocated pro-rata based upon the percentage of the total loan funded by each jurisdiction participating in the loan.

The **Bermuda** segment provides a full range of retail, commercial and private banking services. Retail services are offered to individuals and small to medium-sized businesses through four branch locations and through internet banking, mobile banking, automated teller machines ("ATMs") and debit cards. Retail services include deposit services, consumer and mortgage lending, credit cards and personal insurance products. Commercial banking includes commercial lending and mortgages, cash management, payroll services, remote banking and letters of credit. Treasury services include money market and foreign exchange activities. Bermuda's wealth management offering consists of Butterfield Asset Management Limited, which provides investment management, advisory and brokerage services and Butterfield Trust (Bermuda) Limited, which provides trust, estate, company management and custody services. Bermuda is also the location of the Bank's head offices and accordingly, retains the unallocated corporate overhead expenses.

The **Cayman** segment provides a comprehensive range of retail, commercial and private banking services. Retail services are offered to individuals and small to medium-sized businesses through three branch locations and through internet banking, mobile banking, ATMs and debit cards. Retail services include deposit services, consumer and mortgage lending, credit cards and property/auto insurance. Commercial banking includes commercial lending and mortgages, cash management, payroll services, remote banking and letters of credit. Treasury services include money market and foreign exchange activities. Cayman's wealth management offering comprises investment management, advisory and brokerage services and Butterfield Trust (Cayman) Limited, which provides trust, estate and company management.

The **Channel Islands and the UK** segment includes the jurisdictions of Guernsey and Jersey (Channel Islands), and the UK. In the Channel Islands, a broad range of services are provided to private clients and financial institutions including private banking and treasury services, internet banking, wealth management and fiduciary services. The UK jurisdiction provides mortgage services for high-value residential properties.

The **Other** segment includes the jurisdictions of the Bahamas, Canada, Mauritius, Singapore and Switzerland. These operating segments individually and collectively do not meet the quantitative threshold for segmented reporting and are therefore aggregated as non-reportable operating segments.



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<b>Total Assets by Segment</b>	<b>June 30, 2019</b>	December 31, 2018
Bermuda	5,503,272	5,387,347
Cayman	3,825,969	3,705,468
Channel Islands and the UK	2,173,257	1,966,547
Other	34,879	30,035
<b>Total assets before inter-segment eliminations</b>	<b>11,537,377</b>	11,089,397
Less: inter-segment eliminations	(308,408)	(316,219)
<b>Total</b>	<b>11,228,969</b>	10,773,178

Three months ended June 30, 2019	Net interest income		Provision for credit losses	Non-interest income	Revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter- segment							
Bermuda	45,894	493	(890)	22,378	67,875	210	68,085	58,383	9,702
Cayman	28,829	170	320	12,621	41,940	—	41,940	15,169	26,771
Channel Islands and the UK	10,418	(663)	1,494	7,019	18,268	—	18,268	15,785	2,483
Other	15	—	—	5,371	5,386	(17)	5,369	5,683	(314)
<b>Total before eliminations</b>	<b>85,156</b>	<b>—</b>	<b>924</b>	<b>47,389</b>	<b>133,469</b>	<b>193</b>	<b>133,662</b>	<b>95,020</b>	<b>38,642</b>
Inter-segment eliminations	—	—	—	(3,150)	(3,150)	—	(3,150)	(3,150)	—
<b>Total</b>	<b>85,156</b>	<b>—</b>	<b>924</b>	<b>44,239</b>	<b>130,319</b>	<b>193</b>	<b>130,512</b>	<b>91,870</b>	<b>38,642</b>

Three months ended June 30, 2018	Net interest income		Provision for credit losses	Non-interest income	Revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter- segment							
Bermuda	53,050	647	997	22,124	76,818	186	77,004	47,874	29,130
Cayman	25,267	—	(738)	11,712	36,241	(80)	36,161	15,279	20,882
Channel Islands and the UK	9,073	(647)	265	7,011	15,702	(1,683)	14,019	13,362	657
Other	6	—	—	3,675	3,681	—	3,681	4,638	(957)
<b>Total before eliminations</b>	<b>87,396</b>	<b>—</b>	<b>524</b>	<b>44,522</b>	<b>132,442</b>	<b>(1,577)</b>	<b>130,865</b>	<b>81,153</b>	<b>49,712</b>
Inter-segment eliminations	—	—	—	(2,583)	(2,583)	—	(2,583)	(2,583)	—
<b>Total</b>	<b>87,396</b>	<b>—</b>	<b>524</b>	<b>41,939</b>	<b>129,859</b>	<b>(1,577)</b>	<b>128,282</b>	<b>78,570</b>	<b>49,712</b>

Six months ended June 30, 2019	Net interest income		Provision for credit losses	Non-interest income	Revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter- segment							
Bermuda	93,316	979	(737)	44,033	137,591	1,956	139,547	106,186	33,361
Cayman	59,380	329	293	25,683	85,685	5	85,690	29,813	55,877
Channel Islands and the UK	20,411	(1,308)	1,407	13,682	34,192	—	34,192	31,445	2,747
Other	27	—	—	10,488	10,515	(17)	10,498	11,734	(1,236)
<b>Total before eliminations</b>	<b>173,134</b>	<b>—</b>	<b>963</b>	<b>93,886</b>	<b>267,983</b>	<b>1,944</b>	<b>269,927</b>	<b>179,178</b>	<b>90,749</b>
Inter-segment eliminations	—	—	—	(6,267)	(6,267)	—	(6,267)	(6,267)	—
<b>Total</b>	<b>173,134</b>	<b>—</b>	<b>963</b>	<b>87,619</b>	<b>261,716</b>	<b>1,944</b>	<b>263,660</b>	<b>172,911</b>	<b>90,749</b>

Six months ended June 30, 2018	Net interest income		Provision for credit losses	Non-interest income	Revenue before gains and losses	Gains and losses	Total net revenue	Total expenses	Net income
	Customer	Inter- segment							
Bermuda	100,724	1,246	2,808	43,044	147,822	115	147,937	99,495	48,442
Cayman	48,937	1	(535)	23,179	71,582	349	71,931	29,896	42,035
Channel Islands and the UK	17,619	(1,247)	193	14,632	31,197	(1,688)	29,509	24,895	4,614
Other	11	—	—	6,647	6,658	—	6,658	7,840	(1,182)
<b>Total before eliminations</b>	<b>167,291</b>	<b>—</b>	<b>2,466</b>	<b>87,502</b>	<b>257,259</b>	<b>(1,224)</b>	<b>256,035</b>	<b>162,126</b>	<b>93,909</b>
Inter-segment eliminations	—	—	—	(5,802)	(5,802)	—	(5,802)	(5,802)	—
<b>Total</b>	<b>167,291</b>	<b>—</b>	<b>2,466</b>	<b>81,700</b>	<b>251,457</b>	<b>(1,224)</b>	<b>250,233</b>	<b>156,324</b>	<b>93,909</b>

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**Note 13: Derivative instruments and risk management**

The Bank uses derivatives for risk management purposes and to meet the needs of its customers. The Bank's derivative contracts principally involve over-the-counter ("OTC") transactions that are negotiated privately between the Bank and the counterparty to the contract and include interest rate contracts and foreign exchange contracts.

The Bank may pursue opportunities to reduce its exposure to credit losses on derivatives by entering into International Swaps and Derivatives Association master agreements ("ISDAs"). Depending on the nature of the derivative transaction, bilateral collateral arrangements may be used as well. When the Bank is engaged in more than one outstanding derivative transaction with the same counterparty, and also has a legally enforceable master netting agreement with that counterparty, the net marked to market exposure represents the netting of the positive and negative exposures with that counterparty. When there is a net negative exposure, the Bank regards its credit exposure to the counterparty as being zero. The net marked to market position with a particular counterparty represents a reasonable measure of credit risk when there is a legally enforceable master netting agreement between the Bank and that counterparty.

Certain of these agreements contain credit risk-related contingent features in which the counterparty has the option to accelerate cash settlement of the Bank's net derivative liabilities with the counterparty in the event the Bank's credit rating falls below specified levels or the liabilities reach certain levels.

All derivative financial instruments, whether designated as hedges or not, are recorded on the consolidated balance sheets at fair value within other assets or other liabilities. These amounts include the effect of netting. The accounting for changes in the fair value of a derivative in the consolidated statements of operations depends on whether the contract has been designated as a hedge and qualifies for hedge accounting.

**Notional Amounts**

The notional amounts are not recorded as assets or liabilities on the consolidated balance sheets as they represent the face amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged. Notional amounts represent the volume of outstanding transactions and do not represent the potential gain or loss associated with market risk or credit risk of such instruments. Credit risk is limited to the positive fair value of the derivative instrument, which is significantly less than the notional amount.

**Fair Value**

Derivative instruments, in the absence of any compensating up-front cash payments, generally have no market value at inception. They obtain value, positive or negative, as relevant interest rates, exchange rates, equity or commodity prices or indices change. The potential for derivatives to increase or decrease in value as a result of the foregoing factors is generally referred to as market risk. Market risk is managed within clearly defined parameters as prescribed by senior management of the Bank. The fair value is defined as the profit or loss associated with replacing the derivative contracts at prevailing market prices.

**Risk Management Derivatives**

The Bank enters into interest derivative contracts as part of its overall interest rate risk management strategy to minimize significant unplanned fluctuations in earnings that are caused by interest rate volatility. The Bank's goal is to manage interest rate sensitivity by modifying the repricing or maturity characteristics of certain consolidated balance sheet assets and liabilities so that movements in interest rates do not adversely affect the net interest margin. Derivative instruments that are used as part of the Bank's risk management strategy include interest rate swap contracts that have indices related to the pricing of specific consolidated balance sheet assets and liabilities. Interest rate swaps generally involve the exchange of fixed and variable-rate interest payments between two parties, based on a common notional principal amount and maturity date. The Bank uses foreign currency derivative instruments to hedge its exposure to foreign currency risk. Certain hedging relationships are formally designated and qualify for hedge accounting as fair value or net investment hedges. Risk management derivatives comprise fair value hedges, net investment hedges and derivatives not formally designated as hedges as described below.

**Fair value hedges** consist of designated interest rate swaps and are used to minimize the Bank's exposure to changes in the fair value of assets and liabilities due to movements in interest rates. The Bank previously entered into interest rate swaps to convert its fixed-rate long-term loans to floating-rate loans, and convert fixed-rate deposits to floating-rate deposits. During the year ended December 31, 2011, the Bank canceled its interest rate swaps designated as fair value hedges of loans receivable and therefore discontinued hedge accounting for these financial instruments. The fair value attributable to the hedged loans are accounted for prospectively and are being amortized to net income over the remaining life of each individual loan, which could extend to year 2029, using the effective interest method.

**Net investment hedges** includes designated currency swaps and qualifying non-derivative instruments and are used to minimize the Bank's exposure to variability in the foreign currency translation of net investments in foreign operations. The effective portion of changes in the fair value of the hedging instrument is recognized in AOCL consistent with the related translation gains and losses of the hedged net investment. For net investment hedges, all critical terms of the hedged item and the hedging instrument are matched at inception and on an ongoing basis to minimize the risk of hedge ineffectiveness.

For derivatives designated as net investment hedges, the Bank follows the method based on changes in spot exchange rates. Accordingly:

- The change in the fair value of the derivative instrument that is reported in AOCL (i.e., the effective portion) is determined by the changes in spot exchange rates.
- The change in the fair value of the derivative instrument attributable to changes in the difference between the forward rate and spot rate are excluded from the measure of the hedge ineffectiveness and that difference is reported directly in the consolidated statements of operations under foreign exchange revenue.

Amounts recorded in AOCL are reclassified to earnings only upon the sale or substantial liquidation of an investment in a foreign subsidiary.

For foreign-currency-denominated debt instruments that are designated as hedges of net investments in foreign operations, the translation gain or loss that is recorded in AOCL is based on the spot exchange rate between the reporting currency of the Bank and the functional currency of the respective subsidiary. See Note 20: Accumulated other comprehensive loss for details on the amount recognized into AOCL during the current period from translation gain or loss.

**Derivatives not formally designated as hedges** are entered into to manage the interest rate risk of fixed rate deposits and foreign exchange risk of the Bank's exposure. Changes in the fair value of derivative instruments not formally designated as hedges are recognized in foreign exchange income.

**Client service derivatives**

The Bank enters into foreign exchange contracts and interest rate caps primarily to meet the foreign exchange needs of its customers. Foreign exchange contracts are agreements to exchange specific amounts of currencies at a future date at a specified rate of exchange. Changes in the fair value of client services derivative instruments are recognized in foreign exchange income.

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The following table shows the aggregate notional amounts of derivative contracts outstanding listed by type and respective gross positive or negative fair values and classified by those used for risk management (sub-classified as hedging and those that do not qualify for hedge accounting), client services and credit derivatives. Fair value of derivatives is recorded in the consolidated balance sheets in other assets and other liabilities. Gross positive fair values are recorded in other assets and gross negative fair values are recorded in other liabilities, subject to netting when master netting agreements are in place.

June 30, 2019	Derivative instrument	Number of contracts	Notional amounts	Gross positive fair value	Gross negative fair value	Net fair value
<b>Risk management derivatives</b>						
Derivatives not formally designated as hedging instruments	Currency swaps	4	86,709	488	(137)	351
<b>Client services derivatives</b>						
	Spot and forward foreign exchange	342	2,020,061	3,808	(3,437)	371
<b>Total derivative instruments</b>			<b>2,106,770</b>	<b>4,296</b>	<b>(3,574)</b>	<b>722</b>

December 31, 2018	Derivative instrument	Number of contracts	Notional amounts	Gross positive fair value	Gross negative fair value	Net fair value
<b>Risk management derivatives</b>						
Derivatives not formally designated as hedging instruments	Currency swaps	8	238,810	269	(601)	(332)
<b>Client services derivatives</b>						
	Spot and forward foreign exchange	288	2,064,762	13,331	(12,671)	660
<b>Total derivative instruments</b>			<b>2,303,572</b>	<b>13,600</b>	<b>(13,272)</b>	<b>328</b>

In addition to the above, as at June 30, 2019 foreign denominated deposits of £124.5 million (December 31, 2018: £124.5 million), CHF 0.4 million (December 31, 2018: CHF 0.4 million), and SGD 8.1 million (December 31, 2018: SGD 4.0 million) were designated as a hedge of foreign exchange risk associated with the net investment in foreign operations.

We manage derivative exposure by monitoring the credit risk associated with each counterparty using counterparty specific credit risk limits, using master netting arrangements where appropriate and obtaining collateral. The Bank elected to offset in the consolidated balance sheets certain gross derivative assets and liabilities subject to netting agreements.

The Bank also elected not to offset certain derivative assets or liabilities and all collaterals received or paid that the Bank or the counterparties could legally offset in the event of default. In the tables below, these positions are deducted from the net fair value presented in the consolidated balance sheets in order to present the net exposures. The collateral values presented in the following table are limited to the related net derivative asset or liability balance and, accordingly, do not include excess collateral received or paid.

June 30, 2019	Gross fair value recognized	Less: offset applied under master netting agreements	Net fair value presented in the consolidated balance sheets	Less: positions not offset in the consolidated balance sheets		Net exposures
				Gross fair value of derivatives	Cash collateral received / paid	
<b>Derivative assets</b>						
Spot and forward foreign exchange and currency swaps	4,296	(550)	3,746	—	(324)	3,422
<b>Derivative liabilities</b>						
Spot and forward foreign exchange and currency swaps	3,574	(550)	3,024	—	—	3,024
<b>Net positive fair value</b>			<b>722</b>			

December 31, 2018	Gross fair value recognized	Less: offset applied under master netting agreements	Net fair value presented in the consolidated balance sheets	Less: positions not offset in the consolidated balance sheets		Net exposures
				Gross fair value of derivatives	Cash collateral received / paid	
<b>Derivative assets</b>						
Spot and forward foreign exchange and currency swaps	13,600	(2,036)	11,564	—	(3,216)	8,348
<b>Derivative liabilities</b>						
Spot and forward foreign exchange and currency swaps	13,272	(2,036)	11,236	—	(1,861)	9,375
<b>Net positive fair value</b>			<b>328</b>			

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The following tables show the location and amount of gains (losses) recorded in either the consolidated statements of operations or consolidated statements of comprehensive income on derivative instruments outstanding.

Derivative instrument	Consolidated statements of operations line item	Three months ended		Six months ended	
		June 30, 2019	June 30, 2018	June 30, 2019	June 30, 2018
Spot and forward foreign exchange	Foreign exchange revenue	(178)	(853)	(288)	(425)
Currency swaps, not designated as hedge	Foreign exchange revenue	(2,323)	15,092	682	17,196
Total net gains (losses) recognized in net income		(2,501)	14,239	394	16,771

**Note 14: Fair value measurements**

The following table presents the financial assets and liabilities that are measured at fair value on a recurring basis. Management classifies these items based on the type of inputs used in their respective fair value determination as described in Note 2 of the Bank's audited financial statements for the year ended December 31, 2018.

Management reviews the price of each security monthly, comparing market values to expectations and to the prior month's price. Management's expectations are based upon knowledge of prevailing market conditions and developments relating to specific issuers and/or asset classes held in the investment portfolio. Where there are unusual or significant price movements, or where a certain asset class has performed out-of-line with expectations, the matter is reviewed by management.

Financial instruments in Level 1 include actively traded redeemable mutual funds.

Financial instruments in Level 2 include corporate bonds, mortgage-backed securities and other asset-backed securities, forward foreign exchange contracts and mutual funds not actively traded.

Financial instruments in Level 3 include asset-backed securities for which the market is relatively illiquid and for which information about actual trading prices is not readily available.

There were no transfers between Level 1 and Level 2 or Level 2 and Level 3 during the six months ended June 30, 2019 and the year ended December 31, 2018.

	June 30, 2019			Total carrying amount / fair value	December 31, 2018			Total carrying amount / fair value
	Fair value				Fair value			
	Level 1	Level 2	Level 3		Level 1	Level 2	Level 3	
<b>Items that are recognized at fair value on a recurring basis:</b>								
<b>Financial assets</b>								
<b>Trading investments</b>								
Mutual funds	6,860	292	—	7,152	6,176	319	—	6,495
<b>Total trading</b>	<b>6,860</b>	<b>292</b>	<b>—</b>	<b>7,152</b>	<b>6,176</b>	<b>319</b>	<b>—</b>	<b>6,495</b>
<b>Available-for-sale investments</b>								
US government and federal agencies	—	1,889,751	—	1,889,751	—	1,786,507	—	1,786,507
Non-US governments debt securities	—	25,279	—	25,279	—	25,425	—	25,425
Corporate debt securities	—	64,761	—	64,761	—	78,713	—	78,713
Asset-backed securities - Student loans	—	—	12,758	12,758	—	—	12,626	12,626
Commercial mortgage-backed securities	—	126,019	—	126,019	—	123,209	—	123,209
Residential mortgage-backed securities	—	150,303	—	150,303	—	156,269	—	156,269
<b>Total available-for-sale</b>	<b>—</b>	<b>2,256,113</b>	<b>12,758</b>	<b>2,268,871</b>	<b>—</b>	<b>2,170,123</b>	<b>12,626</b>	<b>2,182,749</b>
Other assets - Derivatives	—	3,746	—	3,746	—	11,564	—	11,564
<b>Financial liabilities</b>								
Other liabilities - Derivatives	—	3,024	—	3,024	—	11,236	—	11,236

**Level 3 Reconciliation**

The Level 3, shown as Asset-backed securities - Student loans in the above table, is a federal family education loan program guaranteed student loan security and is valued using a non-binding broker quote. The fair value provided by the broker is based on the last trading price of similar securities but as the market for the security is illiquid, a Level 2 classification is not supported.

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	Six months ended June 30, 2019	Year ended December 31, 2018
	Available- for-sale investments	Available- for-sale investments
Carrying amount at beginning of period	12,626	12,493
Realized and unrealized gains (losses) recognized in other comprehensive income	132	133
<b>Carrying amount at end of period</b>	<b>12,758</b>	<b>12,626</b>

**Items Other Than Those Recognized at Fair Value on a Recurring Basis:**

	Level	June 30, 2019			December 31, 2018		
		Carrying amount	Fair value	Appreciation / (depreciation)	Carrying amount	Fair value	Appreciation / (depreciation)
<b>Financial assets</b>							
Cash due from banks	Level 1	2,010,980	2,010,980	—	2,053,883	2,053,883	—
Securities purchased under agreement to resell	Level 2	166,333	166,333	—	27,341	27,341	—
Short-term investments	Level 1	163,310	163,310	—	52,336	52,336	—
Investments held-to-maturity	Level 2	2,248,228	2,280,541	32,313	2,066,120	2,036,214	(29,906)
Loans, net of allowance for credit losses	Level 2	3,999,730	4,013,985	14,255	4,043,889	4,047,262	3,373
Other real estate owned <sup>1</sup>	Level 2	4,687	4,687	—	5,346	5,346	—
<b>Financial liabilities</b>							
Customer deposits							
Demand deposits	Level 2	7,446,831	7,446,831	—	7,449,843	7,449,843	—
Term deposits	Level 2	2,370,684	2,372,557	(1,873)	1,968,576	1,970,004	(1,428)
Deposits from banks	Level 2	34,736	34,736	—	33,822	33,822	—
Long-term debt	Level 2	143,411	148,580	(5,169)	143,322	146,261	(2,939)

<sup>1</sup> The current carrying value of OREO is adjusted to fair value only when there is devaluation below carrying value.

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**Note 15: Interest rate risk**

The following tables set out the assets, liabilities and shareholders' equity and off-balance sheet instruments on the date of the earlier of contractual maturity, expected maturity or repricing date. Use of these tables to derive information about the Bank's interest rate risk position is limited by the fact that customers may choose to terminate their financial instruments at a date earlier than the contractual maturity or repricing date. Examples of this include fixed-rate mortgages, which are shown at contractual maturity but which may pre-pay earlier, and certain term deposits, which are shown at contractual maturity but which may be withdrawn before their contractual maturity subject to prepayment penalties. Investments are shown based on remaining contractual maturities. The remaining contractual principal maturities for mortgage-backed securities (primarily US government agencies) do not consider prepayments. Remaining expected maturities will differ from contractual maturities because borrowers may have the right to prepay obligations before the underlying mortgages mature.

(in \$ millions)	Earlier of contractual maturity or repricing date					Non-interest bearing funds	Total
	Within 3 months	3 to 6 months	6 to 12 months	1 to 5 years	After 5 years		
<b>Assets</b>							
Cash due from banks	1,815	—	—	—	—	196	2,011
Securities purchased under agreement to resell	166	—	—	—	—	—	166
Short-term investments	76	75	5	—	—	7	163
Investments	457	3	45	202	3,810	7	4,524
Loans	3,234	5	17	262	459	23	4,000
Other assets	—	—	—	—	—	365	365
<b>Total assets</b>	<b>5,748</b>	<b>83</b>	<b>67</b>	<b>464</b>	<b>4,269</b>	<b>598</b>	<b>11,229</b>
<b>Liabilities and shareholders' equity</b>							
Shareholders' equity	—	—	—	—	—	929	929
Demand deposits	5,184	—	—	—	—	2,293	7,477
Term deposits	1,630	255	414	76	—	—	2,375
Other liabilities	—	—	—	—	—	305	305
Long-term debt	70	—	—	73	—	—	143
<b>Total liabilities and shareholders' equity</b>	<b>6,884</b>	<b>255</b>	<b>414</b>	<b>149</b>	<b>—</b>	<b>3,527</b>	<b>11,229</b>
Interest rate sensitivity gap	(1,136)	(172)	(347)	315	4,269	(2,929)	—
Cumulative interest rate sensitivity gap	(1,136)	(1,308)	(1,655)	(1,340)	2,929	—	—

(in \$ millions)	Earlier of contractual maturity or repricing date					Non-interest bearing funds	Total
	Within 3 months	3 to 6 months	6 to 12 months	1 to 5 years	After 5 years		
<b>Assets</b>							
Cash due from banks	1,930	—	—	—	—	124	2,054
Securities purchased under agreement to resell	27	—	—	—	—	—	27
Short-term investments	40	10	—	—	—	2	52
Investments	488	35	8	245	3,473	6	4,255
Loans	3,160	278	38	223	330	15	4,044
Other assets	—	—	—	—	—	341	341
<b>Total assets</b>	<b>5,645</b>	<b>323</b>	<b>46</b>	<b>468</b>	<b>3,803</b>	<b>488</b>	<b>10,773</b>
<b>Liabilities and shareholders' equity</b>							
Shareholders' equity	—	—	—	—	—	882	882
Demand deposits	5,357	—	—	—	—	2,120	7,477
Term deposits	1,245	228	432	70	—	—	1,975
Other liabilities	—	—	—	—	—	296	296
Long-term debt	70	—	—	73	—	—	143
<b>Total liabilities and shareholders' equity</b>	<b>6,672</b>	<b>228</b>	<b>432</b>	<b>143</b>	<b>—</b>	<b>3,298</b>	<b>10,773</b>
Interest rate sensitivity gap	(1,027)	95	(386)	325	3,803	(2,810)	—
Cumulative interest rate sensitivity gap	(1,027)	(932)	(1,318)	(993)	2,810	—	—

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**Note 16: Long-term debt**

On May 28, 2003, the Bank issued US \$125 million of Subordinated Lower Tier II capital notes. The notes were issued at par and in two tranches, namely US \$78 million in Series A notes due 2013 and US \$47 million in Series B notes due 2018. The issuance was by way of private placement with US institutional investors. The notes are listed on the Bermuda Stock Exchange ("BSX") in the specialist debt securities category. Part of the proceeds of the issue were used to repay the entire amount of the US \$75 million outstanding subordinated notes redeemed in July 2003. The notes issued under Series A paid a fixed coupon of 3.94% until May 27, 2008 when it was redeemed in whole by the Bank. The Series B notes paid a fixed coupon of 5.15% until May 27, 2013 when they became redeemable in whole at the Bank's option. The Series B notes were priced at a spread of 1.35% over the 10-year US Treasury yield. In May 2018, the Bank fully redeemed the 2003 issuance Series B for its nominal value of \$47 million.

On May 27, 2008, the Bank issued US \$78 million of Subordinated Lower Tier II capital notes. The notes were issued at par and in two tranches, namely US \$53 million in Series A notes due 2018 and US \$25 million in Series B notes due 2023. The issuance was by way of private placement with US institutional investors. The notes are listed on the BSX in the specialist debt securities category. The proceeds of the issue were used to repay the entire amount of the US \$78 million outstanding subordinated notes redeemed in May 2008. The notes issued under Series A paid a fixed coupon of 7.59% until May 27, 2013 when they became redeemable in whole at the option of the Bank. In May 2013, the Bank exercised its option to redeem the Series A note outstanding at face value. The Series B notes pay a fixed coupon of 8.44% until May 27, 2018 when they became redeemable in whole at the Bank's option. The Series B notes were priced at a spread of 4.51% over the 10-year US Treasury yield.

On May 24, 2018, the Bank issued US \$75 million of Subordinated Lower Tier II capital notes. The notes were issued at par and due on June 1, 2028. The issuance was by way of a registered offering with US institutional investors. The notes are listed on the Bermuda Stock Exchange (BSX) in the specialist debt securities category. The proceeds of the issue were used, among other, to repay the entire amount of the US \$47 million outstanding subordinated notes series 2003-B. The notes issued pay a fixed coupon of 5.25% until June 1, 2023 when they become redeemable in whole at the option of the Bank. The notes were priced at a spread of 2.27% over the 10-year US Treasury yield. The Bank incurred \$1.8 million of costs directly related to the issuance of these capital notes. These costs have been capitalized directly against the carrying value of these notes on the balance sheet, and will be amortized over the life of the notes.

No interest was capitalized during the six months ended June 30, 2019 and the year ended December 31, 2018.

In the event the Bank would be in a position to redeem long-term debt, priority would go to the redemption of the higher interest-bearing Series, subject to availability relative to the earliest date the Series is redeemable at the Bank's option.

The following table presents the contractual maturity and interest payments for long-term debt issued by the Bank as at June 30, 2019. The interest payments are calculated until contractual maturity using the current LIBOR rates.

Long-term debt	Earliest date redeemable at the Bank's option	Contractual maturity date	Interest rate until date redeemable	Interest rate from earliest date redeemable to contractual maturity	Principal Outstanding	Interest payments until contractual maturity		
						Within 1 year	1 to 5 years	After 5 years
<b>Bermuda</b>								
2005 issuance - Series B	July 2, 2015	July 2, 2020	5.11%	3 months US\$ LIBOR + 1.695%	45,000	1,836	457	—
2008 issuance - Series B	May 27, 2018	May 27, 2023	8.44%	3 months US\$ LIBOR + 4.929%	25,000	1,842	5,511	—
2018 issuance	June 1, 2023	June 1, 2028	5.25%	3 months US\$ LIBOR + 2.255%	75,000	3,938	15,300	13,922
<b>Total</b>					<b>145,000</b>	<b>7,616</b>	<b>21,268</b>	<b>13,922</b>
Unamortized debt issuance costs					(1,589)			
<b>Long-term debt less unamortized debt issuance costs</b>					<b>143,411</b>			

**Note 17: Earnings per share**

Earnings per share have been calculated using the weighted average number of common shares outstanding during the period after deduction of the shares held as treasury stock. The dilutive effect of share-based compensation plans was calculated using the treasury stock method, whereby the proceeds received from the exercise of share-based awards are assumed to be used to repurchase outstanding shares, using the average market price of the Bank's shares for the year. Numbers of shares are expressed in thousands.

During the six months ended June 30, 2019, options to purchase an average of 0.2 million (June 30, 2018: 0.4 million) common shares were outstanding. During the six months ended June 30, 2019, the average number of outstanding awards of unvested common shares was 1.0 million (June 30, 2018: 1.0 million). Only awards for which the sum of 1) the expense that will be recognized in the future (i.e., the unrecognized expense) and 2) its exercise price, if any, was lower than the average market price of the Bank's common shares were considered dilutive and, therefore, included in the computation of diluted earnings per share. An award's unrecognized expense is also considered to be the proceeds the employees would need to pay to purchase accelerated vesting of the awards. For purposes of calculating dilution, such proceeds are assumed to be used by the Bank to buy back common shares at the average market price. The weighted-average number of outstanding awards, net of the assumed weighted-average number of common shares bought back, is included in the number of diluted participating shares.

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	Three months ended		Six months ended	
	June 30, 2019	June 30, 2018	June 30, 2019	June 30, 2018
Net income	38,642	49,712	90,749	93,909
<b>Basic Earnings Per Share</b>				
Weighted average number of common shares issued	54,686	55,159	55,025	55,023
Weighted average number of common shares held as treasury stock	(1,619)	—	(1,635)	—
<b>Weighted average number of common shares (in thousands)</b>	<b>53,067</b>	55,159	<b>53,390</b>	55,023
<b>Basic Earnings Per Share</b>	<b>0.73</b>	0.90	<b>1.70</b>	1.71
<b>Diluted Earnings Per Share</b>				
Weighted average number of common shares	53,067	55,159	53,390	55,023
Net dilution impact related to options to purchase common shares	126	238	127	278
Net dilution impact related to awards of unvested common shares	354	507	396	563
<b>Weighted average number of diluted common shares (in thousands)</b>	<b>53,547</b>	55,904	<b>53,913</b>	55,864
<b>Diluted Earnings Per Share</b>	<b>0.72</b>	0.89	<b>1.68</b>	1.68

**Note 18: Share-based payments**

The common shares transferred to employees under all share-based payments are either taken from the Bank's common treasury shares or from newly issued shares. All share-based payments are settled by the ultimate parent company, which pursuant to Bermuda law is not taxed on income. There are no income tax benefits in relation to the issue of such shares as a form of compensation.

In conjunction with the 2010 capital raise, the Board of Directors approved the 2010 Omnibus Plan (the "2010 Plan"). Under the 2010 Plan, 5% of the Bank's fully diluted common shares, equal to approximately 2.95 million shares, were initially available for grant to certain officers in the form of stock options or unvested shares awards. Both types of awards are detailed below. In 2012 and 2016, the Board of Directors approved an increase to the equivalent number of shares allowed to be granted under the 2010 Plan to respectively 5.0 million and 7.5 million shares.

**Stock Option Awards**

**1997 Stock Option Plan**

Prior to the capital raise on March 2, 2010, the Bank granted stock options to employees and Directors of the Bank that entitle the holder to purchase one common share at a subscription price equal to the market price on the effective date of the grant. Generally, the options granted vest 25 percent at the end of each year for four years, however as a result of the 2010 capital raise, the options granted under the Bank's 1997 Stock Option Plan to employees became fully vested and options awarded to certain executives were surrendered.

**2010 Plan**

Under the 2010 Plan, options are awarded to Bank employees and executive management, based on predetermined vesting conditions that entitle the holder to purchase one common share at a subscription price usually equal to the price of the most recently traded common share when granted and have a term of 10 years. The subscription price is reduced for all special dividends declared by the Bank. Stock option awards granted under the 2010 Plan vest based on two specific types of vesting conditions i.e., time and performance conditions, as detailed below:

**Time vesting condition**

50% of each option award was granted in the form of time vested options and vested 25% on each of the second, third, fourth and fifth anniversaries of the effective grant date.

In addition to the time vesting conditions noted above, the options will generally vest immediately:

- by reason of the employee's death or disability,
- upon termination, by the Bank, of the holder's employment, unless if in relation with the holder's misconduct, or
- in limited circumstances and specifically approved by the Board, as stipulated in the holder's employment contract.

In the event of the employee's resignation, any unvested portion of the awards shall generally be forfeited and any vested portion of the options shall generally remain exercisable during the 90-day period following the termination date or, if earlier, until the expiration date, and any vested portion of the options not exercised as of the expiration of such period shall be forfeited without any consideration therefore.

**Performance vesting condition**

50% of each option award was granted in the form of performance options and would vest (partially or fully) on a "valuation event" date (the date that any of the March 2, 2010 new investors transfers at least 5% of the total number of common shares or the date that there is a change in control and any of the new investors realize a predetermined multiple of invested capital ("MOIC")). On September 21, 2016, it was determined that a valuation event occurred during which a new investor realized a MOIC of more than 200% of the original invested capital of \$12.09 per share and accordingly, all outstanding unvested performance options vested.



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**Changes in Outstanding Stock Options**

Six months ended June 30, 2019	Number of shares transferable upon exercise (thousands)			Weighted average exercise price (\$)		Weighted average remaining life (years)		Aggregate intrinsic value (\$ thousands)
	1997 Stock Option Plan	2010 Stock Option Plan	Total	1997 Stock Option Plan	2010 Stock Option Plan	1997 Stock Option Plan	2010 Stock Option Plan	
Outstanding at beginning of period	25	189	214	64.51	11.98			
Exercised	—	(1)	(1)	—	11.50			24
Expiration at end of plan life	(25)	—	(25)	64.51	—			
<b>Outstanding at end of period</b>	<b>—</b>	<b>188</b>	<b>188</b>	<b>—</b>	<b>11.98</b>	<b>—</b>	<b>1.17</b>	<b>4,139</b>
<b>Vested and exercisable at end of period</b>	<b>—</b>	<b>188</b>	<b>188</b>	<b>—</b>	<b>11.98</b>	<b>—</b>	<b>1.17</b>	

Six months ended June 30, 2018	Number of shares transferable upon exercise (thousands)			Weighted average exercise price (\$)		Weighted average remaining life (years)		Aggregate intrinsic value (\$ thousands)
	1997 Stock Option Plan	2010 Stock Option Plan	Total	1997 Stock Option Plan	2010 Stock Option Plan	1997 Stock Option Plan	2010 Stock Option Plan	
Outstanding at beginning of period	58	476	534	113.46	11.73			
Exercised	—	(167)	(167)	—	11.60			4,671
Forfeitures and cancellations	(33)	—	(33)	150.95	—			
<b>Outstanding at end of period</b>	<b>25</b>	<b>309</b>	<b>334</b>	<b>64.51</b>	<b>11.79</b>	<b>0.70</b>	<b>2.04</b>	<b>10,480</b>
<b>Vested and exercisable at end of period</b>	<b>25</b>	<b>309</b>	<b>334</b>	<b>64.51</b>	<b>11.79</b>	<b>0.70</b>	<b>2.04</b>	

**Share Based Plans**

Recipients of unvested share awards are entitled to the related common shares at no cost, at the time the award vests. Recipients of unvested shares may be entitled to receive additional unvested shares having a value equal to the cash dividends that would have been paid had the unvested shares been issued and vested. Such additional unvested shares granted as dividend equivalents are subject to the same vesting schedule and conditions as the underlying unvested shares.

Unvested shares subject only to the time vesting condition generally vest upon retirement, death, disability or upon termination, by the Bank, of the holder's employment unless if in connection with the holder's misconduct. Unvested shares subject to both time vesting and performance vesting conditions remain outstanding and unvested upon retirement and will vest only if the performance conditions are met. Unvested shares can also vest in limited circumstances and if specifically approved by the Board, as stipulated in the holder's employment contract. In all other circumstances, unvested shares are generally forfeited when employment ends.

The grant date weighted average fair value of unvested share awards granted in the six months ended June 30, 2019 was \$35.96 (December 31, 2018: \$39.25). The Bank expects to settle these awards by issuing new shares.

**Employee Deferred Incentive Plan ("EDIP")**

Under the Bank's EDIP Plan, shares were awarded to Bank employees and executive management based on the time vesting condition, which states that the shares will vest equally over a three-year period from the effective grant date.

**Executive Long-Term Incentive Share Plan ("ELTIP") - Years 2013 - 2019**

The 2019 ELTIP was approved on January 14, 2019. Under the Bank's ELTIP plans for the years 2013 through 2019, performance shares as well as time-vested shares were awarded to executive management. The performance shares will generally vest upon the achievement of certain performance targets in the three-year period from the effective grant date. The time-vested shares will generally vest over the three-year period from the effective grant date.

**Changes in Outstanding ELTIP and EDIP awards (in thousands of shares transferable upon vesting)**

	Six months ended			
	June 30, 2019		June 30, 2018	
	EDIP	ELTIP	EDIP	ELTIP
Outstanding at beginning of period	234	697	244	679
Granted	162	288	125	230
Vested (fair value in 2019: \$13.0 million, 2018: \$13.0 million)	(119)	(242)	(120)	(169)
Resignations	(1)	(1)	(2)	(3)
<b>Outstanding at end of period</b>	<b>276</b>	<b>742</b>	<b>247</b>	<b>737</b>

**Share-based Compensation Cost Recognized in Net Income**

	Six months ended					
	June 30, 2019			June 30, 2018		
	Stock option plans	EDIP and ELTIP	Total	Stock option plans	EDIP and ELTIP	Total
Cost recognized in net income	—	10,548	10,548	—	5,276	5,276

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**Unrecognized Share-based Compensation Cost**

	June 30, 2019		December 31, 2018	
	Unrecognized cost	Weighted average years over which it is expected to be recognized	Unrecognized cost	Weighted average years over which it is expected to be recognized
<b>EDIP</b>	<b>6,872</b>	2.01	4,442	1.73
<b>ELTIP</b>				
Time vesting shares	573	0.61	1,746	1.03
Performance vesting shares	12,788	2.17	7,880	1.85
<b>Total unrecognized expense</b>	<b>20,233</b>		14,068	

**Note 19: Share buy-back plans**

The Bank initially introduced two share buy-back programs on May 1, 2012 as a means to improve shareholder liquidity and facilitate growth in share value. Each program was approved by the Board of Directors for a period of 12 months, in accordance with the regulations of the BSX. The BSX must be advised monthly of shares purchased pursuant to each program.

From time to time the Bank's associates, insiders and insiders' associates as defined by the BSX regulations may sell shares which may result in such shares being repurchased pursuant to each program, provided no more than any such person's pro-rata share of the listed securities is repurchased. Pursuant to the BSX regulations, all repurchases made by any issuer pursuant to a securities repurchase program must be made: (1) in the open market and not by private agreement; and (2) for a price not higher than the last independent trade for a round lot of the relevant class of securities.

**Common Share Buy-Back Program**

On February 15, 2018, the Board approved, with effect on April 1, 2018, the 2018 common share buy-back program, authorizing the purchase for treasury of up to 1.0 million common shares.

On December 6, 2018, the Board approved, with effect from December 10, 2018 to February 29, 2020, a common share buy-back program, authorizing the purchase for treasury of up to 2.5 million common shares.

In the six months ended June 30, 2019, the Bank canceled 1,120,000 shares which were previously held as Treasury Shares resulting from these buybacks.

	Six months ended		Year ended December 31			
	June 30, 2019	2018	2017	2016	2015	Total
<b>Common share buy-backs</b>						
Acquired number of shares (to the nearest 1)	1,485,000	1,254,212	—	97,053	250,371	3,086,636
Average cost per common share	36.18	38.62	—	16.36	19.42	35.19
<b>Total cost (in US dollars)</b>	<b>53,729,102</b>	48,442,768	—	1,588,189	4,862,248	108,622,307

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

**Note 20: Accumulated other comprehensive loss**

Six months ended June 30, 2019	Unrealized (losses) on translation of net investment in foreign operations	HTM investments	Unrealized gains (losses) on AFS investments	Employee benefit plans			Total AOCL
				Pension	Post-retirement healthcare	Subtotal - employee benefits plans	
<b>Balance at beginning of period</b>	(19,866)	(796)	(43,630)	(64,892)	(19,343)	(84,235)	(148,527)
Other comprehensive income (loss), net of taxes	(263)	26	44,069	1,292	324	1,616	45,448
<b>Balance at end of period</b>	<b>(20,129)</b>	<b>(770)</b>	<b>439</b>	<b>(63,600)</b>	<b>(19,019)</b>	<b>(82,619)</b>	<b>(103,079)</b>

Six months ended June 30, 2018	Unrealized (losses) on translation of net investment in foreign operations	HTM investments	Unrealized gains (losses) on AFS investments	Employee benefit plans			Total AOCL
				Pension	Post-retirement healthcare	Subtotal - employee benefits plans	
<b>Balance at beginning of period</b>	(17,549)	(839)	(15,737)	(61,341)	(33,586)	(94,927)	(129,052)
Other comprehensive income (loss), net of taxes	(1,022)	24	(34,461)	(255)	1,327	1,072	(34,387)
<b>Balance at end of period</b>	<b>(18,571)</b>	<b>(815)</b>	<b>(50,198)</b>	<b>(61,596)</b>	<b>(32,259)</b>	<b>(93,855)</b>	<b>(163,439)</b>

**Net Change of AOCL Components**

Line item in the consolidated statements of operations, if any	Three months ended		Six months ended		
	June 30, 2019	June 30, 2018	June 30, 2019	June 30, 2018	
<b>Net unrealized gains (losses) on translation of net investment in foreign operations adjustments</b>					
Foreign currency translation adjustments	N/A	(4,855)	(12,526)	(861)	(7,033)
Gains (loss) on net investment hedge	N/A	3,778	10,320	598	6,011
<b>Net change</b>		<b>(1,077)</b>	<b>(2,206)</b>	<b>(263)</b>	<b>(1,022)</b>
<b>Held-to-maturity investment adjustments</b>					
Amortization of net gains (losses) to net income	Interest income on investments	19	2	26	24
<b>Net change</b>		<b>19</b>	<b>2</b>	<b>26</b>	<b>24</b>
<b>Available-for-sale investment adjustments</b>					
Gross unrealized gains (losses)	N/A	22,785	(5,696)	45,041	(33,567)
Transfer of realized (gains) losses to net income	Net realized gains (losses) on AFS investments	—	(44)	(972)	(894)
<b>Net change</b>		<b>22,785</b>	<b>(5,740)</b>	<b>44,069</b>	<b>(34,461)</b>
<b>Employee benefit plans adjustments</b>					
<b>Defined benefit pension plan</b>					
Net actuarial gain (loss)	N/A	—	(3,236)	—	(3,236)
Net loss (gain) on settlement reclassified to net income	Net other gains (losses)	—	1,554	—	1,554
Amortization of net actuarial (gains) losses	Non-service employee benefits expense	612	525	1,226	1,051
Amortization of prior service (credit) cost	Non-service employee benefits expense	5	—	10	—
Foreign currency translation adjustments of related balances	N/A	333	864	56	376
<b>Net change</b>		<b>950</b>	<b>(293)</b>	<b>1,292</b>	<b>(255)</b>
<b>Post-retirement healthcare plan</b>					
Amortization of net actuarial (gains) losses	Non-service employee benefits expense	68	653	136	1,307
Amortization of prior service (credit) cost	Non-service employee benefits expense	94	10	188	20
<b>Net change</b>		<b>162</b>	<b>663</b>	<b>324</b>	<b>1,327</b>
<b>Other comprehensive income (loss), net of taxes</b>		<b>22,839</b>	<b>(7,574)</b>	<b>45,448</b>	<b>(34,387)</b>

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
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**Note 21: Capital structure**

**Authorized Capital**

On September 16, 2016, the Bank began trading on the New York Stock Exchange under the ticker symbol "NTB". The offering of 12,234,042 common shares consisted of 5,957,447 newly issued common shares sold by Butterfield and 6,276,595 common shares sold by certain selling shareholders, including 1,595,744 common shares sold by certain of the selling shareholders pursuant to the underwriters' option to purchase additional shares, which was exercised in full prior to the closing.

On July 25, 2016, the Bank's board of directors approved a consolidation of the existing common shares on the basis of a 10 to 1 ratio, subject to shareholder approval. As a result of this consolidation, effective September 6, 2016 upon shareholder approval, every 10 common shares of par value BM\$0.01 were consolidated into 1 common share of par value BM\$0.10 (the "Share Consolidation").

In addition, as of September 6, 2016, the par value of each issued common share and each authorized but unissued common share was reduced from BM\$0.10 to BM\$0.01 and the authorized share capital of the Bank was correspondingly reduced from 2,000,000,000 common shares of par value BM\$0.10 each, 6,000,000,000 non-voting ordinary shares of par value BM\$0.01 each, 110,200,001 preference shares of par value US\$0.01 each and 50,000,000 preference shares of par value £0.01 each to 2,000,000,000 common shares of par value BM\$0.01 each, 6,000,000,000 non-voting ordinary shares of par value BM\$0.01 each, 110,200,001 preference shares of par value US\$0.01 each and 50,000,000 preference shares of par value £0.01 each, without any payment by the Bank to the holders of the voting ordinary shares in respect thereof (the "Reduction in Par Value" and together with the Share Consolidation, the "Reverse Share Split").

Immediately following the Reduction in Par Value, the Bank repurchased any and all fractions of common shares issued and outstanding from the holders thereof. All share, share-based payments and dividend information presented in these consolidated financial statements and accompanying footnotes has been retroactively adjusted to reflect the decreased number of shares resulting from this action.

Prior to the Reverse Share Split, the Bank's total authorized share capital consisted of (i) 20 billion common shares of par value BM\$0.01, (ii) 6 billion non-voting ordinary shares of par value BM\$0.01; (iii) 110,200,001 preference shares of par value US\$0.01 and (iv) 50 million preference shares of par value £0.01.

**Dividends Declared**

During the six months ended June 30, 2019, the Bank paid cash dividends of \$0.88 (June 30, 2018: \$0.76) for each common share as of the related record dates.

The Bank is required to comply with Section 54 of the Companies Act 1981 issued by the Government of Bermuda (the "Companies Act") each time a dividend is declared or paid by the Bank and also obtain a letter of no objection from the BMA pursuant to the Banks and Deposit Companies Act 1999 for any dividends declared. The Bank has complied with Section 54 and has obtained BMA's letter of no objection for all dividends declared during the periods presented.

**Regulatory Capital**

Effective January 1, 2016, the Bank's regulatory capital is determined in accordance with current Basel III guidelines as issued by the BMA. Basel III adopts Common Equity Tier 1 ("CET1") as the predominant form of regulatory capital with the CET1 ratio as a new metric. Basel III also adopts the new Leverage Ratio regime, which is calculated by dividing Tier 1 capital by an exposure measure. The Leverage Ratio Exposure Measure consists of total assets (excluding items deducted from Tier 1 capital) and certain off-balance sheet items converted into credit exposure equivalents as well as adjustments for derivatives to reflect credit risk and other risks. Prior to January 1, 2016, the Bank's regulatory capital was determined in accordance with Basel II guidelines as issued by the BMA.

The Bank is fully compliant with all regulatory capital requirements and maintains capital ratios in excess of regulatory minimums as at June 30, 2019 and December 31, 2018. The following table sets forth the Bank's capital adequacy in accordance with the Basel III framework:

	June 30, 2019		December 31, 2018	
	Actual	Regulatory minimum	Actual	Regulatory minimum
<b>Capital</b>				
CET 1 capital	849,564	N/A	846,043	N/A
Tier 1 capital	849,564	N/A	846,043	N/A
Tier 2 capital	111,650	N/A	121,521	N/A
Total capital	961,214	N/A	967,564	N/A
<b>Risk Weighted Assets</b>	4,233,332	N/A	4,321,354	N/A
<b>Leverage Ratio Exposure Measure</b>	11,575,989	N/A	11,139,677	N/A
<b>Capital Ratios (%)</b>				
CET 1 capital	20.1%	10.0%	19.6%	9.4%
Tier 1 capital	20.1%	11.5%	19.6%	10.9%
Total capital	22.7%	16.3%	22.4%	15.6%
Leverage ratio	7.3%	5.0%	7.6%	5.0%

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**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

**Note 22: Business combinations**

**Deutsche Bank's Global Trust Solutions Acquisition**

On March 29, 2018, the Bank concluded the acquisition of Deutsche Bank's Global Trust Solutions ("GTS") business, excluding its US operations, for net cash payments of \$24.7 million (composed of an initial cash payment of \$30.2 million followed by a refund of \$5.5 million on May 29, 2018). The refund was received based upon the movement in the number of clients in the GTS portfolio between the time the acquisition was agreed upon and the conclusion of the acquisition, together with an adjustment based upon the net asset values of the companies transferred. Butterfield has taken over the ongoing management and administration of the GTS portfolio, comprising approximately 1,000 trust structures for some 900 private clients. Butterfield has also offered positions to all employees who are fully dedicated to GTS in the Cayman Islands, Guernsey, Switzerland, Singapore and Mauritius. The acquisition was undertaken to enhance the Bank's market presence in the global trust service market.

The Bank incurred transaction expenses related to this acquisition in the amount of \$3.8 million, of which \$1.9 million were expensed during the year ended December 31, 2018 (including \$1.0 million of legal and professional fees) and \$1.9 million were expensed during the year ended December 31, 2017 (including \$1.6 million of legal and professional fees).

For the year ended December 31, 2018, the amount of revenues and net deficit relating to the acquired GTS operations that were not inextricably merged into the Bank's operations were \$6.5 million and \$2.9 million respectively.

The assets acquired consist mainly of: customer relationships intangible assets, goodwill and accounts receivable. The liabilities assumed consist mainly of deferred revenues and accounts payable. Goodwill is made up of expected cash flows to be derived from new business and expected synergies resulting from leveraging existing support services and infrastructure within the Bank. The goodwill arising from the acquisition was allocated to reportable segments as per Note 9 in the Bank's audited financial statements for the year ended December 31, 2018.

	<b>As at March 29, 2018</b>
<b>Total consideration transferred</b>	<b>24,680</b>
<b>Assets acquired</b>	
Cash due from banks	3,958
Intangible assets (estimated useful life of 15 years)	16,932
Other assets	4,548
<b>Total assets acquired</b>	<b>25,438</b>
<b>Liabilities acquired (included in Other liabilities on the balance sheet)</b>	<b>4,626</b>
<b>Excess purchase price (Goodwill)</b>	<b>3,868</b>

Disclosure of the unaudited pro forma financial information to present a summary of the combined results of the Bank and GTS acquisition is impracticable for the year ended December 31, 2018. The disclosure is impracticable as the Bank does not have access to the complete historical revenue and expense data as it relates to GTS for the period preceding the acquisition.

**Asset Acquisition**

On February 15, 2018, the Bank announced that it had entered into an agreement to acquire Deutsche Bank's banking and custody business in the Cayman Islands, Guernsey and Jersey. During the year ended December 31, 2018, the Bank began to onboard certain customer deposits relating to the acquisition and this activity was completed in the first half of 2019.

**ABN AMRO (Channel Islands) Limited**

On April 25, 2019, the Bank announced that it entered into an agreement to acquire ABN AMRO (Channel Islands) Limited ("ABN AMRO Channel Islands"), the Channel Islands-based banking subsidiary of ABN AMRO Bank N.V. via one of its subsidiaries, Butterfield Bank (Guernsey) Limited. ABN AMRO Channel Islands offers banking, investment management and custody products to three distinct client groups, including trusts, private clients, and funds. As at December 31, 2018, ABN AMRO Channel Islands had a client base with £2.9 billion in deposits and £3.5 billion in assets under management and custody.

This agreement is part of the Bank's strategy to grow through acquisitions in offshore markets where the Bank already have scale and expertise in order to create an organization with a widened and diversified offering.

On July 15, 2019, the transaction completed and the initial aggregate purchase price of £161 million was paid in cash, subject to certain purchase price adjustments. Over the coming 12 months following the acquisition, it is expected that ABN AMRO Channel Islands' business and employees will be integrated with the existing Butterfield Guernsey operations and operate under the Butterfield name. Management is still in the process of allocating the purchase price to the various assets acquired and liabilities assumed (including intangible assets and goodwill).

**The Bank of N.T. Butterfield & Son Limited**  
**Notes to the Consolidated Financial Statements (unaudited) (continued)**  
*(In thousands of US dollars, unless otherwise stated)*

**Note 23: Related party transactions**

**Financing Transactions**

Certain directors and executives of the Bank, companies in which they are principal owners and/or members of the board, and trusts in which they are involved, have loans with the Bank. Loans to directors were made in the ordinary course of business at normal credit terms, including interest rate and collateral requirements. Loans to executives may be eligible to preferential rates. As at June 30, 2019, related party director and executive loan balances were \$30.0 million (December 31, 2018: \$97.2 million). During the six months ended June 30, 2019, new issuance of loans to related parties were \$27.7 million and repayments and change in directorships were \$94.9 million (year ended December 31, 2018: \$77.3 million and \$11.0 million, respectively). All of these loans were considered performing loans as at June 30, 2019 and December 31, 2018. For the six months ended June 30, 2019, the Bank has recognized \$2.2 million (June 30, 2018: \$2.3 million) of loan interest revenue in the consolidated statement of operations relating to directors and executives, companies in which they are principal owners and/or members of the board and trusts in which they are involved.

Certain directors and executives of the Bank, companies in which they are principal owners, and trusts in which they are involved, have deposits with the Bank. As at June 30, 2019, related party director and executive deposit balances were \$17.3 million (December 31, 2018: \$17.2 million).

Certain affiliates of the Bank have loans and deposits with the Bank. The loans were made and the deposits are maintained in the ordinary course of business on normal commercial terms. At June 30, 2019, affiliates had loan balances of \$10.0 million (December 31, 2018: \$10.2 million) and deposit balances of \$0.6 million (December 31, 2018: \$0.4 million). For the six months ended June 30, 2019, the Bank has recognized \$0.9 million (June 30, 2018: \$1.0 million) of non-interest expenses and \$0.3 million (June 30, 2018: \$0.3 million) of loan interest revenue in the consolidated statement of operations relating to affiliates which the Bank holds investments in.

**Financial Transactions With Related Parties**

The Bank holds seed investments in several Butterfield mutual funds, which are managed by a wholly-owned subsidiary of the Bank. As at June 30, 2019, these investments have a fair value of \$6.9 million with an unrealized gain of \$1.9 million (December 31, 2018: \$6.2 million and \$1.2 million, respectively) and were included in trading investments at their fair value. As at June 30, 2019, several Butterfield mutual funds which are managed by a wholly owned subsidiary of the Bank, had loan balances of \$1.4 million (December 31, 2018: \$1.8 million) and deposit balances of \$25.9 million (December 31, 2018: \$36.7 million). During the six months ended June 30, 2019, the Bank earned \$5.2 million (June 30, 2018: \$4.6 million) in asset management revenue from funds managed by a wholly-owned subsidiary of the Bank. During the six months ended June 30, 2019, the Bank earned \$0.7 million (June 30, 2018: \$0.6 million) in custody and other administration services revenue from funds managed by a wholly-owned subsidiary of the Bank and directors and executives, companies in which they are principal owners and/or members of the board and trusts in which they are involved. During the six months ended June 30, 2019, the Bank earned \$0.5 million (June 30, 2018: \$0.5 million) in other income from other related parties.

**Note 24: Subsequent events**

On July 23, 2019, the Board of Directors declared an interim dividend of \$0.44 per common share to be paid on August 16, 2019 to shareholders of record on August 5, 2019.

The ABN AMRO (Channel Islands) Limited acquisition originally announced on April 25, 2019 closed on July 15, 2019 and the initial aggregate purchase price of £161 million in cash was paid, subject to certain purchase price adjustments. Please see Note 22: Business combinations for further details.